SECTION 08 33 00
BLAST RESISTANT OVERHEAD COILING DOORS

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

A. Provide all materials, labor, equipment and services necessary to furnish, deliver and install all work under this section as shown on the contract documents, specified herein, and as specified by the job conditions.

1.02 DESCRIPTION

A. Related work specified elsewhere:

1. Metal Fabrication.	Section 05 50 00
2. Rough Carpentry.	Section 06 10 00
3. Access Panels & Doors:	Section 08 31 00
4. Painting:	Section 09 91 00
5. Electrical:	Division 26

1.03 SUBMITTALS

A. Procedures: Furnish submittals in accordance with the general requirements specified.

B. Shop Drawing: Furnish shop drawings for architect's approval. Include elevations, sections, and details indicating dimensions, materials, finishes, conditions for anchorage and support of each coiling door.

C. Certifications and Testing:
1. Tested and evaluated by Underwriters Laboratories or Intertek testing laboratory for product compliance in accordance with ASTM F2927-21, Standard Test Method for Door Systems Subject to Airblast Loadings.
2. Listed, labeled and certified by Underwriters Laboratories or Intertek testing laboratory for product compliance with ASTM F3038-21 Standard Test Method for Timed Evaluation of Forced Entry Resistant Systems with a rating of 60 minutes.
3. Listed and certified by Underwriters Laboratories or Intertek testing laboratory in accordance with UL 752, Standard for Safety Bullet-Resisting Equipment to a Level 1 Ballistic Resistance Rating.

D. Product Literature: Submit manufacturer's technical literature describing the product to be used under this section.

E. Maintenance and Operating Manuals: Furnish complete manuals describing the materials, devices and procedures to be followed in operating and maintaining all blast resistant overhead coiling doors under this section. Include manufacturer's brochures and parts lists describing the actual materials used in the product.

1.04 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable blast resistant requirements as well as laws, codes, ordinances and regulations of federal, state and municipal authorities having jurisdiction.

B. Manufacturer Requirements: Manufacturer shall have been in the business of and have experience in manufacturing overhead coiling protective door assemblies as well as providing dependable credible service for a minimum of ten (10) years.

C. Operational Cycle Life: Blast resistant overhead coiling doors shall be designed and constructed for a minimum 10,000 operating cycles for the life of the door assembly. Cycles shall be verifiable by a non-resettable cycle counter located within the door’s motor operator control panel.

1.05 DELIVERY, STORAGE AND HANDLING

A. General: Deliver and store materials in manufacturer's original packaging, labeled to show name, brand and type. Store materials in a protected dry location off the ground in accordance with manufacturer's instructions.

1.06 WARRANTY

A. Blast Resistant Overhead Coiling Door Warranty: Provide Two (2) Year, 10,000 Cycle Warranty, effective as of the date of shipment, signed by the manufacturer and installer agreeing to repair or replace work which has failed as a result of defects in materials or workmanship. Upon notification within the warranty period, such defects shall be repaired at no cost to the owner.

PART 2 PRODUCTS

2.01 BLAST RESISTANT OVERHEAD COILING DOORS

A. Manufacturer: Blast resistant overhead coiling doors shall be the model BlastShield™ BL6000-D as manufactured by McKEON. Assembly shall be tested by Underwriters Laboratories or Intertek testing laboratory in accordance with ASTM 2927-21 including a 60 Minute Forced Entry Resistance Rating and a Level 1 Ballistic Resistance Rating.

2.02 MATERIALS

A. Curtain: Shall be assembled of metal composite interlocking slats formed of ZX curtain slat profile sections of thickness as required to sustain the required design Peak Reflected Pressure under the necessary Damage Level Category.

B. Bottom Bar Stabilizer: Shall consist of a custom fitted structural steel assembly formed to fit and engage the curtain assembly, maximize rigidity and act as the interface when it meets the fully closed position.

C. Guides: Each guide assembly shall be fabricated of structural steel support angles of a minimum 4” x 4” and guide retaining angles with a maximum 6” depth to retain curtain in the guides under the design Peak Reflected Pressure.

D. Mounting Brackets: Fabricated of hot rolled steel plates, brackets shall be provided to house, support and sustain ends of the counterbalance barrel assembly.

E. Counterbalance Assembly: Blast resistant overhead coiling door shall be counterbalanced by means of adjustable steel helical torsion springs attached to shaft enclosed in pipe with required mounting blocks or rings for attachment of curtain. Grease sealed bearings or self-lubricating graphite bearings shall be attached to the spring barrel which shall be fabricated of hot formed structural quality carbon steel seamless pipe.

F. Electric Motor Operator: Door shall be provided with a compact power unit designed and laboratory listed by the door manufacturer. Operator shall be equipped with an adjustable screw-type limit switch to break the circuit at termination of travel. High efficiency planetary gearing running in an oil bath, shall be furnished together with a centrifugal governor, magnetic operated brake and a fail-safe magnetic release device, completely housed to protect against damage, dust and moisture. An efficient overload protection device, which will break the power circuit and protect against damage to the motor windings shall be integral with the unit. Operator is to be housed in a NEMA type 1 enclosure.
   a. Motor: Shall be intermediate duty, thermally protected, ball bearing type with a class A or better insulation. Horsepower of motor is to be 1/2hp minimum or of manufacturer's recommended size, whichever is greater.

b. Starter: Shall be size "0" magnetic reversing starter, across the line type with mechanical and electrical interlocks, with 10 amp continuous rating and 24 volt control circuit.
c. Reducer: Planetary gear type, 80% efficiency minimum.
d. Cycle Counter: Non-resettable operational cycle counter.

G. Control Station: Shall be provided as a three position push button control station marked open, close and stop that is active during normal and emergency conditions. The control station shall remain operable as long as there is no main power failure to the motor operator.
H. Finish: After completion of fabrication, clean all metal surfaces to remove dirt and chemically treat to provide for paint adhesion. Curtain assembly shall be of a Dusky Charcoal finish, all other steel components to receive an industrial enamel liquid paint prime coat finish of McKEON Sterling Gray finish.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine surfaces and field conditions to which this work is to be performed and notify architect if conditions of surfaces exist which are detrimental to proper installation and timely completion of work.

B. Verify all dimensions taken at job site affecting the work. Notify the architect in any instance where dimensions vary.

C. Coordinate and schedule work under this section with work of other sections so as not to delay job progress.

3.02 INSTALLATION

A. Perform installation using only factory approved and certified representatives of the coiling door manufacturer.

B. Install coiling door assemblies at locations shown in perfect alignment and elevation, plumb, level, straight and true.

C. Adjust coiling door installation to provide uniform clearances and smooth non-binding operation.

D. Install wiring in accordance with applicable local codes and the National Electrical Code Standard. Materials shall be UL listed.

3.03 PROTECTION AND CLEANING

A. Protect installed work using adequate and suitable means during and after installation until accepted by owner.

B. Remove, repair or replace materials which have been damaged in any way.

C. Clean surfaces of grime and dirt using acceptable and recommended means and methods.