

SECTION 02620
SUBSURFACE DRAINAGE
(SYNTHETIC DRAINAGE SYSTEM)

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes: Underdrain for Synthetic Turf System

- B. Related Sections:
 - 1. Section 02610 – Pipe and Fittings
 - 2. Section 02720 – Storm Sewer Systems

1.02 REFERENCES

- A. American Standard for Testing and Materials (ASTM)
 - 1. ASTM D-1621 Standard Test Method for Compressive Strength of Drainage Core
 - 2. ASTM D-4716 Standard Test Method for Determining Flow Rate of Underdrain
 - 3. ASTM D-4491 Standard Test Method for Determining Permeability of Geotextile
 - 4. ASTM D-4833 Standard Test Method for Determining Puncture Resistance of Geotextile
 - 5. ASTM D-3786 Standard Test Method for Determining Burst Strength of Geotextile
 - 6. ASTM D-4751 Standard Test Method for Determining Apparent Opening Size of Geotextile
 - 7. ASTM D-4355 Standard Test Method for Determining Ultraviolet Resistance of Geotextile

1.03 DEFINITIONS

- A. Terms – Taken from ASTM D-4439
 - 1. Geotextile: Any permeable textile used with foundations, soil, rock, earth, or any other geotechnical material, as an integral part of man-made product, structure, or system.
 - 2. Normal Direction: Direction perpendicular to the plane of a geotextile.
 - 3. Permittivity: Volumetric flow rate of water per unit cross sectional area per unit head under laminar flow conditions, in the normal direction through a geotextile.
 - 4. Permeability: Rate of flow of a liquid under a differential pressure through a material.
 - 5. Transmissivity: Flow or amount of liquid water per foot of material width passing through composite system at certain maximum soil pressure against geotextile at defined hydraulic gradient.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's product data and installation instructions.

- B. Samples: Submit minimum 12" x 12" product sample.
- C. Test Reports: Submit test reports from an independent testing laboratory to verify that product meets or exceeds specified physical properties.

1.05 QUALITY ASSURANCE

- A. Prior to installation of J-DRain Turfcore, review all installation instructions and details with an authorized representative of JDR ENTERPRISES, INC.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Packaging and shipping: Provide materials in original unopened containers with manufacturer's labels intact and legible.
- B. Acceptance at site:
 - 1. Unload materials and check for damage.
 - 2. Damaged materials determined by visual inspection will not be accepted.
 - 3. Remove rejected materials from site immediately.
- C. Storage and protection.
 - 1. Store materials in dry area in manufacturer's protective packaging.
 - 2. Store materials under cover, off ground and protect from extended sunlight.

PART 2 – PRODUCTS

2.01 MANUFACTURED UNITS

- A. Acceptable manufacturers:
 - 1. Products specified as standard of quality (J-DRain Turfcore) manufactured by:
JDR ENTERPRISES, INC., 292 South Main Street, Suite 200,
Alpharetta, Georgia 30009. Telephone: 800-843-7569 or
770-442-1461. Fax: 770-664-7951. Website: www.j-drain.com
 - 2. J-DRain Accessories:
 - a. Splice Sheet: For splicing J-DRain Turfcore end to end.
 - b. Splice Fabric: For covering butt joint splices and overlap splices
 - c. J-Spray: For bonding Splice Sheet and Splice Fabric to J-DRain Turfcore.
 - d. Anchor Pins: For holding J-DRain Turfcore in place for installation of turf.
 - 3. Physical Properties – Drainage Core
 - a. Flow Rate: 23 gpm/ft width @ gradient = .1
 - b. Compressive Strength: 21,000 psf
 - 4. Physical Properties – Geotextile
 - a. Puncture: 65 lbs.
 - b. Mullen Burst: 210 psi
 - c. AOS: 70 U.S. Sieve

- d. Permeability of geotextile: 140 gpm/sf
- e. Ultraviolet resistance: 70% at 500 hours

- 5. Roll properties:
 - a. Roll Length: 150 ft.
 - b. Roll Width: 8'-6".
 - c. Roll Weight: 89 lbs.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verifications of site conditions:
 - 1. Verify that site is properly prepared for installation of J-DRain Turfcore.
 - 2. Complete all excavation, fill, filter fabric placement, sideline trenches and headers, placement of course and fine aggregates, and leveling and compaction.

3.02 INSTALLATION

- A. All installation details and instructions are in strict accordance with the details and instructions of JDR ENTERPRISES, INC.

3.03 TURF INSTALLATION

- A. Turf installation should be in strict accordance with details and instructions of Turf Manufacturer.