

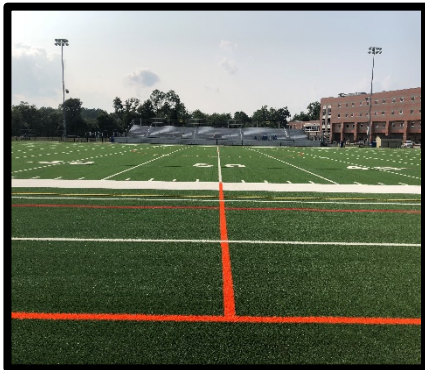
TEST REPORT

CLIENT:

Company:	Sprinturf	Report Number:	74762B
Address:	146 Fairchild St Suite 150	Lab Test Number:	3044-7574
	Daniel Island, SC 29492	Test Date:	8/22/2018
		Report Date:	8/23/2018
		Page:	1 of 5
Requested By:	Pat Oakes		

SITE INFORMATION:

Site Address:	Richard Montgomery High School	Turf Identification:	DFE UltraBlade 52 Oz 1.625"
	250 Richard Montgomery Dr	Infill System:	96% Sand Mixed with 4% ZeoFill
	Rockville, MD 20852	Pad System:	25mm Brock PowerBase
		Base System:	Stone
		Type of Field:	Football
		Install Date:	Aug 2018



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TEST CONDITIONS:

Weather:	Sunny
Field Condition:	Damp
Ambient Temperature:	85°F @ 4:00PM

TESTING METHODS REQUESTED:

<i>Testing Services Inc. was instructed by the client to test for the following...</i>			
Standard:	ASTM F355-16	Test Method:	Standard Test Method for Impact Attenuation of Playing Surface Systems and Materials
Standard:	ASTM F1936-10	Test Method:	Standard Specification for Impact Attenuation of Turf Systems as Measured in the Field (G_{max})
Standard:	EN1969	Test Method:	Surfaces for Sports Areas, Determination of Thickness of Synthetic Sports Surfaces
Standard:	ASTM F2650-17	Test Method:	Standard Terminology Relating to Impact Testing of Sports Surfaces and Equipment

DEVIATION FROM TEST METHOD:

State Reason for Any Deviation from, Additions to, or Exclusions from Test Method.
None

TEST SCOPE:

This specification provides a method for determining maximum impact attenuation shock absorbing properties for all types of synthetic turf playing systems and their corresponding locations for specific field layouts. Turf field systems are tested in accordance with ASTM F1936 and ASTM F355 Procedure A, in which the missile is released from a free-falling drop height of 24", from the bottom of the missile face to the top of the turf field system, and allowed to impact the surface, recording the impact attenuation in G_{max} .

Each drop site, specific to the field layout, was located within 36" in any direction of the required test point location. Three consecutive drops, allowing 3 min intervals between drops, are documented. The average G_{max} was calculated as the sum of the second and third G_{max} values divided by two and rounded to the nearest whole number. The test equipment was not moved between consecutive drops.

Measurement of surface system was measured by inserting a temperature probe 1/2" below the level of the infilling material installed into the turf. Measurement of the infill depth was taken using a depth gauge in three locations, around the periphery of the test site, recording the average.

TERMINOLOGY:

G_{max}: maximum acceleration recorded during impact, expressed in "g" units, which is a unit of acceleration equal to standard gravity.
HIC (Head Injury Criteria): measurement of the likelihood of a head injury upon impact. At a HIC of 1000, there is an 18% probability of a severe head injury, a 55% probability of a serious injury, and a 90% probability of a moderate head injury to the average adult

REQUIREMENTS:

When tested in accordance with ASTM F1936 and F355a, the average G_{max} at any single test point shall be < 200 when tested to a free fall height of 24". If the average G_{max} of one or more test points is \geq 200, the surface system should be brought into compliance and re-tested for verification.

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		Install Date:	Aug 2018

TEST DATA:

Position #	Field Location	Drop 1		Drop 2		Drop 3		Average		Infill Depth (mm)	Field Temp °F
		Gmax	HIC	Gmax	HIC	Gmax	HIC	Gmax	HIC		
1	South End Zone, Center of Goal Line	85	205	93	228	94	228	94	228	29	91
2	SE 10 Yard Line, Left of Hash	81	193	88	210	91	210	90	210	30	91
3	SE 25 Yard Line, @ Hash Mark	81	188	88	205	89	203	89	204	30	92
4	50 Yard Line, Center of Field	77	175	82	191	84	194	83	193	30	92
5	NW 25 Yard Line, Left of Hash	87	206	92	227	94	230	93	229	31	92
6	North 12 Yard Line, Center of Field	85	203	89	215	89	210	89	213	31	92
7	West Sideline Out of Bounds, 50 Yard Line	88	192	94	213	95	215	95	214	26	92
8	NW 40 Yard Line, @ Hash Mark	80	192	85	201	86	200	86	201	32	91
9	South End Zone, 6' From Goal Line to Back of End Zone	79	188	83	194	84	194	94	194	30	89
10	North End Zone, 6' From Back of End Zone to Goal Line	90	248	94	237	92	221	93	229	31	91

Overall Field Gmax Average	90	The above listed playing system: <input checked="" type="checkbox"/> Passes <input type="checkbox"/> Fails Meets the requirements of ASTM F1936-10 for Impact Attenuation (Gmax) as measured in the field, where all drops were ≤ 200 Gmax
Overall Field HIC Average	212	
Average Infill Depth @ Gmax Locations	30mm	
Average Infill Depth of Field	30mm	
Mfg. Specified Pile Height	41mm	
Exposed Tuft Above Infill System	11mm	



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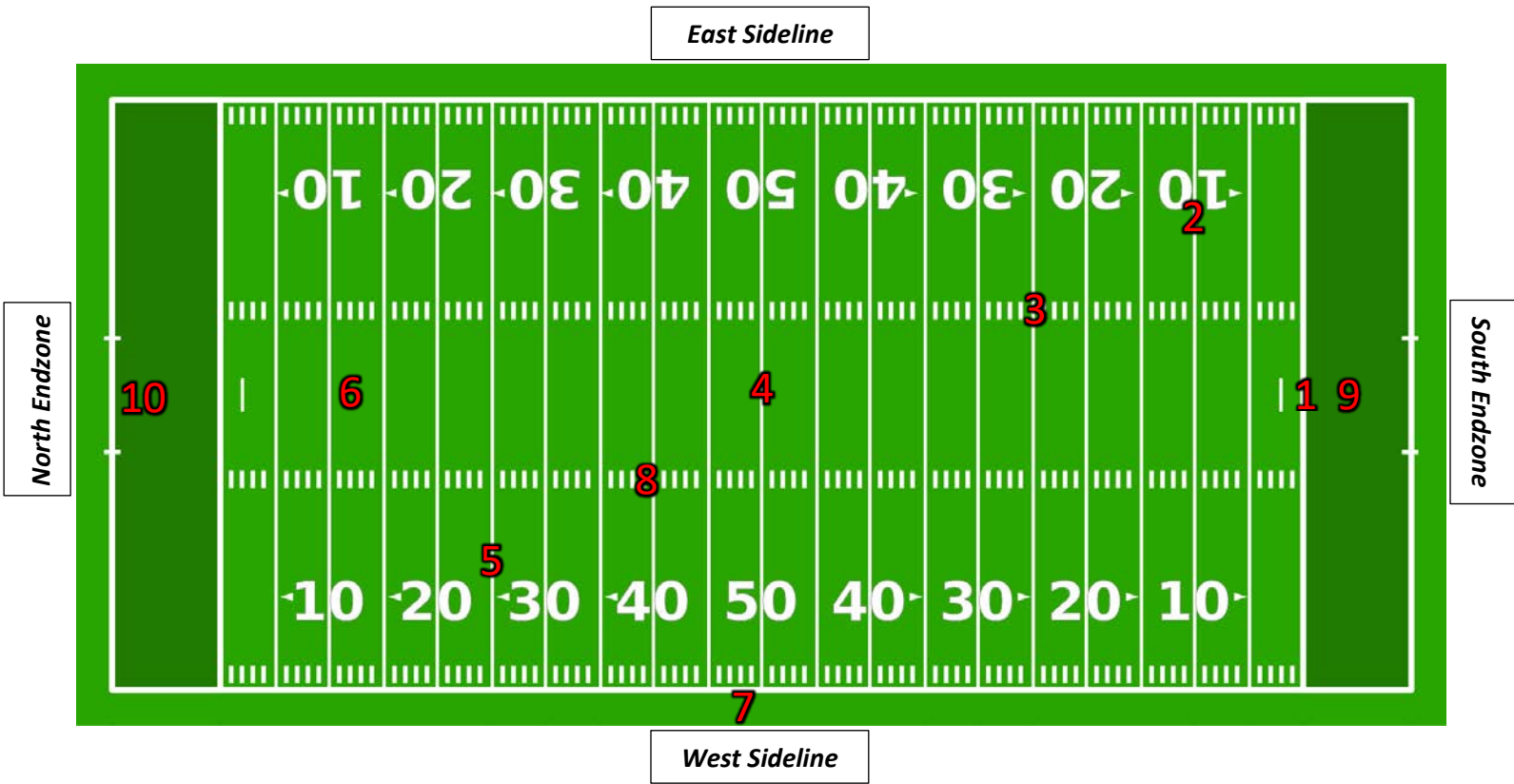
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FIELD LAYOUT SITE LOCATIONS:

Gmax Sites



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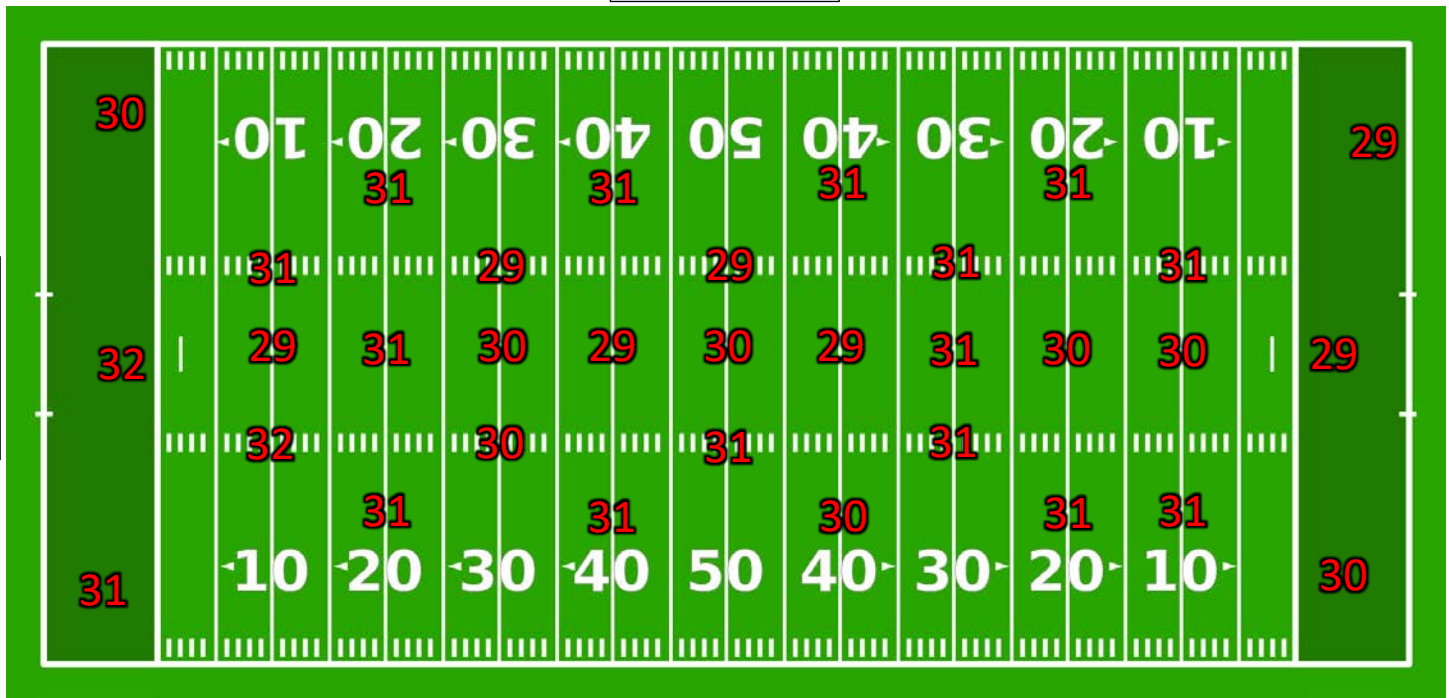
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FIELD LAYOUT SITE LOCATIONS:
Infill Depth Checks

East Sideline



West Sideline

Test Report Approval:
Erie Miles, III,
Lab Director Testing Services Inc.



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