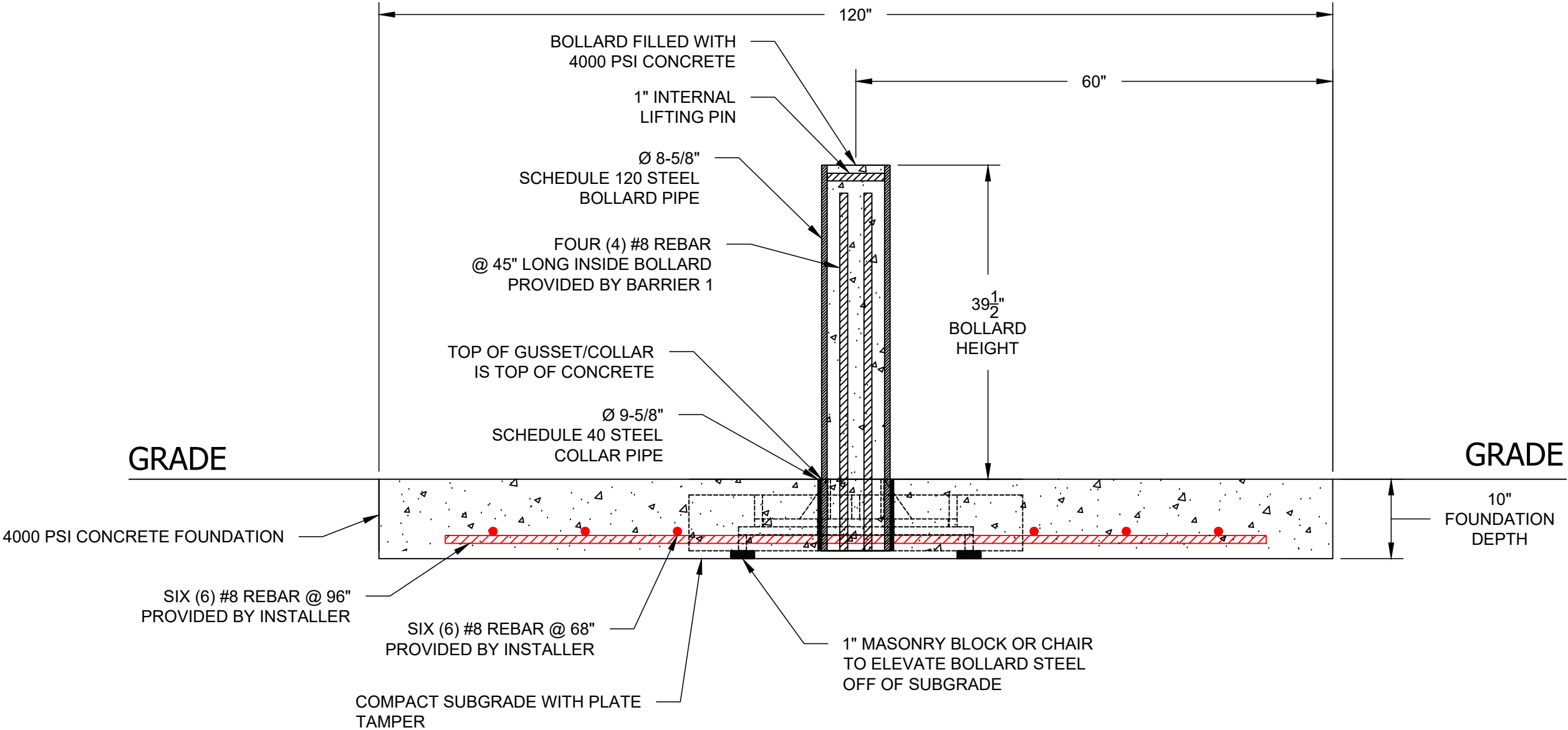


B1 TOMAHAWK M30

SHALLOW MOUNT BOLLARD - MODEL SMB-400-SSA

CRASH TESTED TO ASTM F2656-15 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

TYPICAL SINGLE BOLLARD INSTALLATION



BARRIER1 SYSTEMS, LLC

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ELEVATION VIEW  
(STAND-ALONE)

SMB-400-SA  
WEBSITE DRAWING

SHEET: 1 OF 6

20250328-10-M

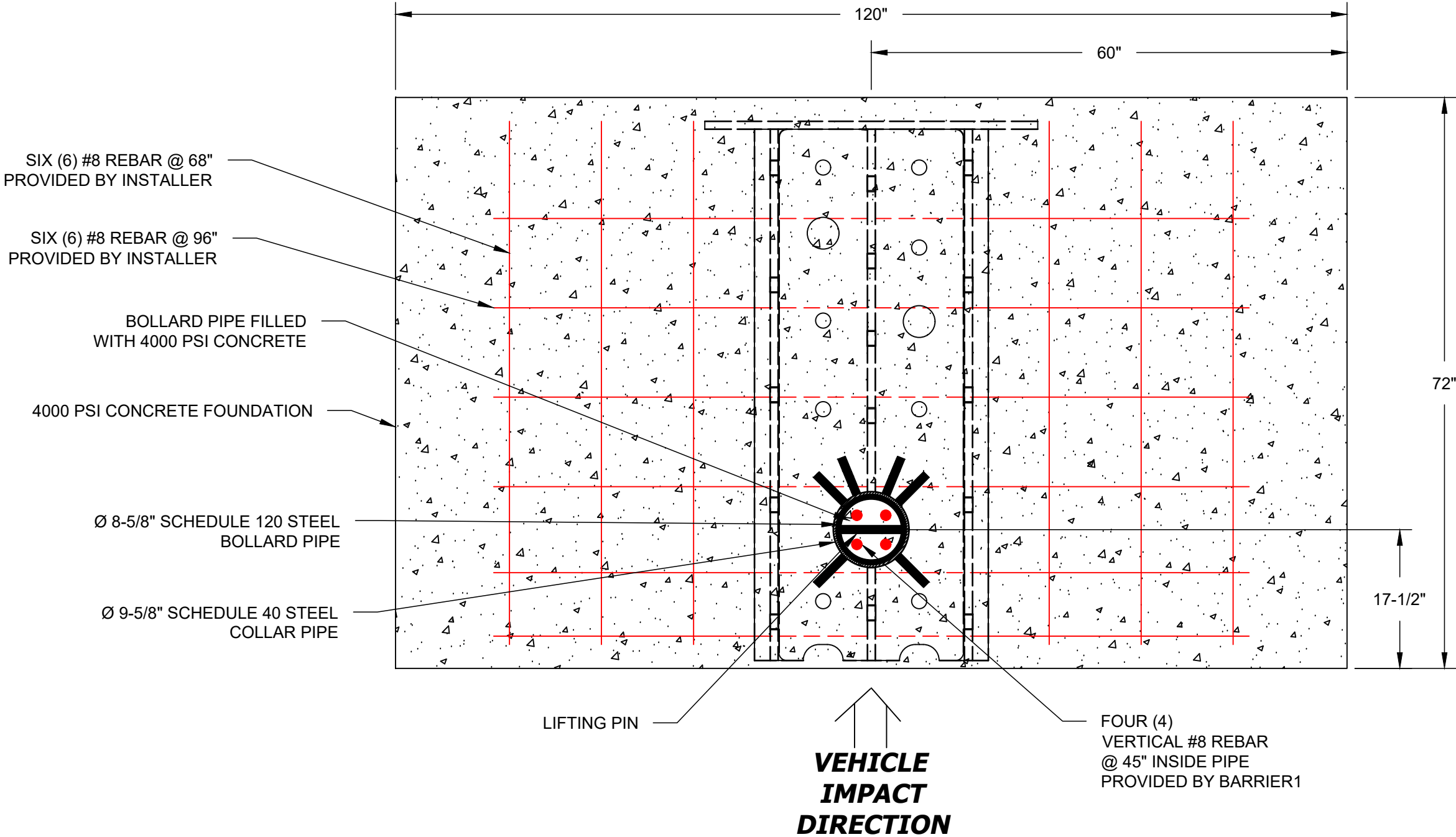
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B1 TOMAHAWK M30

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ELEVATION VIEW  
(STAND-ALONE)

SMB-400-SA  
WEBSITE DRAWING

SHEET: 2 OF 6

20250328-10-M

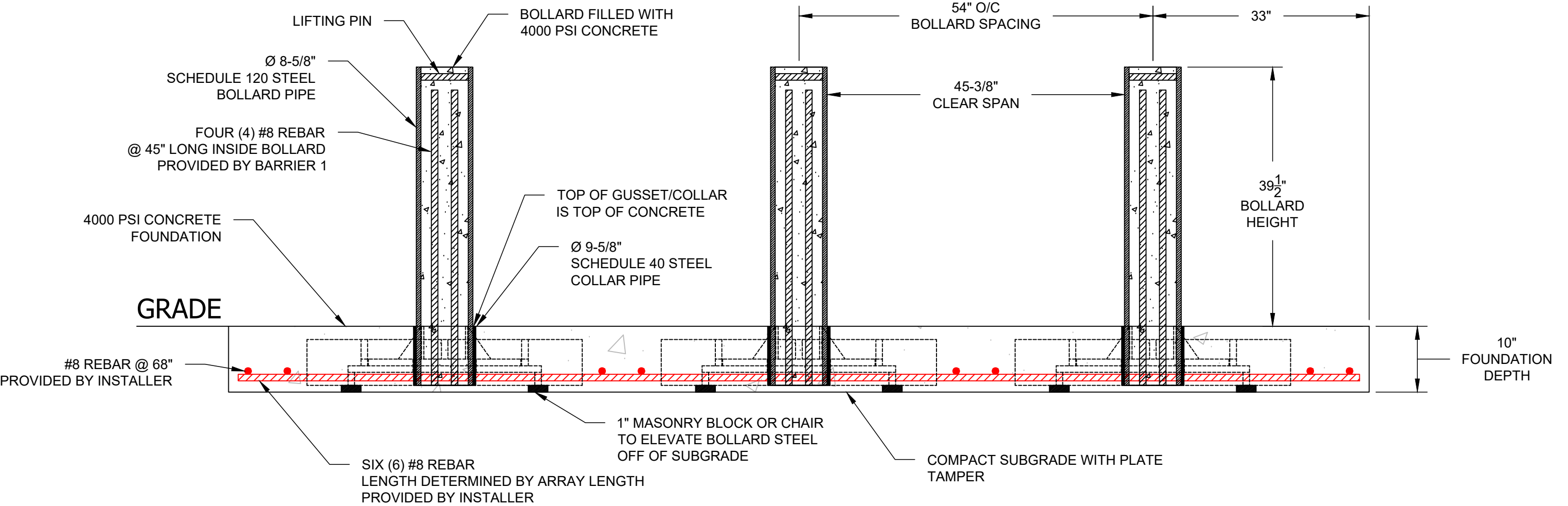
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B1 TOMAHAWK M30

SHALLOW MOUNT BOLLARD - MODEL SMB-400-SSA

CRASH TESTED TO ASTM F2656-15 - 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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ELEVATION VIEW  
(ARRAY - MODIFIED)

SMB-400-SA  
WEBSITE DRAWING

SHEET: 3 OF 6

20250328-10-M

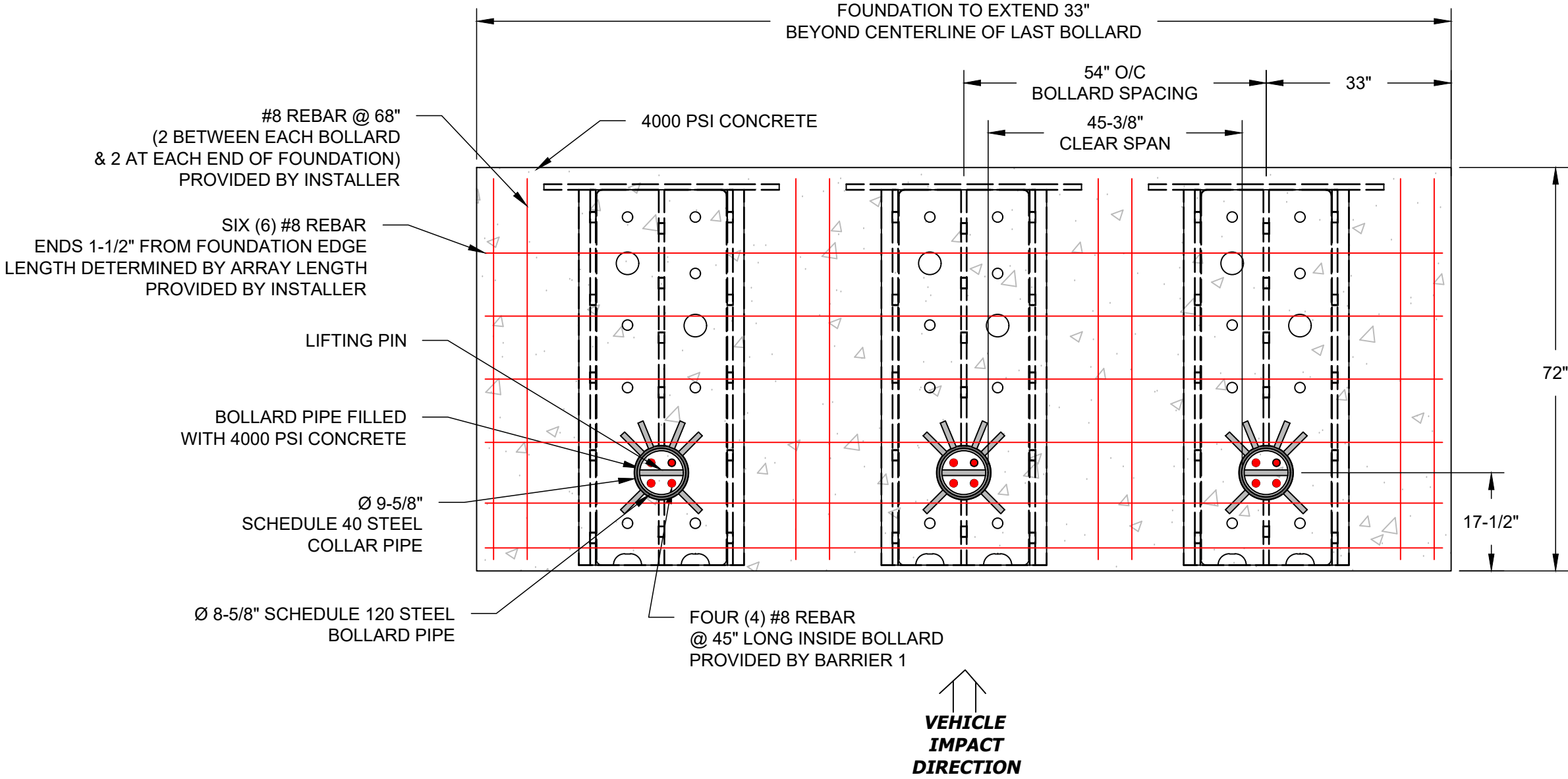
SCALE: N.T.S.

B1 TOMAHAWK M30

SHALLOW MOUNT BOLLARD - MODEL SMB-400-SSA

CRASH TESTED TO ASTM F2656-15 - 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)

SMB-400-SA  
WEBSITE DRAWING

SHEET: 4 OF 6

20250328-10-M

SCALE: N.T.S.

B1 TOMAHAWK M30

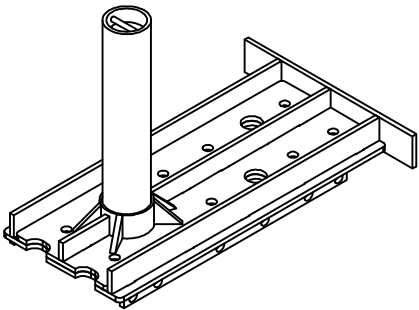
SHALLOW MOUNT BOLLARD - MODEL SMB-400-SSA

CRASH TESTED TO ASTM F2656-15 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

MATERIALS PROVIDED

STANDARD FINISH:  
GLOSS BLACK PAINT

MATERIALS PROVIDED BY BARRIER1 SYSTEMS



(1) EACH:  
PREFABRICATED BOLLARD



(4) EACH:  
#8 VERTICAL REBAR  
@ 45"

MATERIALS PROVIDED BY INSTALLER:

- 1. ABOUT 1.0 CUBIC YARDS OF CONCRETE PER BOLLARD FOR ARRAY  
ABOUT 2.0 CUBIC YARDS OF CONCRETE PER BOLLARD FOR STANDALONE
- 2. SIX (6) #8 HORIZONTAL REBAR @96" PER BOLLARD OR BY ARRAY LENGTH TO  
CONNECT ADJACENT BOLLARDS
- 3. #8 HORIZONTAL REBAR @68" LAID OVER #8 @ 96" REBAR BETWEEN ADJACENT  
BOLLARDS AND EDGE OF FOUNDATION
- 4. MASONRY BRICKS OR CHAIRS TO ELEVATE BOLLARD STEEL OFF SUBGRADE



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MATERIALS  
PROVIDED

SMB-400-SA  
WEBSITE DRAWING

SHEET: 5 OF 6

20250328-10-M

SCALE: N.T.S.



B1 TOMAHAWK M30

SHALLOW MOUNT BOLLARD - MODEL SMB-400-SSA

CRASH TESTED TO ASTM F2656-15 - M30/P1 RATED - STOPS 15,000 LB. VEHICLE AT 30 MPH IMPACT

INSTALLATION STEPS

1 EXCAVATE THEN TAMP SUBGRADE WITH PLATE TAMPER.

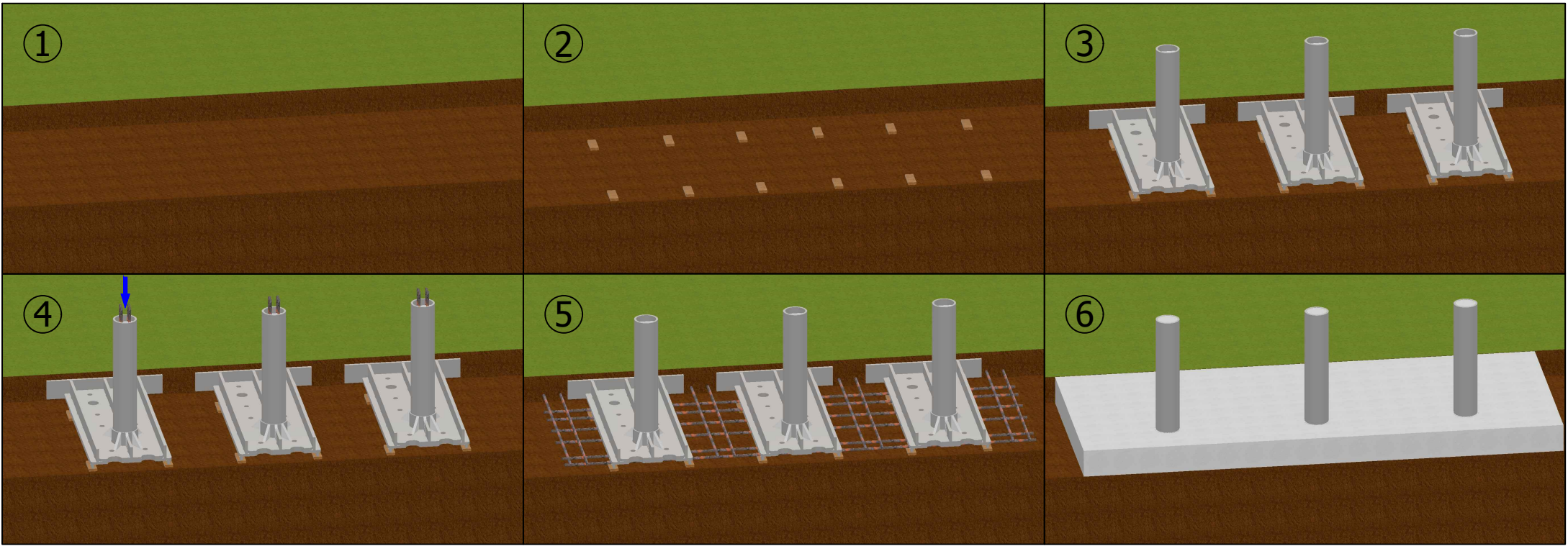
2 USE MASONRY BLOCK OR CHAIRS TO ELEVATE BOLLARD OFF SUBGRADE, SO THAT TOP OF GUSSET / SLEEVE IS SAME HEIGHT AS TOP OF CONCRETE.

3 PLACE PREFABRICATED BOLLARDS INTO EXCAVATION.

4 INSERT VERTICAL REBAR INTO BOLLARD TUBE.

5 INSERT #8 REBAR THROUGH PREFABRICATED HOLES TO CONNECT BOLLARDS.

6 POUR AND VIBRATE CONCRETE IN BOLLARD TUBE AND EXCAVATION



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INSTALLATION STEPS

SMB-400-SA  
WEBSITE DRAWING

SHEET: 6 OF 6

20250328-10-M

SCALE: N.T.S.