Crash-rated Bollard, Model R-1009-12-SM **BOLLARD FILLED TO TOP** WITH 4000 PSI CONCRETE INTERNAL LIFTING PIN (TYP) FOUR (4) #10 VERTICAL REBAR @ 48" -PROVIDED WITH BOLLARD SIX (6) #10 REBAR @ 72" LONG TIED TO REBAR THROUGH HORIZONTAL STRUCTURE PROVIDED BY INSTALLER SCHEDULE 80 STEEL INNER BOLLARD PIPE NINE (9) #8 REBAR @ 60" LONG Ø 10-3/4" THROUGH PREDRILLED HOLES SCHEDULE 120 STEEL BOLLARD PIPE PROVIDED BY INSTALLER Ø 12-3/4" SCHEDULE 100 STEEL BOLLARD PIPE 4000 PSI CONCRETE FOUNDATIONS (BELOW GRADE) TOP OF GUSSET/COLLAR IS TOP OF CONCRETE TAMPED SUBGRADE 1" CHAIR ELEVATES BOLLARD ABOVE SUBGRADE 4000 PSI CONCRETE FOUNDATIONS FOUR (4) #8 REBAR @ 72" LONG (TYP) PROVIDED BY INSTALLER SIX (6) #10 REBAR @ 72" LONG FOUR (4) #8 REBAR @ 52" LONG (TYP) TIED TO REBAR THROUGH HORIZONTAL STRUCTURE PROVIDED BY INSTALLER PROVIDED BY INSTALLER NINE (9) #8 REBAR @ 60" LONG THROUGH PREDRILLED HOLES PROVIDED BY INSTALLER **BOLLARD FILLED TO TOP** WITH 4000 PSI CONCRETE 78" INTERNAL LIFTING PIN (TYP) SCHEDULE 80 STEEL INNER BOLLARD PIPE Ø 10-3/4" SCHEDULE 120 STEEL BOLLARD PIPE Ø 12-3/4" **IMPACT** SCHEDULE 100 STEEL BOLLARD PIPE FOUR (4) #10 VERTICAL REBAR @ 48" DIRECTION (BELOW GRADE) PROVIDED WITH BOLLARD



General Description:

Reliance Foundry's Patriot R-1009-12-SM offers M50level protection in a shallow-mount, fixed installation. Certified to ASTM F2656 M50 P1, this bollard stops a 15, 000 lb vehicle traveling at 50 mph. The shallow foundation design allows deployment in areas where deep excavation is impractical, without compromising on strength. Fabricated in the USA with Buy America-compliant steel, the R-1009-12-SM is ideal for high-security installations requiring certified impact protection and simplified site integration.

Specifications:

Bollard Diameter: 10 3/4" [273 mm]

Total Height: 52 7/8" [1343 mm]

Height Above Grade: 39" [991 mm]

Height Below Grade: 13 3/8" [340 mm]

Total Weight: 1965 lb [893 kg]

Material: Steel

For more information on bollard installation, please visit: https://www.reliance-foundry.com/bollard/vector-fixed-<u>installation</u>



Notes:

- Embedment details are for reference illustration only. Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
- Bollard is provided as shown, with parts listed below. Concrete foundation and/or installation not provided by Reliance Foundry.
- This drawing is not drawn to scale. Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
- Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

	ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	
ation only. Minimum foundation sizes	1	1	2500068	R-1009-12-SM M50 Fixed Bollard	Steel	Ur
conditions, and engineering requirements. End below. Concrete foundation and/or dry. Ons provided herein is for reference only. Essionals if any dimension is critical to your		4	REBAR10- 48	#10 Rebar (60 ksil) - 1-1/4" OD X 48" Long (Included with Bollard)	Steel	
		8	REBAR8-52	#8 Rebar (60 ksi) - 1" OD X 52" Long (Provided by Installer)	Steel	1
		9	REBAR8-60	#8 Rebar (60 ksi) - 1" OD X 60" Long (Provided by Installer)	Steel	
		8	REBAR8-72	#8 Rebar (60 ksi) - 1" OD X 72" Long (Provided by Installer)	Steel	
nd design and specifications without prior	6	6	REBAR10- 72	#10 Rebar (60 ksil) - 1-1/4" OD X 72" Long (Provided by Installer)	Steel	DR
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BOLLARD R-1009-12-SM

NAME	DATE	SIZE	DWG:	2500069-01		REV	
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Crash-rated Bollard, Model R-1009-12-SM TYPICAL BOLLARD ARRAY (1 BOLLARD CAN WITHSTAND VEHICLE IMPACT ALONE) 4000 PSI CONCRETE FOUNDATIONS -SIX (6) #10 REBAR @ 72" LONG TIED TO REBAR THROUGH HORIZONTAL STRUCTURE PROVIDED BY INSTALLER NINE (9) #8 REBAR @ 60" LONG THROUGH PREDRILLED HOLES PROVIDED BY INSTALLER **BOLLARD FILLED TO TOP** WITH 4000 PSI CONCRETE INTERNAL LIFTING PIN (TYP) SCHEDULE 80 STEEL INNER BOLLARD PIPE SCHEDULE 120 STEEL BOLLARD PIPE SCHEDULE 100 STEEL BOLLARD PIPE CLEAR SPAN (BELOW GRADE) 66" O/C FOUR (4) #10 VERTICAL REBAR @ 48" BOLLARD SPACING PROVIDED WITH BOLLARD **BOLLARD FILLED TO TOP** WITH 4000 PSI CONCRETE INTERNAL LIFTING PIN (TYP) FOUR (4) #10 VERTICAL REBAR @ 48" PROVIDED WITH BOLLARD Ø 8-5/8" SCHEDULE 80 STEEL INNER BOLLARD PIPE Ø 10-3/4" SCHEDULE 120 STEEL BOLLARD PIPE SCHEDULE 100 STEEL BOLLARD PIPE (BELOW GRADE) TOP OF GUSSET/COLLAR IS TOP OF CONCRETE 1" CHAIR ELEVATES BOLLARD TAMPED SUBGRADE ABOVE SUBGRADE 4000 PSI CONCRETE FOUNDATIONS → NINE (9) #8 REBAR @ 60" LONG SIX (6) #10 REBAR @ 72" LONG -THROUGH PREDRILLED HOLES TIED TO REBAR THROUGH HORIZONTAL STRUCTURE PROVIDED BY INSTALLER PROVIDED BY INSTALLER



General Description:

Reliance Foundry's Patriot R-1009-12-SM offers M50level protection in a shallow-mount, fixed installation. Certified to ASTM F2656 M50 P1, this bollard stops a 15, 000 lb vehicle traveling at 50 mph. The shallow foundation design allows deployment in areas where deep excavation is impractical, without compromising on strength. Fabricated in the USA with Buy America–compliant steel, the R-1009-12-SM is ideal for high-security installations requiring certified impact protection and simplified site integration.

Specifications:

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Total Height: 52 7/8" [1343 mm]

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ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
1	3	2500068	R-1009-12-SM M50 Fixed Bollard	Steel
2	12	REBAR10- 48	#10 Rebar (60 ksil) - 1-1/4" OD X 48" Long (Included with Bollard)	Steel
3	27	REBAR8-60	(Provided by Installer)	Steel
4	18	REBAR10- 72	#10 Rebar (60 ksil) - 1-1/4" OD X 72" Long (Provided by Installer)	Steel



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BOLLARD R-1009-12-SM

	NAME	DATE	SIZE	DWG:	2500069-01		REV
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