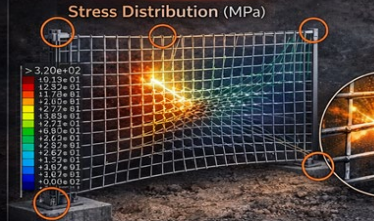
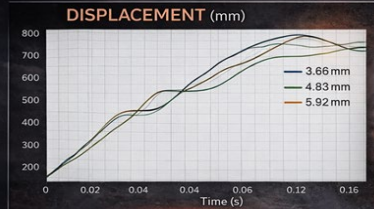


WELDED MESH PERFORMANCE MODELS

RENDERED FINITE ELEMENT ANALYSIS (FEA)



Large Deformation Membrane Behavior



- ✓ Membrane Load Redistribution
- ✓ Energy Dissipation
- ✓ Ductile Performance
- ✓ Projectile Arrest
- ✓ Non-Catastrophic Failure

BEAR MOUNTAIN SECURITY
SECURITY | DESIGN | INNOVATION

BLAST-MITIGATING PERIMETER BARRIER SYSTEM

ABSORB • DIFFUSE • CONTAIN • PRESERVE PERIMETER INTEGRITY

INTEGRITY MAINTAINED

- ✓ No Catastrophic Failure
- ✓ Blast Energy Dissipated
- ✓ Perimeter Preserved

COMPARISON

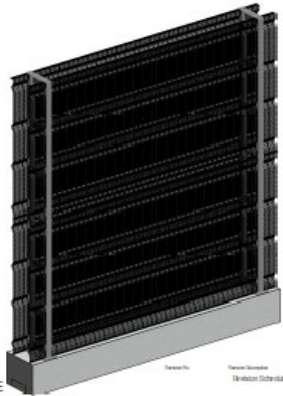
Traditional Solid Fence vs. System

BLAST ENERGY DISSIPATION

Impact → Mesh Deformation → Energy Dissipation → Containment

Controlled Deformation
✓ Barrier Maintained

4 Section
1:10



2 3D ROCKET FENCE



Bear Mountain Security
ANTI-PROJECTILE BARRER

BLAST-MITIGATING PERIMETER BARRIER SYSTEM

ABSORB • DIFFUSE • CONTAIN • PRESERVE PERIMETER INTEGRITY



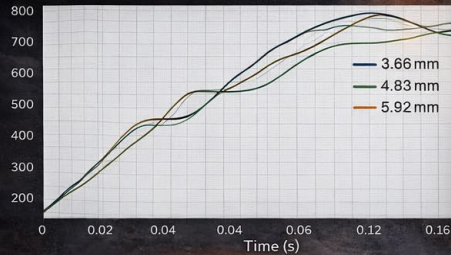
BLAST SCENARIO WITH OVERPRESSURE MODEL AND PROJECTILE PROTECTION

- **Blast Impact Initiation:**
An explosive event generates a high-pressure wave and debris that directly impacts the SecuriMesh barrier.
- **Controlled Mesh Interaction:**
The welded mesh panel absorbs the initial force, preventing immediate rupture or panel blowout.
- **Energy Dissipation & Venting:**
The open mesh architecture allows blast energy to pass through and disperse, reducing reflected pressure and peak loading on the structure.
- **Progressive Deformation:**
The mesh undergoes controlled deformation, redistributing forces across the panel and into the supporting posts rather than concentrating stress at a single failure point.
- **Projectile Risk Reduction:**
Incoming debris loses velocity as it interacts with the mesh, reducing penetration capability and limiting downstream hazard.
- **Structural Continuity Maintained:**
The panel remains engaged with the C-channel posts and base-plate anchors, avoiding catastrophic failure or breach formation.
- **Perimeter Integrity Preserved:**
Despite the blast event, the barrier continues to function as a security perimeter, maintaining delay against intrusion.

WELDED MESH PERFORMANCE MODELS

RENDERED FINITE ELEMENT ANALYSIS (FEA)

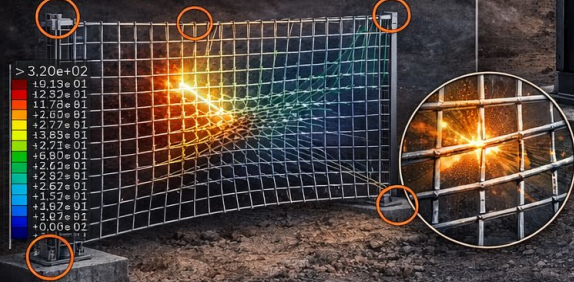
DISPLACEMENT (mm)



Large Deformation Membrane Behavior



Stress Distribution (MPa)



- ✓ Membrane Load Redistribution
- ✓ Energy Dissipation
- ✓ Ductile Performance
- ✓ Projectile Arrest
- ✓ Non-Catastrophic Behavior

BLAST SCENARIO WITH OVERPRESSURE MODEL AND PROJECTILE PROTECTION

- **Membrane load redistribution:** Mesh spreads impact forces across the panel, avoiding localized failure.
- **Energy dissipation:** Progressive deformation absorbs and reduces blast-driven energy.
- **Ductile performance:** High strain capacity enables deformation without rupture.
- **Projectile arrest:** Captures and decelerates debris without perforation.
- **Non-catastrophic behavior:** Maintains structural integrity and perimeter function after impact.



Prevents Catastrophic Failure

Maintains structural integrity under explosive loading, avoiding full panel disengagement and immediate breach pathways.



Blast Energy Dissipation Through Mesh Architecture

Reduces reflected pressure and distributes force, limiting damage to both the barrier and adjacent infrastructure.



Delay Against Forced Entry

Even under shaped charge attack, the system preserves perimeter denial, increasing adversary time, exposure, and likelihood of interdiction.