HIGH TENSILE ACRYLIC ROOF COATING – (07 56 30)

1. All applicable parts of the General Roofing Specification (07 30 00) shall be included in this section.
2. Assessment of High Tensile Acrylic Roof Coating Systems
   - 2.1. A High Tensile Acrylic Roof Coating restoration or preservation system shall be determined as failed when any of the following conditions exist:
     - 2.1.1. When the coating system loses adhesion to the substrate to which it has been installed or between application of coats of coating.
     - 2.1.2. When the coating system surface cracks due to faulty products within the coating system or improper installation of the coating system.
     - 2.1.3. When the coating systems allows water to pass through it and no longer serves to protect the existing roof from moisture intrusion.
     - 2.1.4. When coating blisters are present on sizeable areas of the roof.
   - 2.2. Roof coating manufacturer shall submit the following documents to the Registrant Professional for review prior to having their High Tensile Acrylic Roof Coating being specified:
     - 2.2.1. Product data and safety data sheets.
     - 2.2.2. Test report from independent ASTM accredited testing facility validating compliance of the coating with ASTM D6083.
     - 2.2.3. Sample Copy of ~~10~~20-year no dollar limit (NDL) warranty stating that manufacturer will cover all materials and labor to repair or remove and replace all and any roofing materials that leak or develop failures due to defective coating or faulty installation for the length of the warranty.
     - ~~2.2.4. Fire classification for the proposed coating complying with ASTM E108 per Underwriters Laboratories or another ASTM recognized fire testing facility.~~
     - ~~2.2.5.~~2.2.4. A list of five (5) projects in Arizona where the proposed coating has been installed, including project name, project size, address, owner contact, and year applied.
     - ~~2.2.6.~~2.2.5. A letter from the High Tensile Acrylic Roof Coating Manufacturer stating that the Roofing Contractor is an authorized applicator of the roof coating system.

Formatted: Indent: Left: 1.13", No bullets or numbering

3. Roof Slope Use as defined in Part 7, General Roofing Specification (07 30 00)
   3.1. A Roof Coating System can be used on the following roof slopes:
      3.1.1. Low Slope
      3.1.2. Transitional Slope
      3.1.3. High Slope, in accordance with the manufacturer's limitations and testing data.
   3.2. The recommended minimum slope for High Tensile Acrylic Roof Coatings is ¼" per unit vertical and 12 inches per unit horizontal when possible. The absolute minimum slope for new High Tensile Acrylic Roof Coatings shall be "positive roof drainage". Ponding water is not acceptable.
4. Repair or replacement of existing roof system, not to contradict Part 6, General Roofing Specification (07 30 00).
   4.1. If High Tensile Acrylic Roof Coating system does not meet the criteria established to be acceptable to receive a new High Tensile Acrylic Roof Coating, then the replacement or overlay of the existing roof system with a new roof system is required.
   4.2. If an existing High Tensile Acrylic Coating System is beyond repair, the existing Coating System shall either be removed or isolated with a recovery board before a new roof system is installed.
   4.3. Additional information for what constitutes a failed High Tensile Acrylic Roof Coating Restoration or Preservation System can be found in Part 2 of this Section.
5. Demolition Requirements
   5.1. All items as found in Part 10, General Roofing Specification (07 30 00).
   5.2. No special demolition requirements for High Tensile Acrylic Roof Coating Systems.
6. Back of Parapet Wall Treatment
   6.1. High Tensile Acrylic Roof Coating System shall be spray or roller applied to the parapet walls as required within this Section and by the High Tensile Acrylic Roof Coating Manufacturer.

6.1.1. Height of High Tensile Acrylic Coating System to the back of parapet walls shall be determined by the type of parapet wall surface. High Tensile Acrylic Coating may be terminated beneath the metal wall counter flashing or extend up the back of the parapet wall. If the back of the parapet wall is stucco or a synthetic wall system, the coating shall either terminate beneath the metal parapet wall counter flashing or extend the full height of the back of the parapet wall.

6.1.2. At locations where the High Tensile Acrylic Coating System terminates less than the full height of the parapet wall, the back of the parapet wall surface shall be waterproofed with materials suitable to the substrate.

7. High Wall Treatment

7.1. High Tensile Acrylic Coating System shall be spray or roller applied to properly prepare high wall substrate.

7.2. Height of High Tensile Acrylic Coating System on high walls is unlimited.

7.3. If the High Tensile Acrylic Coating System can be seen from the ground, custom color High Tensile Acrylic Roof Coating shall be installed to match the surrounding substrate color. If a color match is not practical, the Coating System shall be terminated to a height where the High Tensile Acrylic Coating System cannot be seen from the ground.

7.4. Areas where the High Tensile Acrylic Coating System does not extend the full height of the high wall, the high wall surface shall be waterproofed with materials compatible with the substrate.

8. Components of High Tensile Acrylic Roof Coating System

8.1. Biodegradable Cleaner

8.1.1. Biodegradable cleaner to be used where required to ensure the existing roof surface is in clean condition to receive the new High Tensile Acrylic Coating System.

8.2. Fabric Adhesive & Bleed Block Primer

8.2.1. Fabric Adhesive & Bleed Block Primer to be used on asphaltic surfaces to increase the adhesion of the new High Tensile Acrylic Coating System

and prevent asphalt bleed from the existing roof system through the new High Tensile Acrylic Coating System.

8.3. Primer for Other Substrates

8.3.1. Primer as required by High Tensile Acrylic Coating Manufacturer to provide greater adhesion to aluminized asphalt, metal, concrete masonry units (CMU) or other surfaces to receive the High Tensile Acrylic Roof Coating System.

8.4. Self-Flashing SPF Roof Insulation

8.4.1. Self-flashing SPF Roof Insulation is an option to be used to seal parapet walls, pipe penetrations, curbs and other roof top penetrations. SPF shall UL 723 fire rated and 50 psi compressive strength.

8.5. Construction Grade Sealant

8.5.1. Polyurethane sealant, as approved by the coating manufacturer, for use in filling cracks, splits or voids and for sealing reglet counter flashing

8.6. Reinforcement Fabric

8.6.1. Stitch bonded polyester fabric, as supplied by High Tensile Acrylic Coating Manufacturer, for reinforcement at drain/scupper areas, valley lines, pipe penetrations, curbs, split seams, flashings, tears, perimeter areas or for the full reinforcement of the new High Tensile Acrylic Coating System where specified.

8.7. Fluid Applied Reinforcement Acrylic Sealant

8.7.1. Acrylic sealant to be used as an option to stitch bonded fabric on certain detail areas, leveling small rough textured areas and for reinforcing metal flanges at drip edges.

8.8. High Tensile Acrylic Roof Coating

8.8.1. High tensile acrylic coating shall be internally plasticized to provide a permanently flexible waterproof coating system that is fire classified by Underwriters Laboratories or a recognized fire testing agency to comply with ASTM E108 Class A or Class B as required. The high tensile acrylic coating shall meet all requirements of ASTM D6083 and comply with the following physical property requirements:

Volume Solids >55~~50~~%	ASTM D2697
Initial Elongation 340% minimum	ASTM D2370
Initial Tensile Strength 350 PSI	ASTM D2370
Final % Elongation >100%	ASTM D2370
Tear Resistance >100 lb/in.	ASTM D624
Solar Reflective Index (Initial) >100	ASTM E1980
Solar Reflective Index (3 Year Aged) > 85	ASTM E1980
Adhesion Minimum 2.0 PLI	ASTM D903 or C794

8.8.2. No private label coating manufacturers allowed.

8.8.3. The High Tensile Acrylic Roof Coating System shall have a minimum ten (10) year, no dollar limit (NDL) material and labor warranty to be provided by the Roof Coating manufacturer. Fifteen (15) and twenty (20) year no dollar limit (NDL) material and labor warranties are available when required by the Professional Registrant and the Coating Manufacturer.

8.8.4. The minimum dry mil thickness of the High Tensile Acrylic Roof Coating shall be 35 or greater if required by the High Tensile Acrylic Roof Coating Manufacturer for a ten (10) year no dollar limit (NDL) manufacturer material and labor warranty. Fifteen (15) year material and labor warranty shall be a minimum 40 dry mil thickness and twenty (20) year material and labor warranty shall be 45 dry mil thickness or greater if required by the Coating Manufacturer.

8.8.5. The High Tensile Acrylic Roof Coating Manufacturer's guide specification for the proper repairs of the existing roof system, surface preparation and installation of the High Tensile Acrylic Roof Coating System components shall be considered an integral part of this Section. If there is a discrepancy between the specifications and High Tensile Acrylic Roof Coating Manufacturer's requirements, the more stringent requirement will prevail when approved by the Professional Registrant.

9. Closeout Documents

9.1. All items found in Part 16, General Roofing Specification (07 30 00).

10. Preventive Maintenance Criteria
    10.1. All items found in Part 17, General Roofing Specification (07 30 00).
    10.2. Roof Coating manufacturer shall provide District maintenance personnel training in the proper inspection and housekeeping procedures on an annual basis for the entire warranty period. Any deficiencies observed during the annual inspection shall be documented and reported in writing to the District for either warranty repair or third-party damage repair.
11. Budget Cost Range
    11.1. This part shall apply only to SFB budgeting and economic projections and analysis. Not to be used for anything else.
    11.2. Budget Cost Range High Tensile Acrylic Roof Coating Restoration (Full Fabric System) over Existing Granulated Modified Bitumen or BUR
        11.2.1. 10 Year Manufacturer NDL $2.50 - $3.50 per square foot (Basis of Design)
        11.2.2. 15 Year Manufacturer NDL $2.75 - $3.75 per square foot (Optional)
        11.2.3. 20 Year Manufacturer NDL $3.00 -$4.00 per square foot (Optional)
    11.3. Budget Cost Range High Tensile Acrylic Roof Coating Preservation System (Fabric at Targeted Areas) over Existing Granulated Modified Bitumen or BUR
        11.3.1. 10 Year Manufacturer NDL $2.00 - $3.00 per square foot
        11.3.2. 15 Year Manufacturer NDL $2.25 - $3.25 per square foot
        11.3.3. 20 Year Manufacturer NDL $2.50 - $3.50 per square foot
    11.4. Budget Life Cycle Cost Estimates
        11.4.1. Roof Coating Manufacturer to provide no cost inspection on an annual basis for the term of the warranty.
        11.4.2. Roof Coating System Maintenance to clear the roof of debris and repair minor nicks and damage the roof system = .01 per square foot per year.
        11.4.3. Roof Coatings are sustainable and can be recoated after the warranty period expires. Recoating budget is $1.00 - $1.25 per square foot to receive a new Roof Coating Manufacturer 10 Year NDL Warranty.
~~12. Expected Roof Coating End of Life~~

~~12.1. A properly installed and maintained High Tensile Acrylic Coating System can be sustained at the end of the warranty period by making any repairs needed and installing additional coating to receive another 10 Year Roof Coating Manufacturer NDL Warranty. Based on local roof coating performance of greater than 30 years, the expected End of Life (EOL) of a High Tensile Acrylic Coating Roof System with recoats at the 10-15 year time frame is 30 years or longer.~~

Note: This coating system has not shown great results throughout the roofing industry. It has a lot of water intrusion issues and is recommended to be used only after determining the compatibility on a project-by-project basis.