# MegaShield™

Modular Concrete Block System



# MegaShield™

## Modular Concrete Block System

Product Standard and high-density, oversized, concrete blocks

Usage Interlocking modular units

Construction Linear accelerator vaults, proton therapy rooms, HDR rooms, industrial x-ray room applications, and other modalities requiring shielding materials

Dimensions 2'H x 2'D x 6'W, 2'H x 2'D x 4'W, 2'H x 2'D x 2'W

Construction 147 lbs/cu ft – standard; 240 lbs/cu ft – high density

Density 4000 psi



#### TECHNICAL SPECIFICATIONS

Dimensions

2'H x 2'D x 6'W, 2'H x 2'D x 4'W, 2'H x 2'D x 2'W

Construction

147 lbs/cu ft – standard; 240 lbs/cu ft – high density

Density

4000 psi

Manufacturing

Interlocking, standard and high-density, concrete bricks with 1/4" mortared gap

Compliance

Meets all regulatory and safety compliance requirements

#### Description

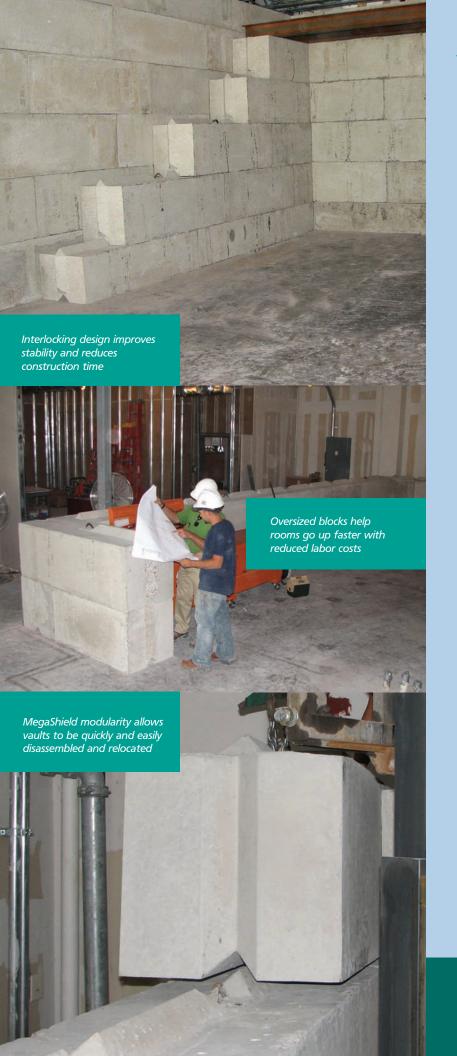
NELCO's MegaShield modular concrete block system is an ideal solution for facilities requiring a temporary or permanent shielded vault. NELCO designed the MegaShield system to address changing facility and business needs.

Vaults can be assembled quickly and easily wherever they are needed. On leased properties where terms require the space to be returned in original condition, these blocks can quickly and easily be disassembled for fast relocation, removal, and reuse. For permanent vaults, MegaShield's larger size and interlocking modularity help cut construction costs and reduce time-to-completion.

Each oversized block is pre-cast of concrete and molded to interlock for strength and superior shielding. NELCO has the ability to pre-cast concrete blocks in several densities to suit the specific shielding requirements of various facilities. In addition, NELCO owns and operates all forms and casting molds, making it possible to manufacture blocks as close to the job site as possible to reduce construction time and shipping costs.

All NELCO concrete block products are manufactured under strict NELCO quality guidelines.

W W W . N E L C O - U S A . C O M 1 - 8 0 0 - N E L C O - 13



#### Modularity

modular block vaults are easily installed, relocated, and/or removed

### Time Savings

modular blocks pre-cast independent of the permitting process allowing for a shorter construction schedule when compared to traditional poured vaults

#### Fiscal Advantages

classified as capital equipment for possible tax savings

#### Versatility

ideal for vaults within an existing facility or freestanding bunkers

#### Design Flexibility

MegaShield modular block and hybrid systems available for ceiling and primary beam areas

#### Locally Manufactured

blocks manufactured and trucked locally to job sites

#### Compliance

shielded for use with neutron and gamma radiation

#### Structural Integrity

meets all seismic and structural requirements

#### **Installation Options**

NELCO-provided construction crews ensure a smooth and efficient installation process

#### **Quality Assurance**

blocks produced in a controlled environment and tested for weight and density

#### Price

competitively priced when compared to traditional cast-in-place concrete bunkers

### **Environmentally Friendly**

concrete is nontoxic, environmentally safe, and composed of natural materials





### Optional Products and Services - Complete vault construction

#### Site Work

NELCO can provide design and construction of the site work through arrangements with local engineers and contractors, or advise and direct the design and construction, as a Construction Manager, on the owner's behalf. Alternatively, NELCO can provide a pre-engineered vault and work with owner-selected design and construction firms.

#### Foundation

The foundation, along with underground utilities, is a non-removable component of the design. The foundation incorporates cable, duct, and piping pathways that provide shielded cable and pipe access to the vault interior. NELCO also requires specific seismic/wind load structural elements for the modular vault system. These elements require specific design criteria that must be properly incorporated into the construction documents. NELCO can provide foundation construction as a Design/Build element, or direct the construction of the NELCO design as the Construction Manager.

#### Vault

Each MegaShield Modular Concrete Block System consists of wall and ceiling pre-cast units, supplemental shielding (if required), a swing or slide door unit, and assembly by trained NELCO personnel. Optional products and services include full architectural, structural, physics, site work, foundation, interior finish, and mechanical and electrical systems. Wall and ceiling units can be cast at NELCO's factory or on site.

#### Interior Finish

Interior finishes can be incorporated into NELCO's scope of work or be provided by the owner's resources. Some elements of the floors, walls, and ceilings must be coordinated with other components of the overall design created by NELCO.

#### Project Management

As a value-added resource to both contractors and owners, NELCO has an extensive background in the construction of medical and industrial facilities. Our experience allows us to provide insight into the coordination and selection of design elements, chilled water requirements, HVAC, power, safety, furnishings, and patient monitoring systems. Our team of architects, design engineers, and construction experts are always ready to assist on-site teams to assure project success.

Other details regarding manufacturing, materials, installation requirements, structural specifications, custom options, financing, and physics may be obtained from your NELCO representative.

Lists of installed references are available upon request.

