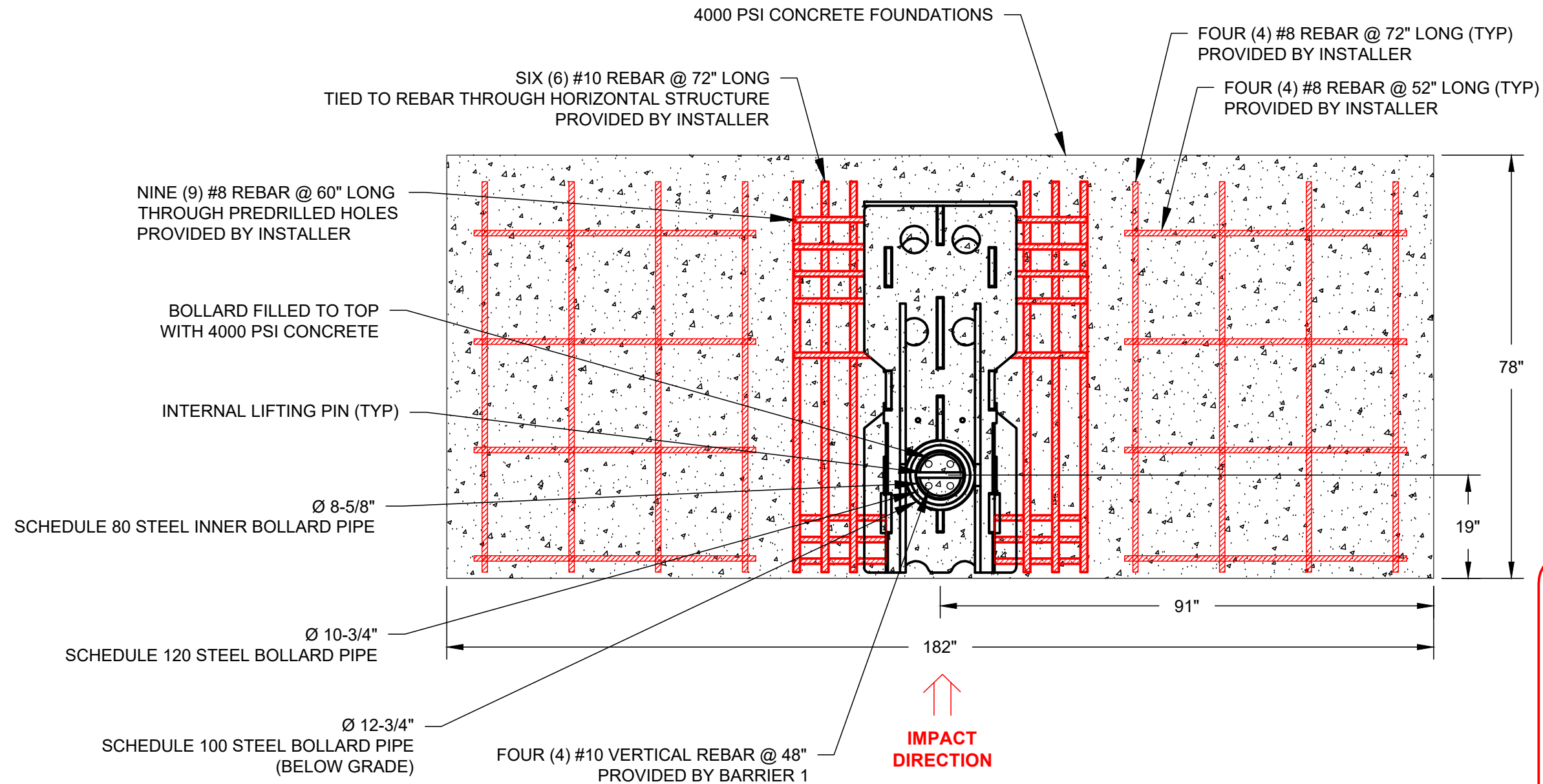


# B1 TOMAHAWK M50

SHALLOW MOUNT BOLLARD - MODEL SMB-1200-SA

CRASH TESTED TO ASTM F2656-07 - M50/P1 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

## TYPICAL SINGLE BOLLARD INSTALLATION



PLEASE SIGN AND DATE BELOW  
TO ACKNOWLEDGE ACCEPTANCE  
OF THE SUBMITTAL DRAWING.

NAME:

SIGNATURE:

DATE:



### BARRIER1 SYSTEMS, LLC

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PLAN VIEW AND  
ELEVATION (STAND-ALONE)

SMB-1200-SA  
SUBMITTAL DRAWING

SHEET: 1 OF 6

20250528-10-M

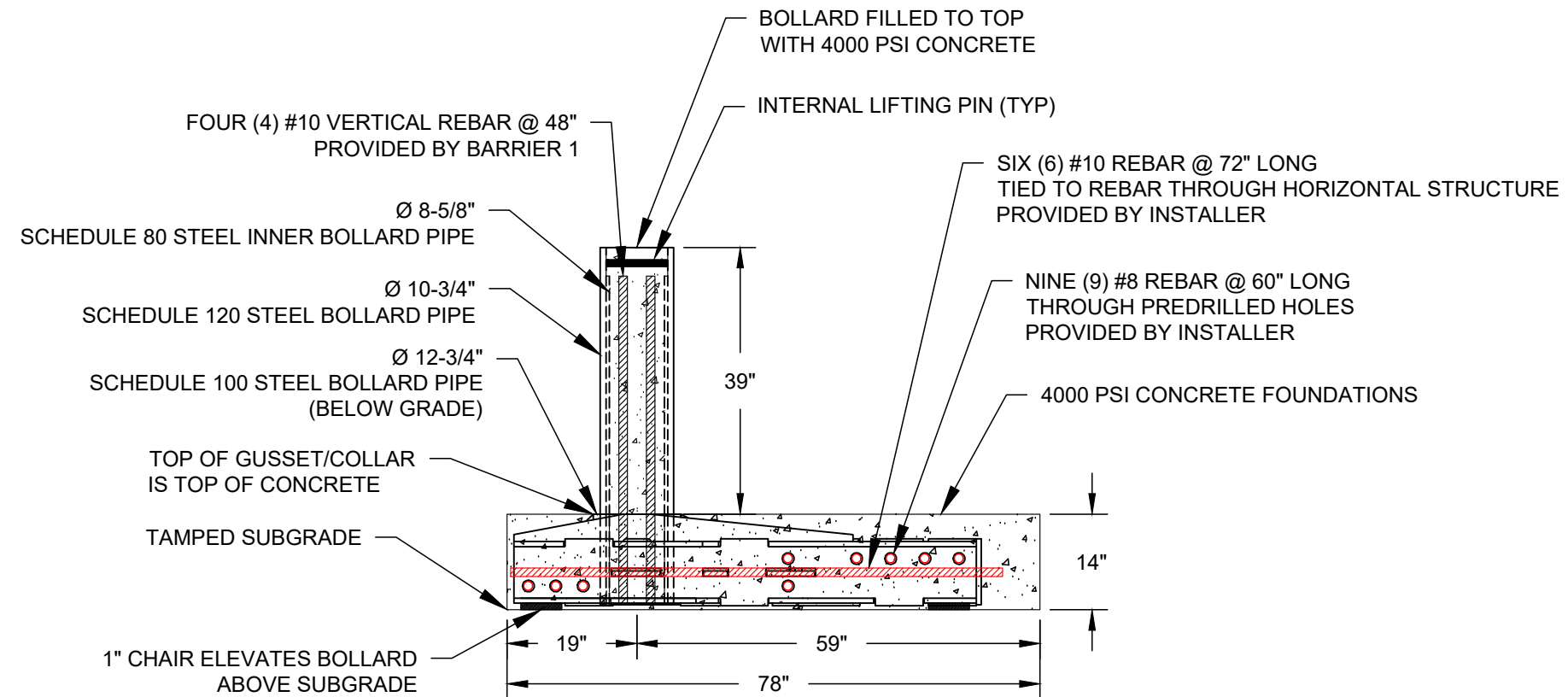
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SHALLOW MOUNT BOLLARD - MODEL SMB-1200-SA

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## TYPICAL SINGLE BOLLARD INSTALLATION



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ELEVATION (STAND-ALONE)

SMB-1200-SA  
SUBMITTAL DRAWING

SHEET: 2 OF 6

20250528-10-M

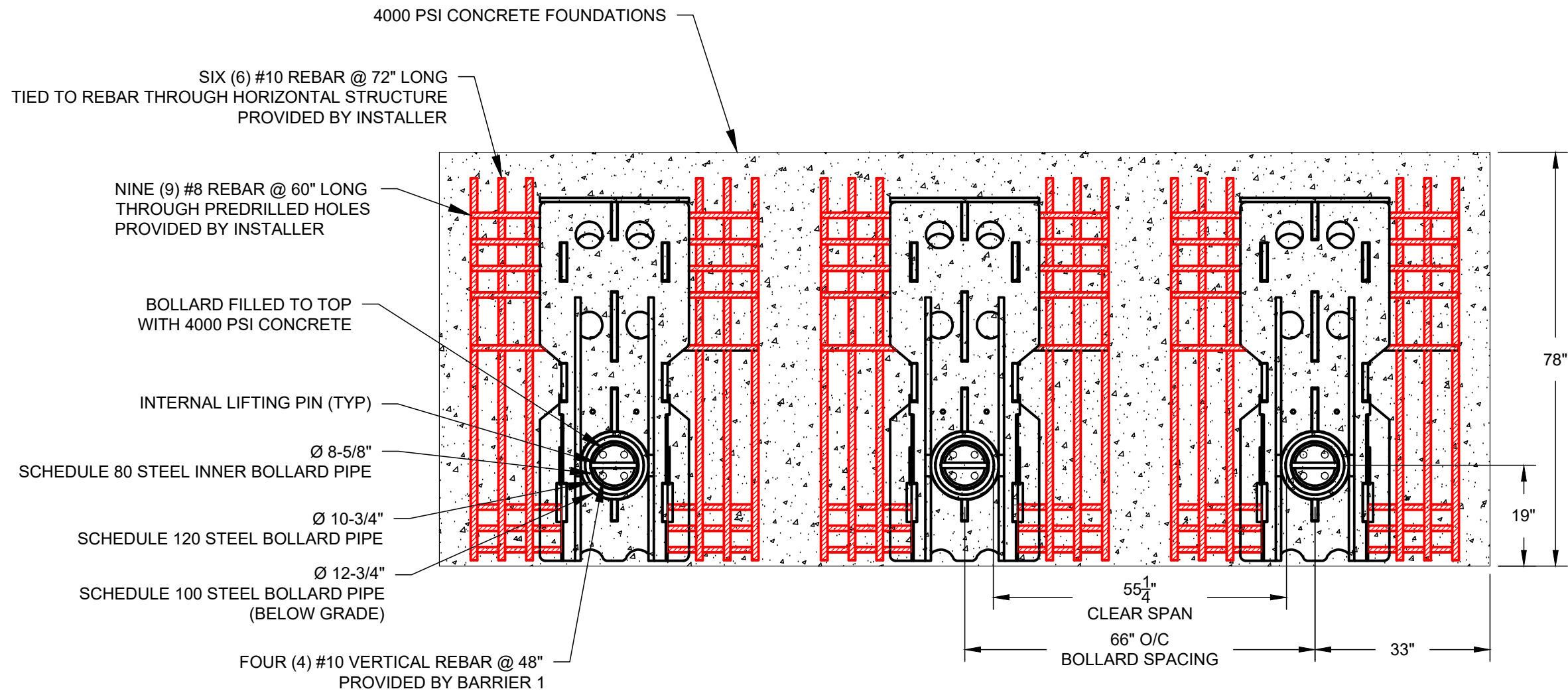
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# B1 TOMAHAWK M50

SHALLOW MOUNT BOLLARD - MODEL SMB-1200-SA

CRASH TESTED TO ASTM F2656-07 - M50/P1 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

## TYPICAL BOLLARD ARRAY INSTALLATION



NOTE:

1. MODIFIED SPACING FOR SITE SPECIFIC CONDITIONS AVAILABLE



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PLAN VIEW  
AND ELEVATION (ARRAY)

SMB-1200-SA  
SUBMITTAL DRAWING

SHEET: 3 OF 6

20250528-10-M

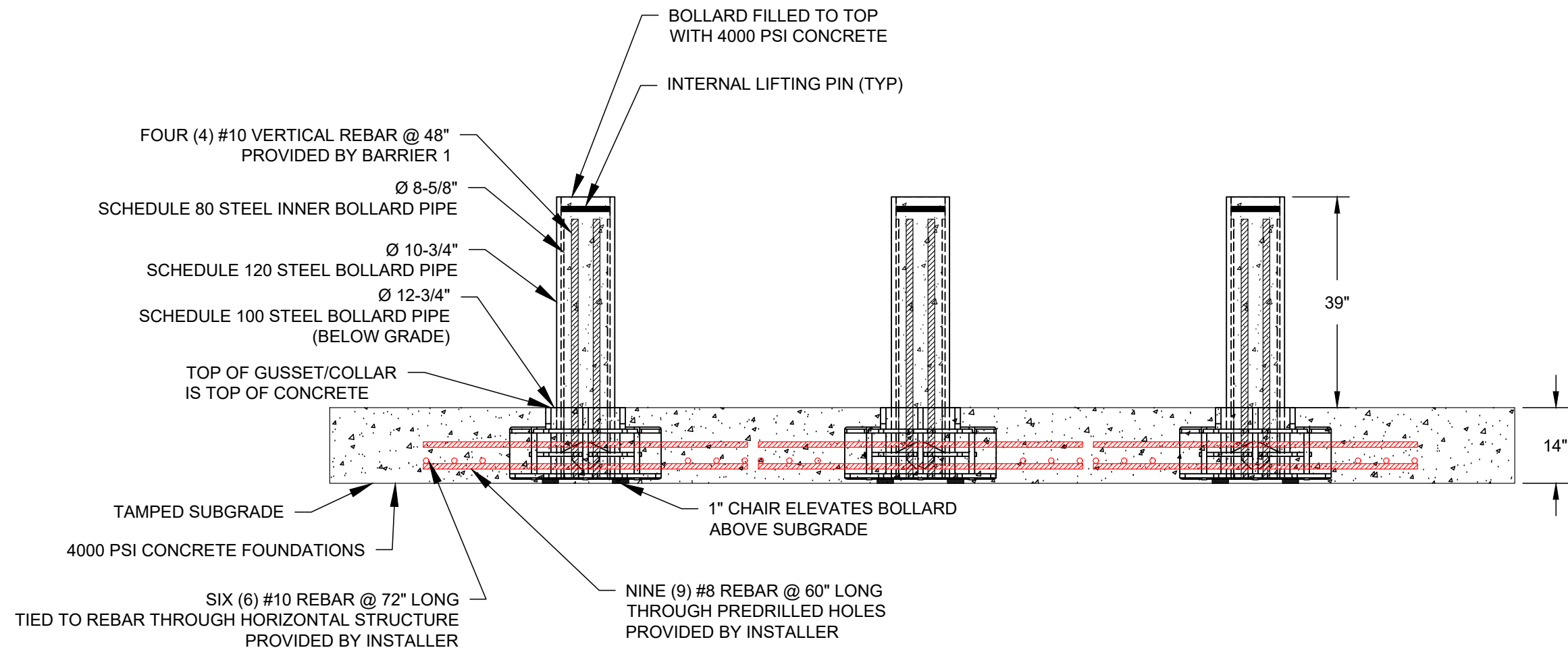
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# B1 TOMAHAWK M50

SHALLOW MOUNT BOLLARD - MODEL SMB-1200-SA

CRASH TESTED TO ASTM F2656-07 - M50/P1 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

## TYPICAL SINGLE BOLLARD INSTALLATION



NOTE:

1. MODIFIED SPACING FOR SITE SPECIFIC CONDITIONS AVAILABLE



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PLAN VIEW AND  
ELEVATION (ARRAY)

SMB-1200-SA  
SUBMITTAL DRAWING

SHEET: 4 OF 6

20250528-10-M

SCALE: N.T.S.

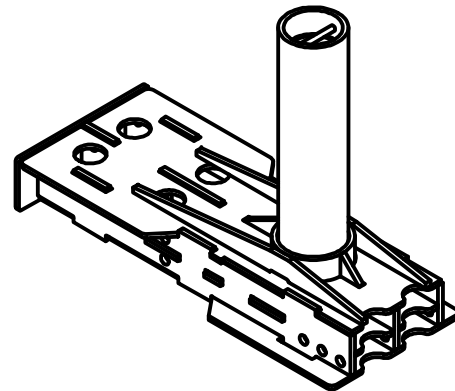
# B1 TOMAHAWK M50

SHALLOW MOUNT BOLLARD - MODEL SMB-1200-SA

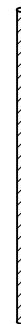
CRASH TESTED TO ASTM F2656-07 - M50/P1 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

## PRODUCTS PROVIDED BY BARRIER1

STANDARD FINISH:  
GLOSS BLACK PAINT



ONE (1) EACH  
PREFABRICATED  
BOLLARD UNIT



PRE-CUT #10 REBAR  
@ 48" LONG  
QTY: FOUR (4) PER BOLLARD  
(INSIDE BOLLARD)

### MATERIALS PROVIDED BY INSTALLATION CONTRACTOR:

1. ABOUT 1.65 CUBIC YARDS OF 4000 PSI CONCRETE PER BOLLARD FOR ARRAY  
ABOUT 4.5 CUBIC YARDS OF 4000 PSI CONCRETE PER BOLLARD FOR STANDALONE
2. NINE (9) #8 REBAR @60"
3. SIX (6) #10 REBAR @72"
4. MASONRY BRICKS OR CHAIRS TO ELEVATE BOLLARD STEEL OFF SUBGRADE



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MATERIALS  
PROVIDED

SMB-1200-SA  
SUBMITTAL DRAWING

SHEET: 5 OF 6

20250528-10-M

SCALE: N.T.S.



## B1 TOMAHAWK M50

SHALLOW MOUNT BOLLARD - MODEL SMB-1200-SA

CRASH TESTED TO ASTM F2656-07 - M50/P1 RATED - STOPS 15,000 LB. VEHICLE AT 50 MPH IMPACT

### INSTALLATION STEPS

① EXCAVATE THEN TAMP SUBGRADE WITH PLATE TAMPER.

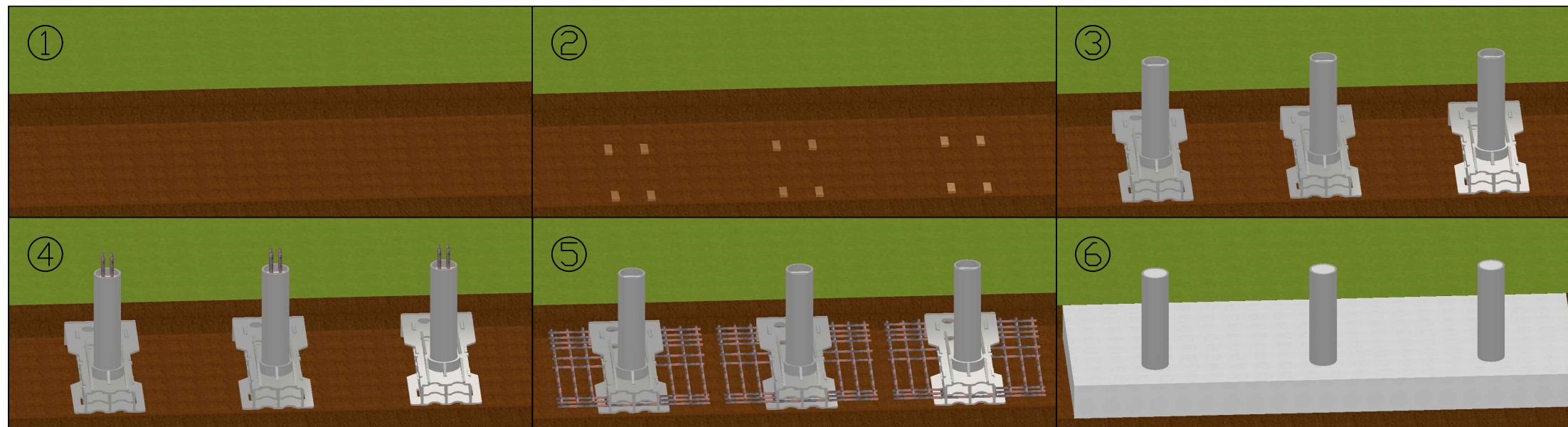
② USE MASONRY BLOCK OR CHAIRS TO ELEVATE BOLLARD OFF SUBGRADE, SO THAT TOP OF GUSSET / SLEEVE IS SAME HEIGHT AS TOP OF CONCRETE.

③ PLACE PREFABRICATED BOLLARDS INTO EXCAVATION.

④ INSERT #10 VERTICAL REBAR INTO BOLLARD TUBE.

⑤ INSERT #8 REBAR THROUGH PREFABRICATED HOLES IN BOLLARD AND TIE TO PERPENDICULAR #8 REBAR.

⑥ FILL BOLLARD TUBE AND FOUNDATION WITH CONCRETE.



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INSTALLATION DETAILS

SMB-1200-SA  
SUBMITTAL DRAWING

SHEET: 6 OF 6

20250528-10-M

SCALE: N.T.S.