

REQUEST FOR PROPOSAL

2019 Ballistic Film

Selected areas on four educational buildings
(1 Elementary, 2 Middle School, 1 other)

Bid Closing Date: October 1, 2019

Bid Closing Time: 2:00 pm CST

Park Hill School District reserves the right to reject any or all proposals and to waive informalities or irregularities in any proposal.



August 28, 2019

Dear Contractor:

The Park Hill School District (DISTRICT) is seeking proposals from qualified contractors (CONTRACTOR) for purchase and installation of ballistic film at various schools in the Park Hill School District.

Bids are to be returned to Jim Rich, Park Hill School District, 8500 NW River Park Drive, Pillar 116, Parkville, MO 64152. All bids are to be returned before 2:00 p.m., October 1, 2019. The bid sheet may be emailed to RichJ@parkhill.k12.mo.us or faxed to 816-359-4109. Please mark your bid "Bid Proposal-Ballistic Film". Your bid amount will be placed on the enclosed specification sheet and must be signed by an authorized representative of your company.

Please call 816-359-4100 to schedule a time if you need to look at the schools.

If your company has not done work in the Park Hill School District in the past three school years, please provide a school client contact list including phone numbers and contact names.

The DISTRICT reserves the right to reject any and all proposals and to waive informalities.

You may access the specifics of the project on our web site at: www.parkhill.k12.mo.us > DISTRICT INFORMATION > REQUESTS FOR PROPOSAL AND BIDS > OPERATIONS REQUESTS FOR PROPOSAL & BIDS

Sincerely,



Jim Rich
Director of Operations

General Notes

1. Installers must be certified and approved to install the selected product by the manufacturer.
2. Product and installation must comply with attached specifications.
3. Bid must be submitted on enclosed Bid Form and signed by an authorized company representative.
4. We estimate the total square feet for installation will be approximately 966.
The Contractor is responsible for actual measurements.

BID FORM – Ballistic Film

PACKAGE 1: Contractor is responsible for actual measurements

Installed Amount per square foot \$ _____

COMPANY _____

ADDRESS _____

PHONE _____ FAX _____

EMAIL _____

PRINT NAME _____

SIGNATURE _____



SECTION 088700 SECURITY GLAZING FILMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Security Glazing film applied to existing glazing assemblies.

1.3 CODES AND REFERENCES:

- A. WEY-SA-C1 – Standard for shooter/attack certification and forced entry.
- B. GSA Level C – General Services Administration Standard Test Method for Glazing and Window Systems Subject to Dynamic Overpressure Loadings.
- C. ASTM F1642 – Standard Test Method for Glazing and Glazing Systems Subject to Air blast Loadings.
- D. UL972 – Standard for Burglary Resisting Glazing.
- E. EN356 P4 – Testing and Classification of Resistance against Manual Attack.
- F. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- G. 16CFR 1201 - Safety Standard for Architectural Glazing Materials; Consumer Products Safety Commission; current edition.
- H. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test; 2010.
- I. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials; 2013a.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Glazing film manufacturer specializing in manufacture of security glazing films with minimum 10 years successful experience.

1.5 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Test Reports: Detailed reports of full-scale chamber tests to specified criteria, using assemblies identical to those required for this project.

- C. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Record of product certification for safety requirements.
 - 2. Preparation instructions and recommendations.
 - 3. Storage and handling requirements and recommendations.
 - 4. Installation methods.
- D. Samples: For each film product to be used, minimum size 4 inches by 6 inches, representing actual product, color, and patterns.
- E. Specimen warranty.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufactures unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent—based materials, in accordance with requirements of authorities having jurisdiction.

1.7 FIELD CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. Provide 15 Year manufacturers replacement warranty to cover film against peeling, cracking, discoloration, and deterioration.

PART 2 PRODUCTS

2.1 MANUFACTURER'S

- A. Basis of Design: Armoured One, LLC., Which is located at: 386 North Midler Ave. Syracuse, NY 13206. Tel: 315-720-4186; Email:info@armouredone.com; Web: www.armouredone.com.
- B. Substitutions: Must be an approved equal by Owner.
- C. Requests for substitutions will be considered in accordance with provisions in Division 1.

2.2 MATERIALS

- A. Security Glazing Film:
 - 1. Transparent polyester film for permanent bonding to glass.
 - 2. Final installed product must be a minimum of 0.023 inches (23 Mil) thick.
 - a. Installing multiple layers of thinner film to accomplish the required thickness is not allowed.
 - 3. Adhesive Type: Pressure sensitive.
 - 4. Tensile Strength: ASTM D-882, 32,000 psi minimum.

5. Breaking Strength: ASTM D-882, 640 lbs. / inch.
 6. Elongation at Break: ASTM D-882, 230%
 7. Haze: ASTM D1003, <4%
 8. Color b: ASTM D2244, 4.2
 9. Visible Light Transmission: 87%
 10. Visible Light Reflected (Int): 12%
 11. Visible Light Reflected (Ext): 12%
 12. UV Block:>99%
 13. Total Solar Energy Reflected: 11%
 14. Total Solar Energy Transmitted: 77%
 15. Total Solar Energy Absorbed: 12%
 16. Shading Coefficient: 0.93
 17. Total Solar Energy Rejected: 19%
 18. Solar Heat Gain Coefficient: 0.81
 19. U-Value Winter: 1.03
 20. K-Value Winter: 5.85
 21. Glare Reduction: 3%
 22. Surface Burning Characteristics: Flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84 (Class A).
- B. Retrofit existing glazing assemblies to provide impact resistance and forced/attack resistance complying with WEY-SA-C1, ANSI Z97. I and CPSC 16 CFR 1201 Category II, ASTM E330, UL972, EN356 P4A, and GSA Level C as specified:
- C. Provide supplemental anchoring system as required to meet forced entry resistance requirements.
- D. Light Transmission of Film Applied on 1/4-inch-Thick Clear Annealed Glass:
1. Visible light Transmittance: 86 percent.
- E. Anchoring System: DOW 995 or GE SCS2000 SilPruf Structural Sealant with high impact styrene trim.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Field -Applied Film: Verify that existing conditions are adequate for proper application and performance of film.
- B. Examine glass and frames, insure that existing conditions are adequate for proper application and **Performance of film.**
- C. Verify glass is not cracked, chipped, broken, or damaged.
- D. Verify that frames are securely anchored and free of defects.

3.2 PREPARATION

- A. Clean glass of dust, dirt, paint, oil, grease, mildew, mold, and other contaminants that would inhibit adhesion.
- B. Immediately prior to applying film, thoroughly wash glass with neutral cleaning solution.
- C. Protect adjacent surfaces.
- D. Do not begin installation until substrates have been properly prepared.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, without air bubbles, wrinkles, streaks, bands, thin spots, pinholes, or gaps, as required to achieve specified performance.
- B. Accurately cut film with straight edges to required sizes allowing 1/16-inch to 1/8-inch gap at perimeter of glazed panel unless otherwise required by anchorage method.
- C. Seams. Seam film only as required to accommodate material sizes; seam without overlaps.
- D. Clean glass prior to film installation with neutral cleaning solution.
- E. Peel back release liner and apply film to glass. Using squeegees, push out solution between film and glass.
- F. Once film is installed, anchor the edges of the film by applying approved structural sealant and high impact styrene to the edges of the frames and film.
- G. Clean glass and excess structural sealants from finished surfaces
- H. Remove any labels or protective covers.

3.4 FILM VERIFICATION

- A. Awarded contractor will be required to verify that film installed meets the requirements highlighted in this bid. By submitting a bid, you as the contractor understand that three pieces of glass, chosen at random will be removed and film applied will be measured to verify that film installed meets specifications as requested. Film may need to be removed as part of the verification process.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION