



Bullistic Barriers LLC provides Bullet Resistant products that provide aesthetically pleasing ballistic protection that eliminates ricochet, is non-combustible, and is practically unscalable.

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BULLET RESISTANT FENCE

MasterFormat 2020:

Section 32 31 00 Fences and Gates

Notes to Specifier:

1. Where several alternative parameters or specifications exist, or where, the specifier has the option of inserting text, such choices are presented in **<bold text>**.
2. Explanatory notes and comments are presented in *italicized colored* text.

Level 10 BULLET RESISTANT FENCE

PART 1 GENERAL

1.01 SUMMARY

1. Section includes an aluminum fence, furnished with all components, and designed and tested to provide bullet resistance per UL-752, Standard for Bullet-Resisting Equipment, levels 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, plus AP. It also covers all three classifications outlined in the National Institute of Justice (NIJ), and MIL-SAMIT Ballistic Standards.

B Related Requirements

1. Division 03 Concrete
 - a. 03 00 00 Concrete
2. Division 08 Openings
 - a. 08 34 56 Security Gates
3. Division 28 Electronic Safety and Security
 - a. 28 10 00 Access Control
4. Division 31 Earthwork
 - a. 31 60 00 Special Foundations and Load Bearing Elements

1.02 REFERENCES

A Reference Standards

1. Underwriters' Laboratories (UL)
 - a. UL 752 - Standard for Bullet-Resisting Equipment
 - 1) Level 1: 9 mm, 124 grain, full metal copper jacket with lead core; 1175 -1293 ft/sec;
3 shots
 - 2) Level 2: .357 Magnum, 158 grain, jacketed lead soft point; 1250 - 1375 ft/sec;
3 shots
 - 3) Level 3: .357 Magnum, 240 grain, lead semi-wadcutter gas checked; 1350 - 1485 ft/sec;
3 shots
 - 4) Level 4: 30 30-06, 180 grain, lead semi-wadcutter gas checked; 2540 to 2794 ft/sec;
1 shot
 - 5) Level 5: .30 7.62, 150 grain, full metal copper jacket with lead core; 2750 to 3025 ft/sec.
1 shot
 - 6) Level 6: 9 mm, 124 grain, full metal copper jacket with lead core; 0400 - 1540 ft/sec;
5 shots
 - 7) Level 7: .223 5.56, 55 grain, full metal copper jacket with lead core; 3080 to 3388 ft/sec.
5 shots
 - 8) Level 8: .30 7.62, 150 grain, full metal copper jacket with lead core; 2750 to 3025 ft/sec
5 shots

- 9) Level 9: .30 cal. 30-06 M2 AP, 166 grain, full metal jacket; 2,715 to 2,987 ft/sec.
1 shot
 - 10) Level 10: .50 cal FMJ Military Ball, 709.5 grain, full metal jacket; 2,810 to 3,091 ft/sec.
1 shot
 - 11) Level 10AP (Customized): .50 cal M2 AP Military Ball, 709.5 grain; 2,810 to 3,091 ft/sec.
1 shot
 - 12) Level 1: Thru 3 SG 12 gauge 2 $\frac{3}{4}$ "
1 shot
 - 13) Level 1: Thru 3 SG 12 gauge Buckshot
1 shot
2. National Institute of Justice (NIJ)
 - a. NIJ Standard 0108.01 Ballistic Resistant Protective Materials, Armor Types I , II, III
 3. MIL-SAMIT Ballistic Standards
 - a. MIL-SAMIT .30 7.62 NATO, 147 grain M80; 2750 to 2850 ft/sec
25 shots
 - b. MIL-SAMIT .30 7.62 NATO, 150 grain M61 AP; minimum of 2800 ft/sec
25 shots
 4. ASTM International
 - a. ASTM B117 - Practice for Operating Salt-Spray (Fog) Apparatus
 - b. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes
 - c. ASTM D822 - Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus

1.03 SUBMITTALS

- A Product Data
 1. Manufacturer's printed or electronic data sheets
 2. Manufacturer's installation and operation manuals
 3. Independent testing agency certification of product performance satisfactory to Owner's representative.

1.04 QUALIFICATIONS

- A Manufacturer's products shall be manufactured in the United States of America.

END OF SECTION

PART 2 PRODUCTS

2.01 EQUIPMENT

- A Manufacturer: Bullistic Barriers, LLC
1406 West Kings Highway
Gap, PA 17527
Phone: +1 717 869-2775
Web: www.bullisticbarriers.com
E-mail: office@bullisticbarriers.com
- B Models: Level 10 Fence
- C Alternates: None

2.02 DESCRIPTION

- A The Level 10 bullet-resistant fence ("fence") shall be an aluminum fence skeleton, furnished with all components required to provide a complete structure including panels, panel tops, posts, post caps, and gates.

2.03 MATERIAL

- A Material for the fence structure, to include posts, panel skins and panel tops, shall be aluminum conforming to ASTM B221.
1. Aluminum extrusions shall conform to Alloy and Temper Designation 6063 T6 or 6061 T6.
- B The engineered panel shall be processed through a 7 step, blasting, multi-stage pretreatment, prime and powder-coat topcoat. Topcoat shall be Tiger Drylac AAMA 2604 Super Durable Series 38 Argento 314 38/90018.
- C Aluminum castings shall be used for post caps.
In a coastal environment, specify Alloy 535 for maximum corrosion resistance.

2.04 CONSTRUCTION

- A Posts to accept the fence panels shall be 8"x 12" H-posts.
- B Post spacing shall be 10 feet on-center unless otherwise noted in drawings.
10 foot is typical spacing value for a 119 inch wide panel with a 2 foot louver top. Consult factory for additional height options and spacing requirements.
- C The fence panel shall be 5 7/8^{ths}-inch nominal thickness in a tongue and groove design.
- D Footing as specified is calculated to 90mph wind load.

2.05 PERFORMANCE

- A The fence shall meet the following ballistic requirements:
- a. UL-752 Levels 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, plus 10AP
 - b. NIJ-I, NIJ-II, NIJ-III, 2 levels of ammo, 5 shots
 - c. 12 GA. shotgun, 2 ¾ slug and buck shot
 - d. MIL-SAMIT .30 7.62 NATO

2.06 AESTHETIC

1. The Manufacturer shall offer as a minimum the following appearance options:
 - a. Cascade
 - b. Classic

- c. Contemporary
- d. Louvre
 - d1. Louvre can be placed at a 45-degree angle for wind to pass through but engineered to provide Level 3 Bullet Resistance on a horizontal plane.
 - d2. Louvre can be placed at a 45-degree angle for wind to pass through but engineered to provide Level 8 Bullet Resistance on a horizontal plane.
- e. Modern
- f. Villanova

END OF SECTION

PART 3 EXECUTION

3.01 INSTALLERS

- A Installers will be pre-accredited by Bullistic Barriers LLC.
- B Contractor personnel shall comply with all applicable state and local licensing requirements.

3.02 PRODUCT HANDLING AND STORAGE

- A Upon receipt at the job site, all materials shall be verified to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a way that will ensure protection from damage, weather, vandalism and theft.

3.03 PREPARATION

- A All new installation shall be laid out by the contractor in accordance with the construction plans.

3.04 INSTALLATION

- A Contractor shall follow Manufacturers recommended installation guidelines.
- B Fence Installation
 - 1. Post holes shall be dug, and posts shall be installed in accordance with engineered specifications. Details include rebar location/ diameter/ number, hole depth/ width, and properly concreted.
 - 2. Drilling holes, cutting open, or otherwise tampering with the ballistic integrity of the manufactured Level 10 panel shall be prohibited without the clear written consent of the Manufacturer.
- C Gate Installation
 - 1. Gate posts shall be spaced according to the manufacturers' gate drawings. Manufacturer's provided hinges and hardware shall be installed in conformance with intended application.

END OF SECTION