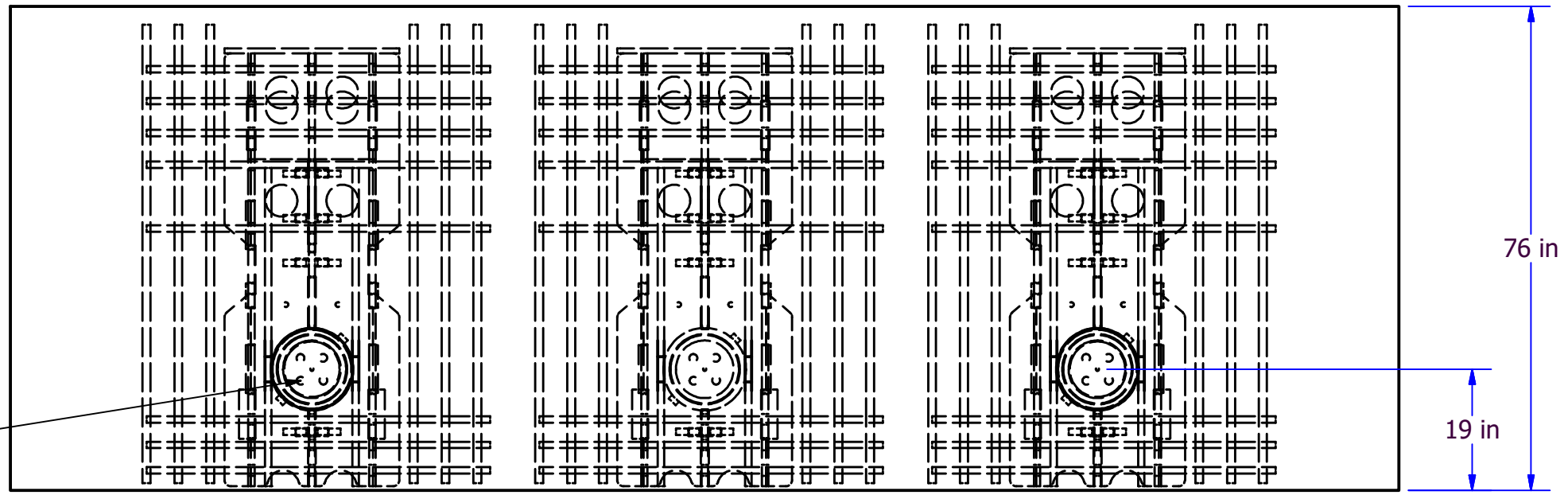


SHALLOW FOUNDATION BOLLARD - MODEL SMB-1200 SA
 STOPS 15,000 lb VEHICLE AT 50 mph IMPACT WITHIN 1 METER - ASTM F2656-07 M50 P1 (K12)
 ONE (1) SINGLE STAND ALONE BOLLARD STOPPED IMPACT

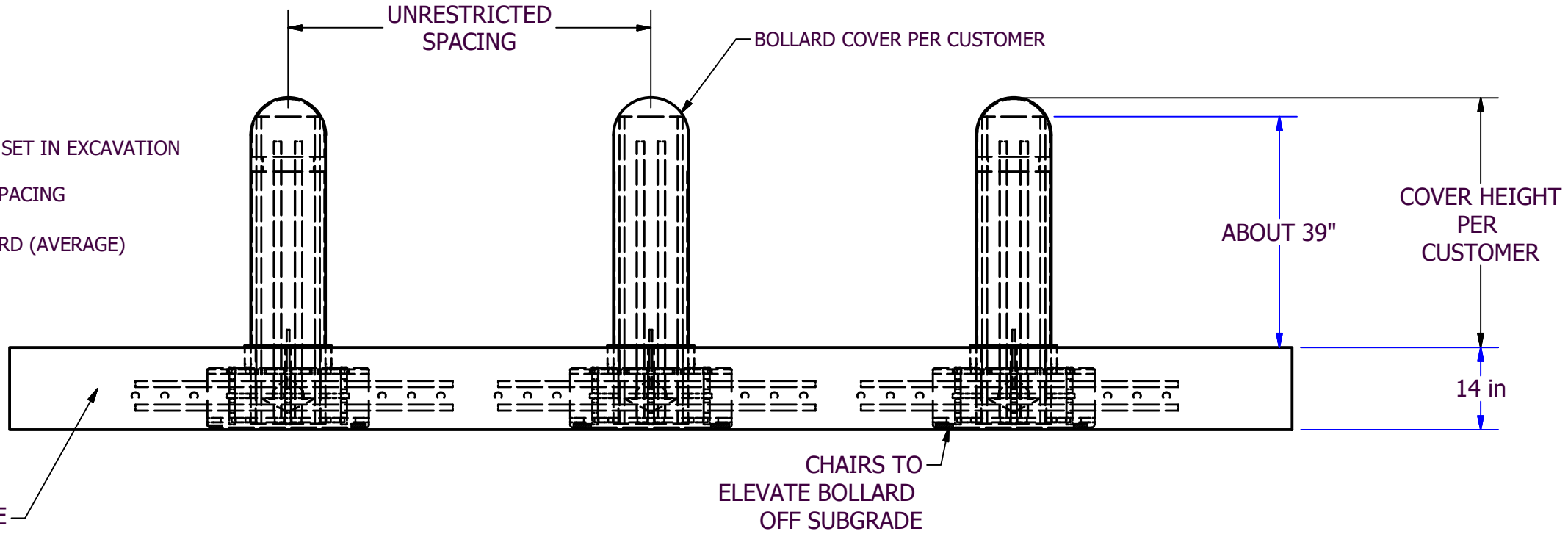
BOLLARD ARRAY LAYOUT




VERTICAL REBAR
AND CONCRETE
FILLED BOLLARD
(TYP)

KEY ADVANTAGES

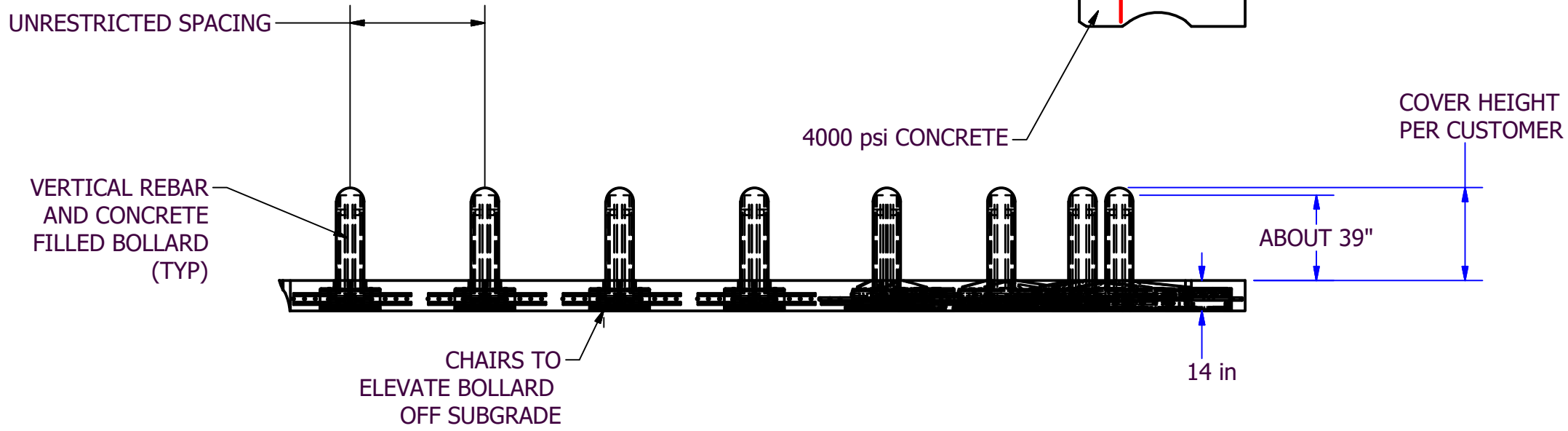
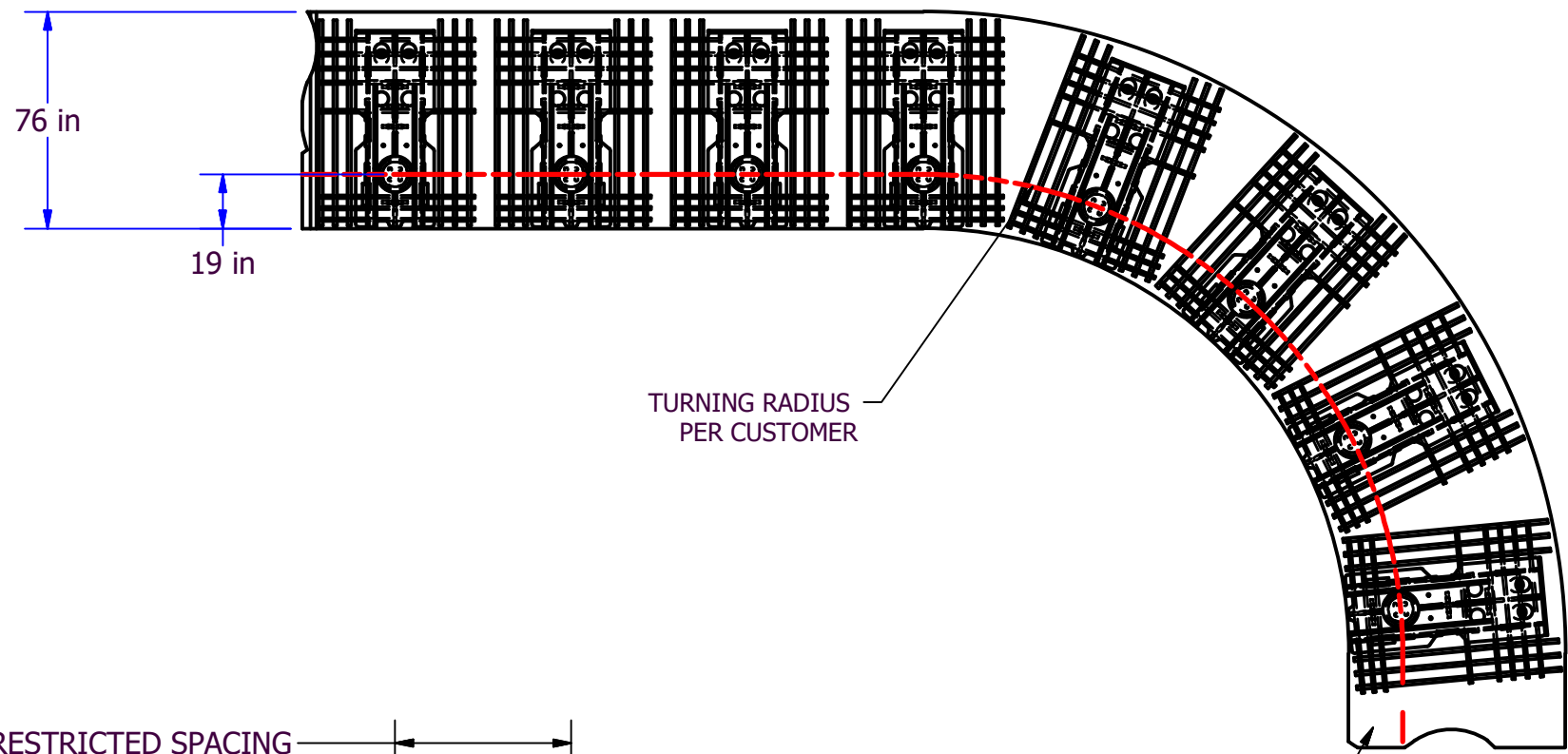
1. SINGLE STAND ALONE BOLLARD STOPS MASSIVE IMPACT
2. UNRESTRICTED SPACING BETWEEN BOLLARDS
3. EASY INSTALLATION. BOLLARD IS 1 PREFABRICATED UNIT AND SIMPLY SET IN EXCAVATION
4. NO FIELD WELDING OR BOLTING NO FIELD BOLTING
5. ALLOWS FOR FIELD ADJUSTMENTS AND FIELD CHANGES TO BOLLARD SPACING
6. EASILY ACCOMODATES TURNS AND GRADE CHANGES
7. REQUIRES ONLY 1.65 CUBIC YARDS OF 4000 psi CONCRETE PER BOLLARD (AVERAGE)



SMB-M50-100V075H INSTALL ARRAY		REV:	SHALLOW FOUNDATION BOLLARD	ITEM / PAGE 2 OF 7
	BARRIER1 SYSTEMS, INC. 8015 THORNDIKE ROAD GREENSBORO, NC 27409 (336) 617-8478 (336) 617-471 FAX mlamore@barrier1.us www.barrier1.us			JUNE 6 2019
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SHALLOW FOUNDATION BOLLARD - MODEL SMB-1200 SA
 STOPS 15,000 lb VEHICLE AT 50 mph IMPACT WITHIN 1 METER - ASTM F2656-07 M50 P1 (K12)
 ONE (1) SINGLE STAND ALONE BOLLARD STOPPED IMPACT

ACCOMMODATES
INSTALLATION ACROSS
CURVES



SMB1200SA CURVE



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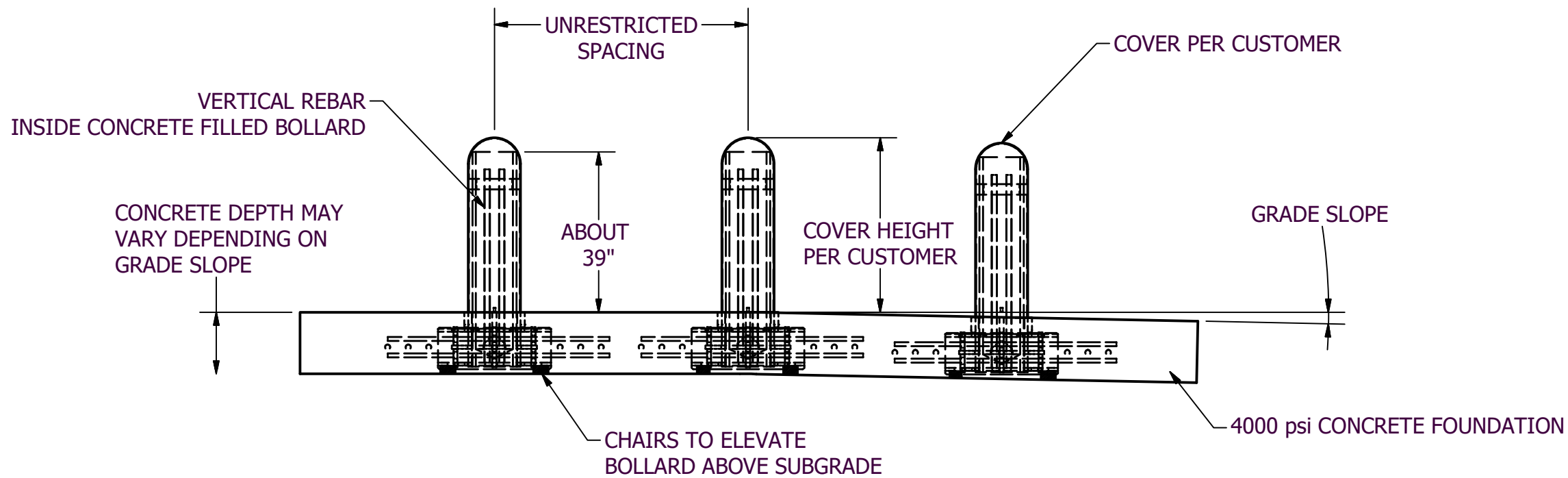
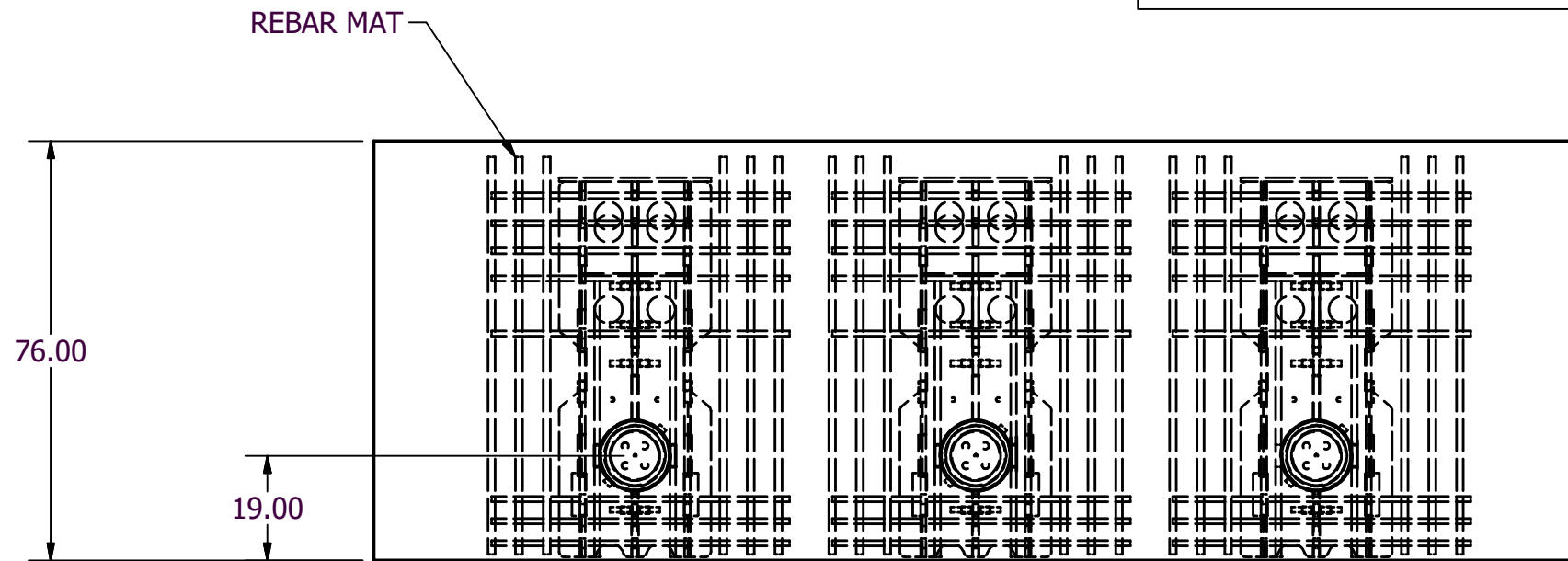
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SHALLOW
FOUNDATION
BOLLARD

ITEM / PAGE 3 OF 7
 JUNE 6 2019
 SCALE 3/16"=1'

SHALLOW FOUNDATION BOLLARD - MODEL SMB-1200 SA
 STOPS 15,000 lb VEHICLE AT 50 mph IMPACT WITHIN 1 METER - ASTM F2656-07 M50 P1 (K12)
 ONE (1) SINGLE STAND ALONE BOLLARD STOPPED IMPACT

ACCOMODATES INSTALLATION
ACROSS GRADE CHANGES



SMB1200SA ON SLOPE



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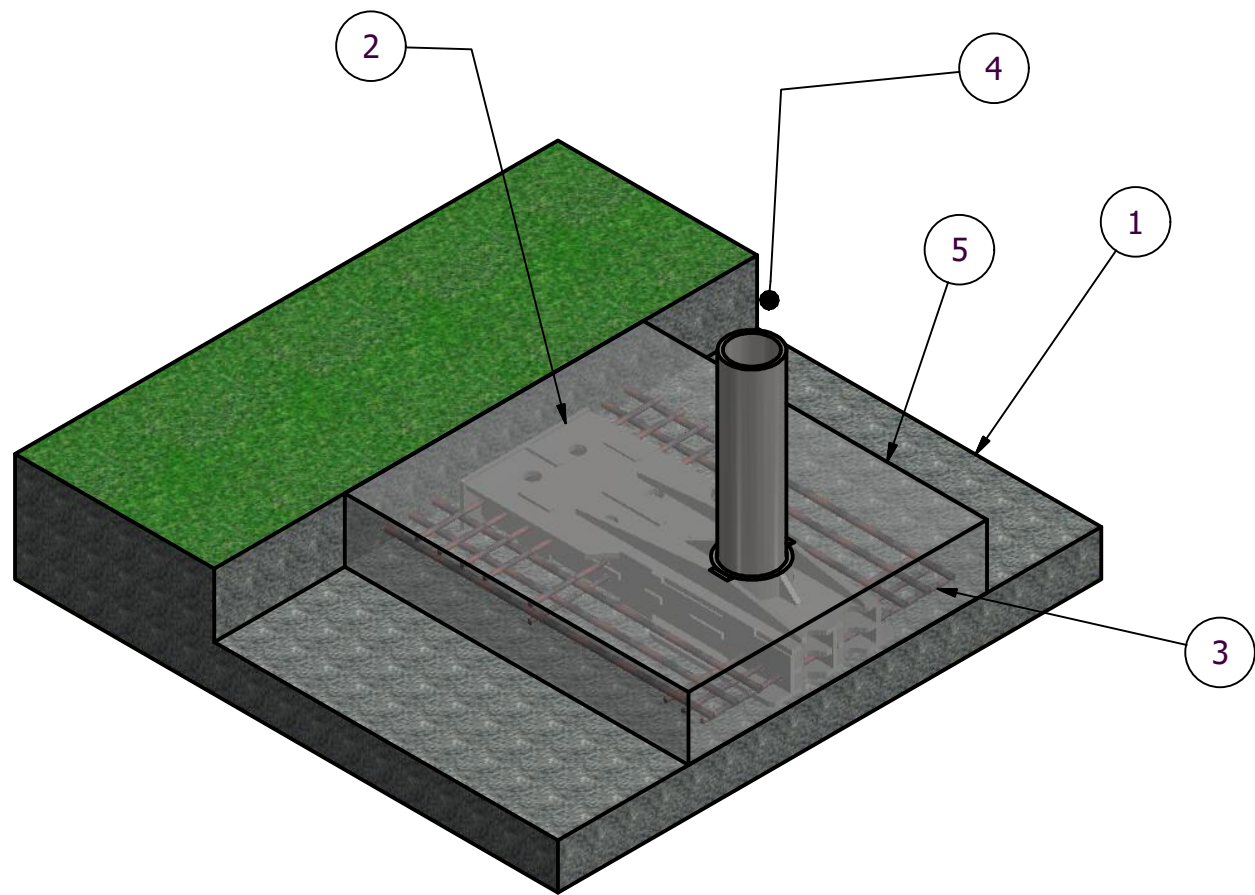
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SHALLOW
FOUNDATION
BOLLARD

ITEM / PAGE 4 OF 7
 JUNE 6 2019
 SCALE 3/8"=1'

SHALLOW FOUNDATION BOLLARD - MODEL SMB-1200 SA
 STOPS 15,000 lb VEHICLE AT 50 mph IMPACT WITHIN 1 METER - ASTM F2656-07 M50 P1 (K12)
 ONE (1) SINGLE STAND ALONE BOLLARD STOPPED IMPACT



- (1) EXCAVATE TO 14", THEN TAMP SUBGRADE WITH PLATE TAMPER
- (2) PLACE SINGLE PREFABRICATED BOLLARD STRUCTURE. USE MASONRY BLOCK OR CHAIRS TO ELEVATE OFF SUBGRADE.
- (3) INSERT HORIZONTAL REBAR THROUGH HOLES AND PLACE PERPENDICULAR REBAR
- (4) INSERT VERTICAL REBAR INTO BOLLARD
- (5) POUR AND VIBRATE CONCRETE.

KEY ADVANTAGES

- 1. SINGLE STAND ALONE BOLLARD STOPS MASSIVE IMPACT
- 2. UNRESTRICTED SPACING BETWEEN BOLLARDS
- 3. EASY INSTALLATION. BOLLARD IS 1 PREFABRICATED UNIT AND SIMPLY SET IN EXCAVATION
- 4. NO FIELD WELDING OR BOLTING NO FIELD BOLTING
- 5. ALLOWS FOR FIELD ADJUSTMENTS AND FIELD CHANGES TO BOLLARD SPACING
- 6. EASILY ACCOMODATES TURNS AND GRADE CHANGES
- 7. REQUIRES ONLY 1.65 CUBIC YARDS OF 4000 psi CONCRETE PER BOLLARD (AVERAGE)

SMB-M50-100V075H INSTRUCT



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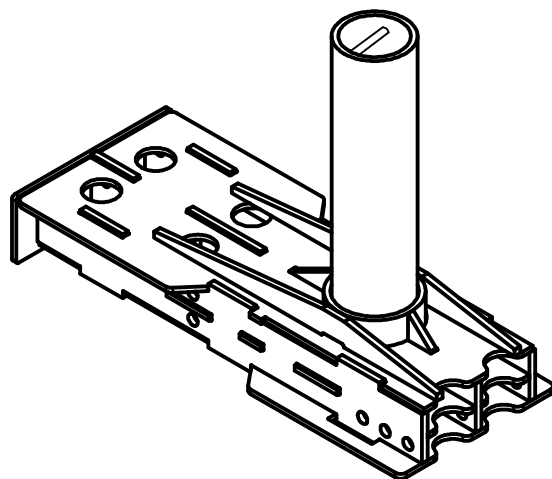
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SHALLOW
 FOUNDATION
 BOLLARD

ITEM / PAGE 5 OF 7
 JUNE 6 2019
 SCALE 1/30

SHALLOW FOUNDATION BOLLARD - MODEL SMB-1200 SA
 STOPS 15,000 lb VEHICLE AT 50 mph IMPACT WITHIN 1 METER - ASTM F2656-07 M50 P1 (K12)
 ONE (1) SINGLE STAND ALONE BOLLARD STOPPED IMPACT

BARRIER1 SYSTEMS TO PROVIDE



ONE (1) EACH
 PREFABRICATED
 BOLLARD UNIT



ONE (1) EACH (OPTIONAL)
 BOLLARD COVER
 CHOSEN BY CUSTOMER
 (OPTIONAL)

INSTALLER TO PROVIDE

- 1.) ABOUT 1.65 CUBIC YARDS OF 4000 psi CONCRETE PER BOLLARD
- 2.) REBAR

SMB-M50-100V075H



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SHALLOW
 FOUNDATION
 BOLLARD

ITEM / PAGE 6 OF 7
 JUNE 6 2019
 SCALE 1/2"=1'

4

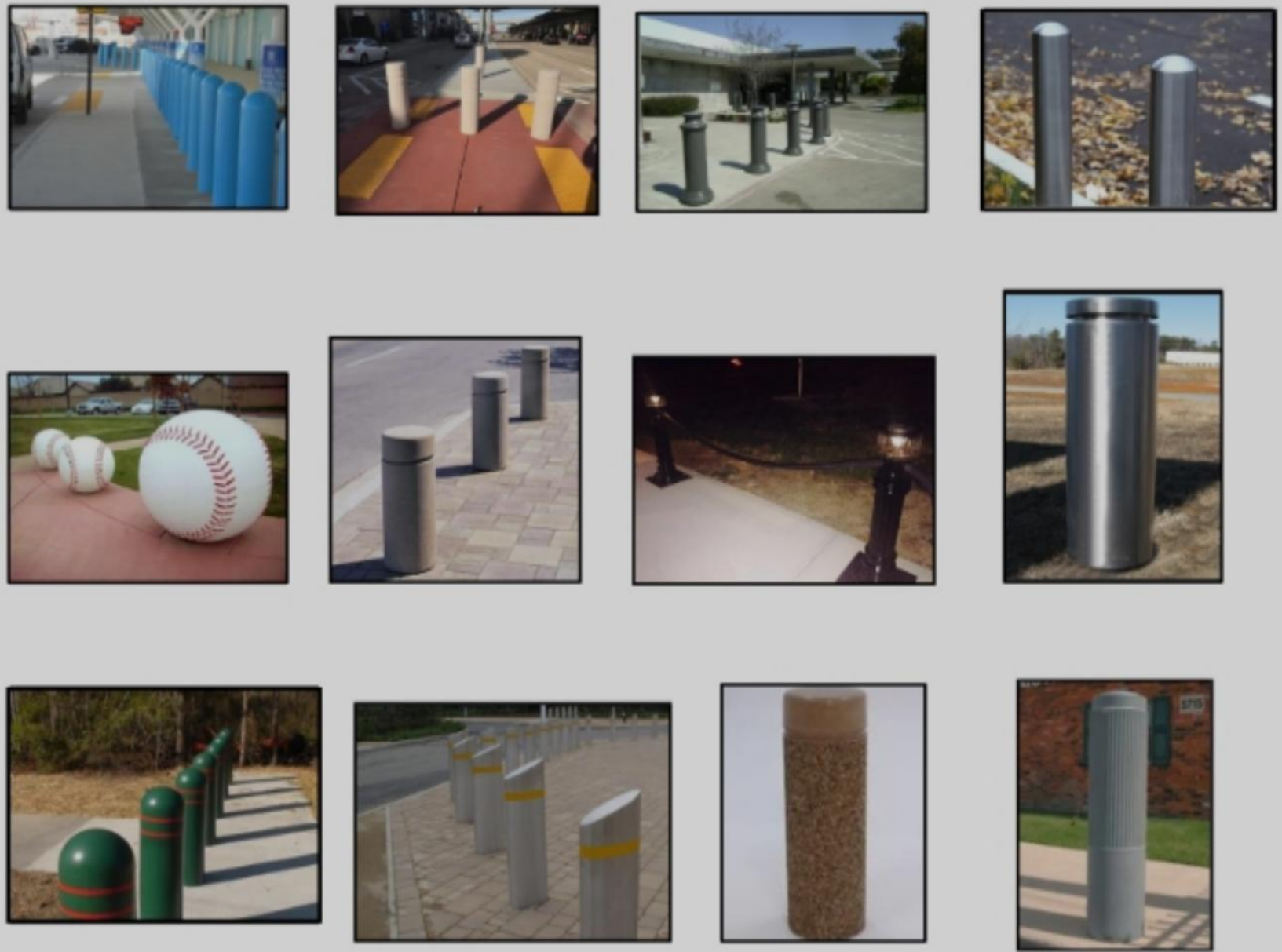
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SHALLOW FOUNDATION BOLLARD - MODEL SMB-1200 SA
 STOPS 15,000 lb VEHICLE AT 50 mph IMPACT WITHIN 1 METER - ASTM F2656-07 M50 P1 (K12)
 ONE (1) SINGLE STAND ALONE BOLLARD STOPPED IMPACT

SAMPLES OF BOLLARD COVER OPTIONS



BOLLARD COVER IMAGES



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**SHALLOW
 FOUNDATION
 BOLLARD**

ITEM / PAGE 7 OF 7
 JUNE 6 2019
 SCALE 1 / 2

4

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