



PLAYGROUND GRASS SURFACING – 7 Foot Critical Fall Height

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK:

- A. Playground Grass surface systems for surfaces under and around playground equipment including but not limited to the furnishing and installing an artificial grass safety surface over a compacted base. Finished product shall be seamed to provide a resilient continuous surface over the entirety of the project surface. Work includes all labor, materials, tools, equipment and applicable taxes to perform all work and services for a complete and proper installation of the surface.

1.2 REFERENCE SPECIFICATIONS AND STANDARDS:

- A. Materials and methods of construction shall comply with the latest provisions of the following standards:
 1. ASTM F1292-04: Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
 2. ASTM D2859: Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials (Pill Flammability).
 3. ASTM F1951-99: Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
 4. Toxic Characteristic Leaching Procedure (TCLP) by Method 6010B.

1.3 SUBMITTALS:

- A. Provide the following information:
 1. Product Data: Materials certificates, certifying each material item complies with, or exceeds, specified requirements. Certificates of compliance must be signed by materials producer and contractor.
 2. Laboratory Testing Reports: Testing reports for turf material including Impact Attenuation, Flammability, Handicap Accessibility, and Lead (Pb).
 3. Sample: 12” x 12” sample of turf material.
 4. Warranties: Product and maintenance warranties must be provided to the Owner prior to installation.



5. Product verification: Delivery slip and item list for each material shipment, including turf and infill material.
6. Playground Grass Installer Qualifications
 - a. A list of five (5) playground surfacing or similar projects completed with a similar product within the last five (5) years. List shall include names of project representatives and respective telephone numbers. This list shall also contain projects which require the same level of or greater difficulty, e.g. number of poles and cutouts, transitions and other special requirements. These five (5) projects shall have been contracted and installed by the company installing the surface.
 - b. Installer must be IPEMA certified to install the playground surface.

1.4 TESTING OF MATERIALS:

- A. Provide test results from an independent testing laboratory which meet these standards:
 1. ASTM 1292-04: Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment. Impact attenuation test results will be provided to obtain a minimum of seven (7) foot Critical Fall-Height. These test results shall be certified and submitted on the letterhead of an independent testing lab. Impact attenuation test results shall meet or exceed Consumer Product Safety Commission Guidelines for impact attenuation (G-max and Head Injury Criteria "H.I.C."). Test results must be administered and evaluated under the same test and these results must be shown for three drops at each required temperature: 32°, 72°, 120°; yield less than 200 G's and less than 1,000 H.I.C. Only test results from ASTM testing approved laboratories, F8 committee will be acceptable. Approved testing laboratories are TSI and Detroit Testing.
 2. ASTM D2859: Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials (Pill Flammability). Test results
 3. ASTM F1951-99: Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
 4. Toxic Characteristic Leaching Procedure (TCLP) by Method 6010B.

1.5 WORKMANSHIP AND QUALITY ASSURANCE:

- A. The artificial grass is to be installed per MANUFACTURER'S plans and specifications.
- B. All artificial grass and components shall be provided by a single source.



1.6 DELIVERY AND STORAGE OF MATERIALS:

- A. Artificial grass will be delivered in rolls 15' in length, wrapped in plastic. Rubber buffing's, performance pads, drain pads, or foam pads for under the grass will be delivered on pallets or in rolls wrapped in plastic to the job site.
- B. Products will be stored in a dry, secure area.
- C. Guarantee/Warranty of the Material and Workmanship
 - 1. The artificial grass installed under this contract will be warranted for a period of eight (8) years from the date of manufacturing against defects in material or workmanship, resulting in premature wear, deterioration and excessive fading/UV degradation during ordinary and normal use of the product(s). Vandalism and force majeure will not be covered.
 - a. Submit written warranty, by the installer
 - 2. When defective material or workmanship is discovered requiring repair or replacement, all such repair work or replacement work shall be done by the CONTRACTOR at its own expense after written notification is given of such required repairs. However, if the CONTRACTOR fails to comply with the requirements of the above guarantee within reasonable time after notification is given, the owner shall proceed to have the repairs made by others at the CONTRACTOR'S expense.
 - a. Any unsafe conditions that arise shall be secured and maintained by the installer until all required repairs or replacements have been completed.
 - b. All resurfacing will conform in kind and quality to the specifications set forth in the plans and specifications, and will be free of defects in workmanship and material.

PART 2 – PRODUCTS

2.1 DESCRIPTION OF SYSTEM:

- A. Resilient safety surface shall be ProPLAY PLUS-73S as manufactured by Artificial Turf Supply, LLC or equal. Resilient safety surface shall have all of the following requirements independently and collectively:
 - 1. Blades: The blades shall be 100% polyethylene. Primary blades shall be dual-tone green wide bladed monofilament polyethylene, and Secondary blades shall be green texturized polyethylene. Primary blades shall be manufactured with a minimum of 50% anti-microbial yarn and cool plus technology. The anti-microbial agent shall be inherent in yarn production; post-production application of antimicrobial agent shall not be acceptable. Polyethylene blades that are web or honeycomb fibrillated shall not be accepted.



2. Weight: The product face weight will be 69 ounces. With backing, the total weight of the product will be a minimum of 102 ounces.
3. Tufting: The tufting gauge will be 3/8", pile height 1 3/4". Tufting configuration – A/B setup, dual yarn, alternating rows wide monofilament polyethylene and nylon blades.
4. Backing: The backing shall be a multi-layered backing.
 - a. First single layer is an 18 pic polyback construction 7 ounces per square yard. (Stabilized primary backing consisting of polyester, fiberglass and polyurethane).
 - b. Second layer is a 26 ounce per square yard, urethane layer.
 - c. Third layer is an optional EnvironCell 16 ounce fleece backing.
5. Permeability: Turf Product shall meet or exceed vertical drainage capacity of thirty (30) inches of water per hour.
6. Seams: Primary seaming system shall be a comprised of a Geotextile fabric and a urethane based glue as the bond.
7. Synthetic Nailing Strip: A synthetic 2" x 3" or 2" x 4", TREX, Poly-Tuf HDPE or equivalent nailing strip shall be used at all points where the turf system meets a sidewalk or other concrete surface and around each post of the installed playground equipment.
8. Resilient subsurface: Rubber buffing, typically 3/8" or larger, spread evenly to a depth of 4", a Foam Pad or Performance Pad, per critical fall-height requirements of owner. This will be needed to achieve a critical fall-height greater than seven (7) feet.
9. Infill material: Will be 10/20, 14/20 or 14/30 crumb rubber granules applied at a rate of 2lbs/sq.ft.

PART 3 – EXECUTION

3.1 BASE REQUIREMENTS

- A. The base shall be cleared, leveled and compacted with 3-4 inches of #8 crushed and washed stone at a finished height to 5 inches below the adjoining finished surface height, if using the rubber buffing, or 2-3 inches below if using the Foam Pad or Performance Pad, per fall-height requirement.
 1. Compaction of base: The dry density after compaction shall be 95% of the dry density for the material being tested in accordance with Modified Proctor procedure according to ASTM 1557.
 2. Permeability of entire turf system and base shall be greater than ten (10) inches/hour.



3.2 PREPARATION

- A. The perimeter of the area shall be defined with a composite nailer board. Secure nailer boards into adjacent concrete or asphalt, or hold in place with rebar or landscape spikes.
- B. Cleaning – The entire surface shall be clean and free of any foreign material.

3.3 INSTALLATION

- A. Rubber Buffering subsurface (resilient safety surface) – Thickness may vary according to fall-height, but will typically be a depth of 4”. Foam Pad or Performance Pad subsurface (resilient safety surface) – Thickness may vary according to fall-height and may be achieved by using multiple layers.
- B. Artificial Turf – The turf will be rolled out in sections, cut around the poles, and seamed together using a Geotextile fabric and a urethane based glue as the bond.
- C. Securing – The turf will be secured around the perimeter. If using nailer boards, 1” stainless steel staples will be used to secure the turf to the boards. Staples will be placed every 1 inch.
- D. Protection – Surface installer shall be responsible for the protection of the resilient safety surface during the installation process. Surface installer shall be responsible for the protection of the surface during the curing period upon completion of the installation.

END OF SECTION