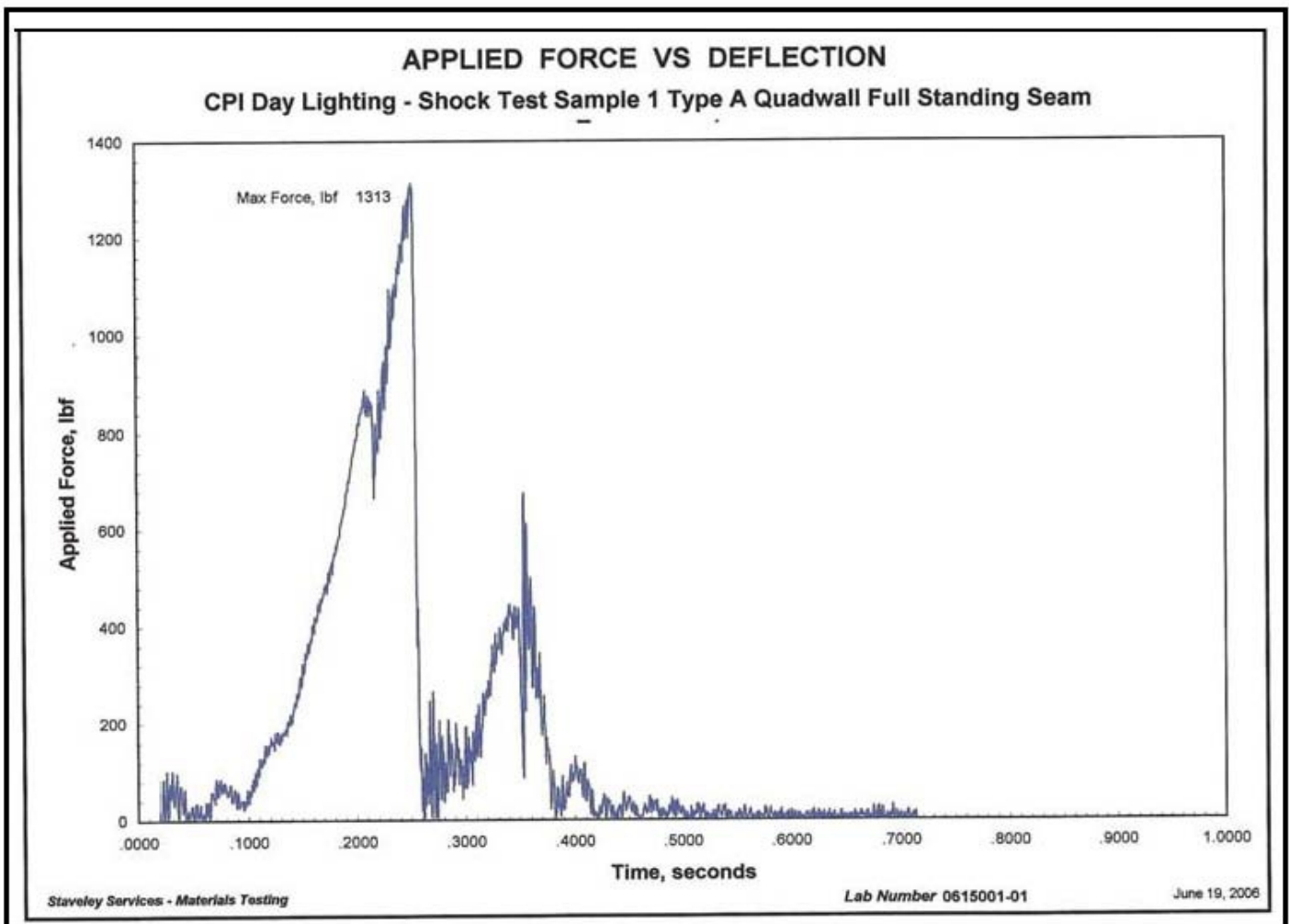


CPI Daylighting Anti-Terrorism Blast Resistant Systems

The CPI UniQuad/Quadwall system has been custom engineered for projects requiring anti-terrorism blast resistance, to meet United States Department of Defense requirements per UFC 4-010-01. Each proposed Anti-Terrorism Blast Resistant project must be specifically engineered per site conditions and DOD standards in order to meet these exacting requirements.

United States military projects have selected this CPI product for their daylighting projects that require Anti-Terrorism Blast Resistant systems.

Please request CPI's 3 part Anti-Terrorism Blast Resistant System specification to review additional product details.



Example of Shock Tests on a Quadwall system for 1313 LBF

Table 2-1 Levels of Protection – New and Existing Buildings

| Level of Protection | Potential Structural Damage | Potential Door and Glazing Hazards | Potential Injury |
|---------------------------|--|---|--|
| Below AT standards | Severely damaged. Frame collapse/massive destruction. Little left standing. | Doors and windows fail and result in lethal hazards | Majority of personnel suffer fatalities. |
| Very Low | Heavily damaged - onset of structural collapse: Major deformation of primary and secondary structural members, but progressive collapse is unlikely. Collapse of non-structural elements. | Glazing will break and is likely to be propelled into the building, resulting in serious glazing fragment injuries, but fragments will be reduced. Doors may be propelled into rooms, presenting serious hazards. | Majority of personnel suffer serious injuries. There are likely to be a limited number (10% to 25%) of fatalities. |
| Low | Damaged – unrepairable. Major deformation of non-structural elements and secondary structural members and minor deformation of primary structural members, but progressive collapse is unlikely. | Glazing will break, but fall within 1 meter of the wall or otherwise not present a significant fragment hazard. Doors may fail, but they will rebound out of their frames, presenting minimal hazards. | Majority of personnel suffer significant injuries. There may be a few (<10%) fatalities. |
| Medium | Damaged – repairable. Minor deformations of non-structural elements and secondary structural members and no permanent deformation in primary structural members. | Glazing will break, but will remain in the window frame. Doors will stay in frames, but will not be reusable. | Some minor injuries, but fatalities are unlikely. |
| High | Superficially damaged. No permanent deformation of primary and secondary structural members or non-structural elements. | Glazing will not break. Doors will be reusable. | Only superficial injuries are likely. |

Table B-1 Minimum Standoff Distances for New and Existing Buildings

| Location | Building Category | Standoff Distance or Separation Requirements | | | |
|---|----------------------------|--|---|--|--|
| | | Applicable Level of Protection | Conventional Construction Standoff Distance | Effective Standoff Distance ⁽¹⁾ | Applicable Explosive Weight ⁽²⁾ |
| Controlled Perimeter or Parking and Roadways without a Controlled Perimeter | Billeting | Low | 45 m ⁽³⁾ (148 ft.) | 25 m ⁽³⁾ (82 ft.) | I |
| | Primary Gathering Building | Low | 45 m ⁽³⁾⁽⁴⁾ (148 ft.) | 25 m ⁽³⁾⁽⁴⁾ (82 ft.) | I |
| | Inhabited Building | Very Low | 25 m ⁽³⁾ (82 ft.) | 10 m ⁽³⁾ (33 ft.) | I |
| Parking and Roadways with a Controlled Perimeter | Billeting | Low | 25 m ⁽³⁾ (82 ft.) | 10 m ⁽³⁾ (33 ft.) | II |
| | Primary Gathering Building | Low | 25 m ⁽³⁾⁽⁴⁾ (82 ft.) | 10 m ⁽³⁾⁽⁴⁾ (33 ft.) | II |
| | Inhabited Building | Very Low | 10 m ⁽³⁾ (33 ft.) | 10 m ⁽³⁾ (33 ft.) | II |
| Trash Containers | Billeting | Low | 25 m (82 ft.) | 10 m (33 ft.) | II |
| | Primary Gathering Building | Low | 25 m (82 ft.) | 10 m (33 ft.) | II |
| | Inhabited Building | Very Low | 10 m (33 ft.) | 10 m (33 ft.) | II |

(1) Even with analysis, standoff distances less than those in this column are not allowed for new buildings, but are allowed for existing buildings if constructed/retrofitted to provide the required level of protection at the reduced standoff distance.

(2) See UFC 4-010-02, for the specific explosive weights (kg/pounds of TNT) associated with designations – I and II. UFC 4-010-02 is For Official Use Only (FOUO)

(3) For existing buildings, see paragraph B-1.1.2.2 for additional options.

(4) For existing family housing, see paragraph B-1.1.2.2.3 for additional options.

Figure B-1 Standoff Distances and Building Separation – Controlled Perimeter

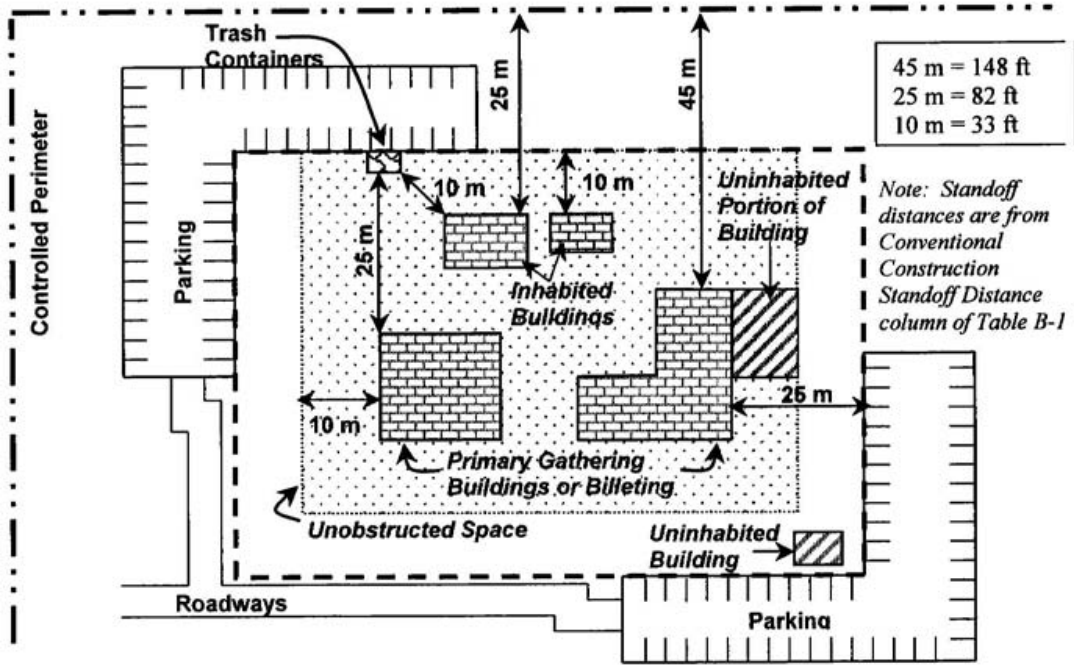


Figure B-2 Standoff Distances and Building Separation – No Controlled Perimeter

