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Department of Permitting Services  
Fire Department Access and Water Supply Comments

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**DATE:** 28-Jul-20  
**TO:** Tiara McCray - Tiara.McCray@montgomerycounty  
MCDOT  
**FROM:** Marie LaBaw  
**RE:** Ellsworth Drive  
AB771

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**PLAN APPROVED**

1. Review based only upon information contained on the plan submitted **16-May-20**. Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.
2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.

**\*\*\* MCDPS section of Fire Department Access and Water Supply supports AB771 so long as the conditions of the 5/26/2020 site plan amendment 81999002M approval are met \*\*\***



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**Department of Permitting Services  
Fire Department Access and Water Supply Comments**

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**DATE:** 26-May-20  
**TO:** Jeff Amateau  
VIKA, Inc  
**FROM:** Marie LaBaw  
**RE:** Downtown Silver Spring - Ellsworth Drive  
81999002M

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**PLAN APPROVED**

1. Review based only upon information contained on the plan submitted **22-May-20**. Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.
2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.

**\*\*\* See Statement of Performance Based Design and Statement of Operations: applicant is attempting to create festival space out of existing public right of way.**

**Any method of access control not described in the attached Statement of Performance Based Design and the Statement of Operations shall be reviewed and approved by DPS Section of Fire Department Access & Water Supply prior to implementation.**

**All fire department vehicular access surfaces and subgrades shall meet minimum MCDOT tertiary road load bearing capacity.**

**No existing hydrants shall be removed or relocated as part of this approval. \*\***



May 13, 2020

VIA DIGITAL DELIVERY

Ms. Marie LaBaw PhD, PE  
Fire Department Access and Water Supply  
Department of Permitting Services  
255 Rockville Pike, 2nd Floor  
Rockville, MD 20850

**Re: Downtown Silver Spring  
Performance Based Review  
Site Plan #81999002M  
VIKA PROJECT #VM50378A**

### FIRE CODE ENFORCEMENT

#### Fire Department Access Review

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation

BY: SML\* FM: 43 DATE: 5/26/2020

Dear Marie:

On behalf of our client, Peterson Companies, the developer of the proposed site improvements within the Downtown Silver Spring Plaza, we are requesting the review and approval of a performance-based design for Site Plan # 81999002M.





In order to meet the prescriptive code requirements for this project, we have provided an access lane onto the site from Georgia Avenue & Fenton Street. The delineated fire access lane will meet the structural requirements for the 85,000 lbs. as Ellsworth Road was built to a public Standard originally, and the inherent road section/base will remain unchanged. As for access to the portions of the access lane within the abandoned Ellsworth Drive ROW, the area will be accessible to fire trucks via a mountable curb (MC-104.1).

In the center of the plaza area there is a proposed movable stage. The stage is comprised of multiple bench seating pieces when separated, but all connect into a singular piece to become a 'stage'. This stage will be constructed on fixed rails that will allow the stage piece(s) to shift along the designed pathway. However, at the stage's maximum extent, it will ensure the fire access travel lane is no less than 12' along Ellsworth Drive.

In addition to the proposed mountable curb, the developer is also proposing a layer of vehicular-rated artificial turf to be affixed to the existing asphalt within a portion of the abandoned Ellsworth Drive. This material will be securely adhered to the existing asphalt drive and is not to contain any infill material. As such, the artificial turf installation will not impede emergency vehicular access. In the event of a snowstorm or other weather phenomena that could impact fire access to and around the property, the developer has contracted with a snow removal company to ensure prompt removal. Snow removal from the surfaces of the artificial turf will consist of using a mechanical plow with an appropriate edge and/or hand brooms to ensure complete removal.

We hope that this letter and the Fire Access Plan are acceptable for your approval. Please contact me with any questions or if you need additional information

**VIKA Maryland, LLC**

20251 Century Boulevard, Suite 400  Germantown, Maryland 20874  301.916.4100 Fax 301.916.2262  
Tysons, VA  Germantown, MD  Washington, DC

[www.vika.com](http://www.vika.com)

May 22, 2020

VIA DIGITAL DELIVERY

Ms. Marie LaBaw PhD, PE  
Fire Department Access and Water Supply  
Department of Permitting Services  
255 Rockville Pike, 2nd Floor  
Rockville, MD 20850

Re: **Downtown Silver Spring  
Maintenance Agreement  
Site Plan #81999002M  
VIKA PROJECT #VM50378A**

**FIRE CODE ENFORCEMENT**

**Fire Department Access Review**

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation

BY: SML\* FM: 43 DATE: 5/26/2020

Dear Marie:

With regard to the proposed site improvements within the Downtown Silver Spring Plaza, we are providing the following long-term maintenance agreement for Site Plan # 81999002M.

**Long-term Maintenance Agreement**

When the forecast is calling for ice/snow conditions the following procedures are followed:

1. Perform pretreatment when rain/snow conditions are forecasted, and the temperature falls below freezing.
2. Snow removal is implemented once snow accumulation is greater than 2".
3. Will maintain at least a 20' wide clearance on the street between the curbs when snowfall accumulates greater than 2".
4. Different manufacturer approved equipment is used for each surface type. (Sidewalks, asphalt, turf, etc.)
5. Per the submitted plan, the stage is designed to be mobile on a fixed track system. The track system limits the movement of the stage in order to always maintain a life safety access route upon Ellsworth, between Fenton and Wayne, regardless of the configuration of the stage.
6. Future changes to this agreement will be brought to DPS before implementation.

Sincerely,

  
Paul Weinschenk  
President, Retail

CC: K. Price, Peterson Cos.  
D. Figueroa, Peterson Cos.  
I. Duke, VIKa  
B. Sears, Esq., Miles & Stockbridge

# OCULUS

**DATE:** APRIL 17, 2020

**PROJECT:** DOWNTOWN SILVER SPRING

**TO:** ATIQ PANJSHIRI (MONTGOMERY COUNTY) [ATIQ.PANJSHIRI@MONTGOMERYCOUNTY.GOV](mailto:ATIQ.PANJSHIRI@MONTGOMERYCOUNTY.GOV)

**FROM:** BRIAN C. FLYNN (OCULUS)

**SUBMITTAL NO:** SYNTHETIC TURF ON ELLSWORTH DRIVE

---

**CC:** PAUL WEINSCHENK (PETERSON), BRYANT FOULGER (FOULGER-PRATT), DON HOOVER (OCULUS)

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**RESPONSE:**

1. Product Specification:
  - a. The material specified is Syntipede243 from SynLawn with a 1" pile height;
  - b. The blades are polyethylene with an Enviroloc backing – including a "Super Yarn" offering anti-microbial, anti-static, and HeatBlock technology;
  - c. The backing is 15 / 18 PP 1-Part / 20 oz. Enviroloc – a durable two-part woven Polypropylene backing fabric constructed to lock in the tuft fibers. The backing fabric and stitched fibers receive a thick layer of a biobased Enviroloc coating created with polymers from sustainable resources, including soybean oil.
2. Flammability
  - a. Based on the manufacturer's published literature, the specified material has passed flammability testing according to D2859 "Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials"; This test method determines the flammability of finished textile floor covering materials when exposed to an ignition source; The specified material has passed this test and, as such, is rated as "flame resistant" under laboratory conditions.
  - b. The material also passed testing according to ASTM E108-17 "Standard Test Methods for Fire Tests of Roof Coverings, Class A Spread of Flame Testing". The specified material is therefore a Class A roofing material, offering the highest rating for resistance to fire. This test was conducted by the Southwest Research Institute, a 3<sup>rd</sup>-party independent testing agency. This test method is used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions. The results indicate that there was no lateral spread of the flame beyond the path directly exposed to the flame. The turf melted in the direct path of the flame, but did not catch fire. If a burner could not light the turf on fire, it is reasonable to assume that cigarette would not as well.

3. Installation method

- a. We are proposing to install the turf by gluing it directly to the asphalt roadbed substrate (See the attached details). The glue will be applied continuously at the perimeter and in a pattern at the interior to ensure a good bond to the substrate. The edges of the drive at the concrete gutter will be milled to provide continuous drainage to the adjacent gutters. No infill will be used on the project.

4. Maintenance

- a. Since the turf will be attached directly to the roadbed, vehicles will be able to drive on the turf, but they will have to drive slowly. The only concern is for oil and/or other fluids leaking from the vehicle remaining on the turf. The attached maintenance guidelines discuss the procedures to remove stains from the turf emanating from vehicles and other potential sources of contamination.

5. Specified Adhesive

- a. The specified adhesive is SDS #34-2. The specification is attached.

6. Runoff

- a. We are unaware of any contamination coming from the specified turf. There is no infill specified, so the only materials are the fibers, backing, and glue. Every SynLawn product meets EPA, Consumer Product Safety Commission, and California Proposition 65, and other requirements.

7. Slippery when wet

- a. The manufacturer has not needed to test the turf for slip resistance in the past. We are currently investigating slip resistance testing with the manufacturer and will provide if we are able to obtain the test results.
- b. Similar material from the manufacturer is installed in public spaces throughout the country, including a similar installation at National Harbor in Maryland that has similar climate conditions. There has been no instance the manufacturer is aware of where a pedestrian slipped and fell on the synthetic turf.

8. Roadway Restoration

“What would it take to restore roadway to its current condition should the turf be removed in the future?”

Should the County decide to restore the area to a roadway in the future, the Applicant could simply pull up the turf. Because of the strength of the bond of the glue, some adhesive would remain attached to the asphalt roadway. The Applicant could surface mill the roadbed to eliminate any proud glue spots and repave and recoat the asphalt surface to have a fully functioning roadway. Because none of the drains along the turf area are being altered, drainage of the roadway would be as it is today.

9. Heat Build-up

“Synthetic turf is approximately 20 degrees hotter than Natural Grass, but not sure how much hotter than asphalt. Perhaps 10 degrees.”

This specified product contains built-in HeatBlock technology that minimizes rising temperatures by reflecting sunlight. The infrared reflective pigment embedded in the fibers of the turf help dissipate heat build-up, reduce thermal emissivity, and make this product as much as 20% cooler than similar artificial turf products.

In addition to the HeatBlock technology, the location of the existing roadway will help to minimize any heat build-up. The portion of Ellsworth Drive to receive the turf installation is a tree-covered and building-lined space. These factors will limit the amount of sun that reaches the surface of the turf. The attached heat map shows the amount of shading time resulting from the surrounding buildings for mid-summer (July 15). In addition, the tree coverage along Ellsworth Drive, not reflected in the calculation, will provide additional shading and further limit any potential heat build-up in the synthetic turf.

### **Table of Contents - Exhibits**

1. Product Specification – 1: SYNLawn SYNTipede 243 ST243
2. Product Specification – 2: SY20027\_SuperYarn
3. Installation Method: L0802 Details – Synthetic Turf
4. Maintenance: C&M Guide 2018
5. Specified Adhesive: SDS #34N-2 (2019-01-01)
6. Runoff: SYNLawn 100 percent safe certification
7. Heat Build-up: Ellsworth Drive – July 15 – Heat Map

### **Attachments - Exhibits**

8. Flammability: ST243\_E108 – Fire Rating



**Exhibit 1: Product Specification - 1: SYNLawn SYNTipede 243 ST243**

Exhibit 1: Product Specification - 2: SY20027\_SuperYarn

Exhibit 3: Installation Method: L0802 Details - Synthetic Turf

Exhibit 4: Maintenance: C&M Guide 2018

Exhibit 5: Specified Adhesive: SDS #34N-2 (2019-01-01)

Exhibit 6: Runoff: SYNLawn 100 percent safe certification

Exhibit 7: Ellsworth Drive - July 15 - Heat Map



# SYNLAWN®

Plant-Based Artificial Grass

PRODUCT SPECIFICATIONS



## SYN Tipede 243

When performance matters, this turf delivers. With a low profile pile height and heavy-duty Super Yarn™ grass blades, this artificial grass provides strength and resiliency not commonly found in competitor turf varieties.

Grass Zone Yarn/Color	PE / Field Green / Apple
Grass Zone Denier	10,000 / 6
Thatch Zone Yarn/Color	PE / Field Green / Beige
Thatch Zone Denier	5,040 / 12
Grass Zone Yarn Shape	Omega
Finished Pile Height	1"
Finished Pile Weight	60 oz.
Backing	15 / 18 PP 2-Part / 20oz. EnviroLoc™
Tuft Gauge	3/8"
Total Weight	86 oz.
Tuft Bind	> 8 lbs.
Permeability	> 100 inches per / SY
Features	Sanitized®, EnviroLoc™, StatBlock™ Anti-Static, DualChill™ IR Reflective, Deluster, UV Stabilizers
Test Data	ASTM F1292, F1951, IPEMA Certified



Unmatched Lifetime Warranty



EnviroLoc™ Plant-Based Backing



Deluster and UV Protection



Class A Fire Rating



Foot Traffic



Softness



### SUPER YARN™ TECHNOLOGY

**Sanitized®**  
Antimicrobial

**DualChill™**  
IR Reflective

**StatBlock™**  
Anti-Static



Learn more at [CADdetails.com](http://CADdetails.com)

Not to scale. For illustration only.

### RECOMMENDED USES



LANDSCAPE



PETS



PLAY



ROOFTOP



GOLF



**SYNLAWN®**  
a sportgroup company



For ordering and questions, contact SYNLawn at 866-796-5296 or visit [SYNLawn.com](http://SYNLawn.com)

Primary Yarn Polymer	Polyethylene	Primary Backing	15/18 PP 2-Part
Yarn Cross Section	Omega	Coating Type	20 oz. EnviroLoc™
Standard Color	Field Green / Apple	PE Yarn Denier / Ends	10,000 / 6
Fabric Construction	Tufted	Texturized Thatch Denier / Ends	5,040 / 12
Second Yarn Polymer Thatch	Polyethylene	Warranty Period	Limited Lifetime
Secondary Yarn Color	Field Green / Beige		

Finish Fabric	English System		ASTM Test
<i>Nominal Specification</i>	<i>Value</i>	<i>Units</i>	<i>Method</i>
Pile Height (Nominal)	1	inch	D-5823
Face Weight	60	oz/yd <sup>2</sup>	D-5848
Total Fabric Weight	86	oz/yd <sup>2</sup>	D-5848
Primary Backing Weight	6	oz/yd <sup>2</sup>	D-5848
Secondary Coating Weight	20	oz/yd <sup>2</sup>	D-5848
Tuft Bind	> 8	lbs.	D-1335
Grab Tear Strength (Average)	> 200	lbs.	D-5034
Total Yarn Linear Density	15,040	Denier	D-1577
Elongation to Break	> 30	%	D-2256
Yarn Breaking Strength	> 20	lbs.	D-5793
Machine Gauge	3/8	inches	D-5793
Flammability	Passed	-	D-2859
Water Permeability	344.31	in/hr	D-1551
Fabric Width	15	ft	-

Exhibit 1: Product Specification - 1: SYNLawn SYNTipede 243 ST243

**Exhibit 1: Product Specification - 2: SY20027\_SuperYarn**

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# SUPER YARN™

The Cleanest & **Safest Turf Available**



## SUPER YARN™ TECHNOLOGY

-  **Sanitized®** Antimicrobial Technology
-  **DualChill™** IR Reflective Technology
-  **StatBlock™** Anti-Static Component



Super Yarn™ technology is a quantum leap in the advancement of synthetic turf products. Now in its fifth generation of artificial grass enhancements, SYNLawn's Super Yarn technology changes the landscape of the turf industry by binding three incredible features into one extruded grass yarn formulation. Bound at the molecular level, Super Yarn combines Sanitized® antimicrobial technology with DualChill™ IR reflective technology, and StatBlock™ anti-static technology to create the first of its kind artificial grass fiber.

- ▶ SYNLawn Super Yarn is the first fifth generation turf product produced and presented to the market.
- ▶ Super Yarn technology binds each additive to the molecular level of the fiber meaning that you cannot reach down and remove one element.
- ▶ SYNLawn is the only company in the industry to combine these three molecular components into a single yarn package.



100% RECYCLABLE



For ordering and questions, contact SYNLawn at **866-796-5296** or visit **SYNLawn.com**



| **SYNLAWN®**

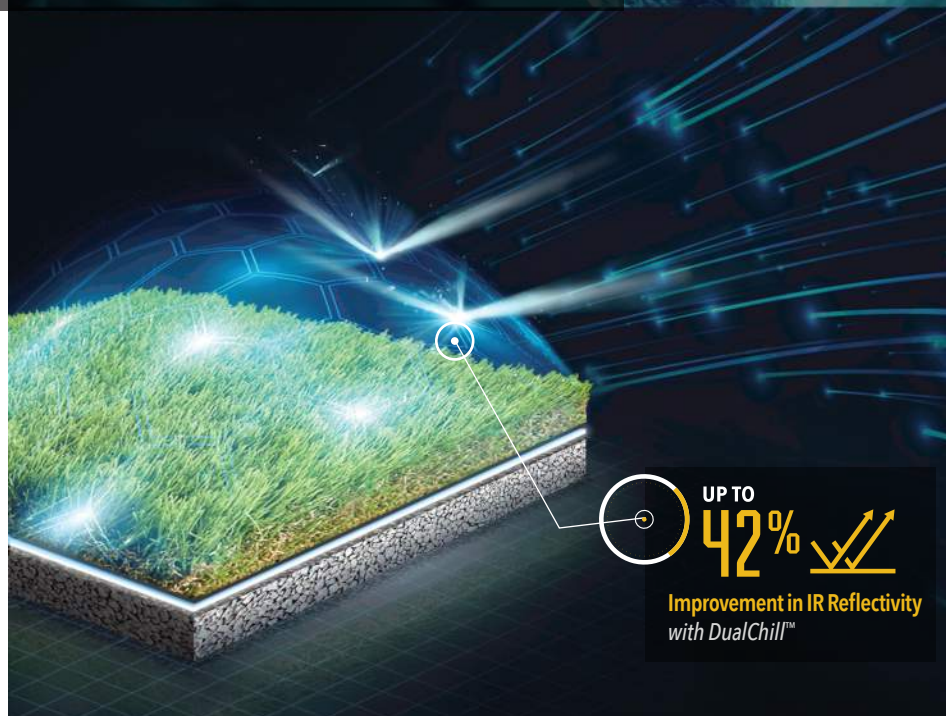


# SANITIZED®

## SILVER-BASED TECHNOLOGY



- Helps eliminate pet odors and provides long lasting protection against the formation of bacteria and algae.
- Works by eliminating bacterial growth and preventing the propagation of microbes on SYNlawn face fibers.
- Used for centuries, thus meaning the additive is very dependable and extremely safe.



# DUALCHILL™

## THERMAL SHIELD

- Infrared light is a detriment to turf. DualChill™ acts as a thermal shield ensuring IR is not absorbed into the fibers.
- DualChill's ability to act as a thermal shield strengthens the fibers allowing them to be more resilient and durable over long time periods.
- Test results done on the same fiber package, with and without DualChill™, shows that there is an average of a 42% increase in IR reflectivity.

# STATBLOCK™

## ANTI-STATIC COMPONENT

- New carbon-based anti-static ingredient molecularly bound into the face fiber that inhibits the buildup of static electricity.
- Anti-static components are used in the industry but SYNlawn brings the first DNA level addition.
- Testing shows up to a 17x reduction in static levels when StatBlock™ is introduced into the turf.

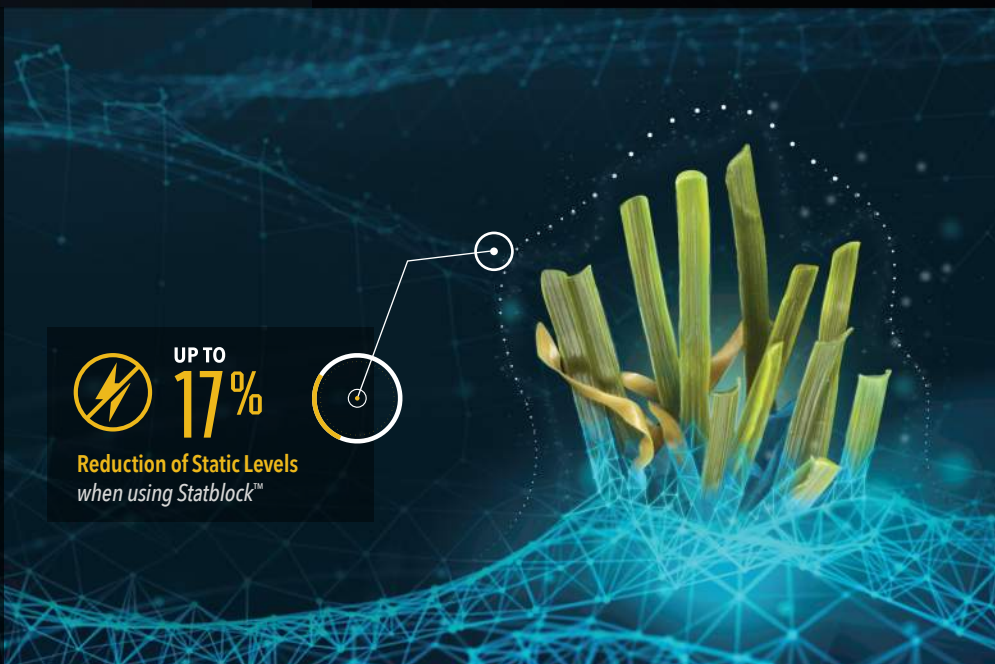


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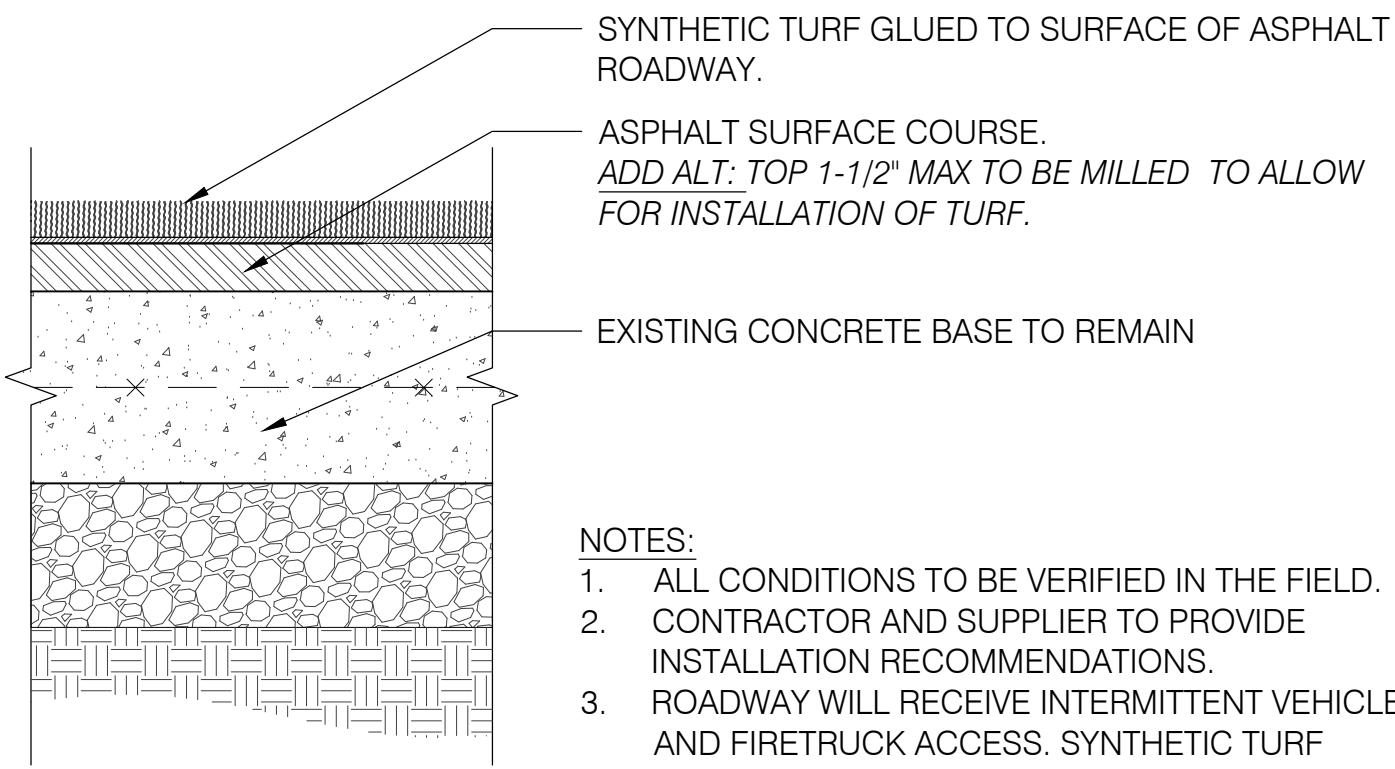
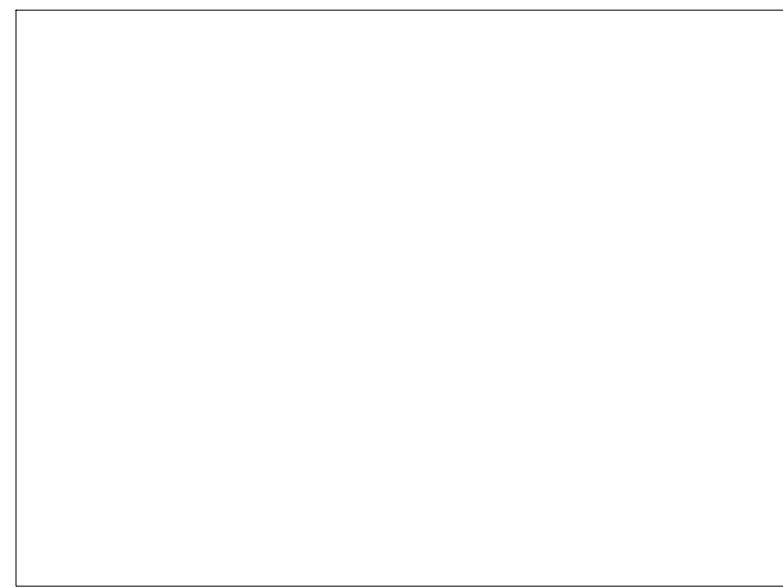
**Exhibit 3: Installation Method: L0802 Details - Synthetic Turf**

Exhibit 4: Maintenance: C&M Guide 2018

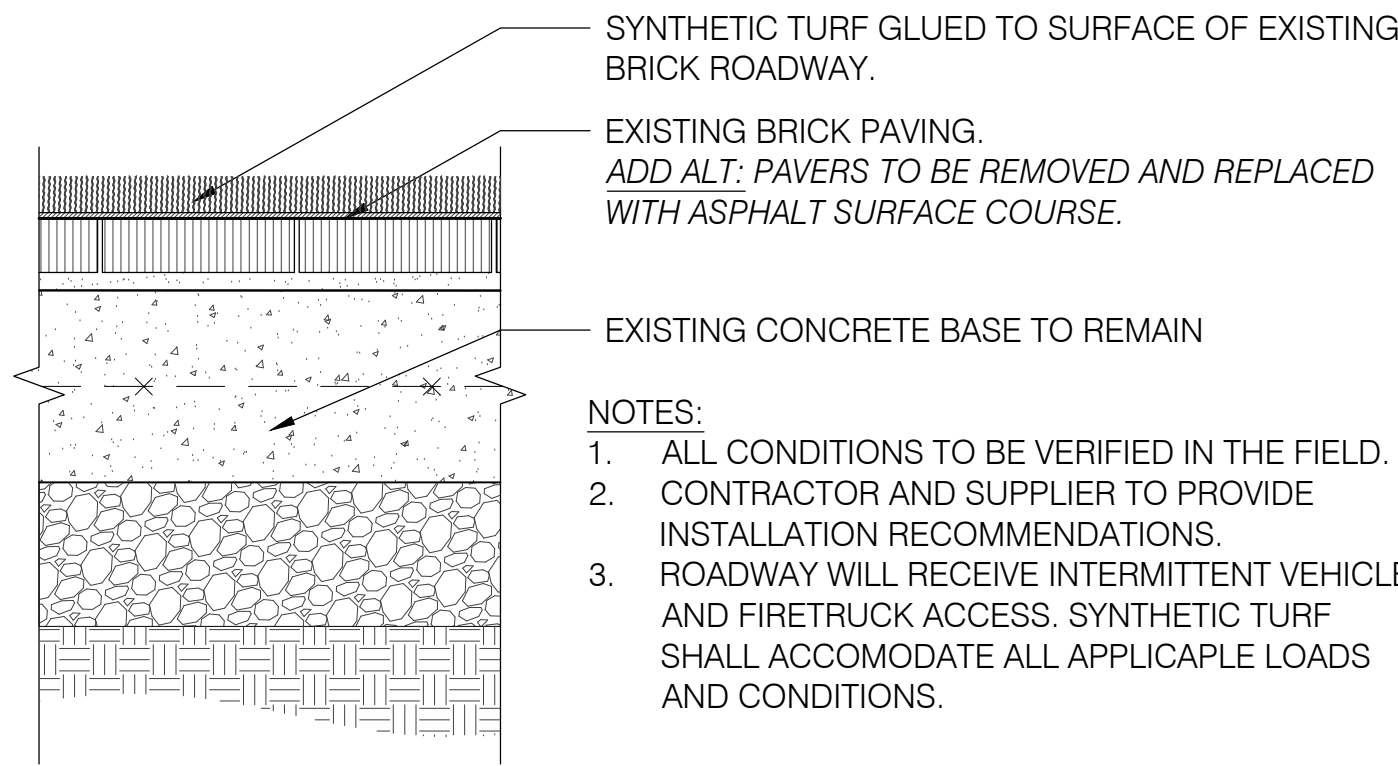
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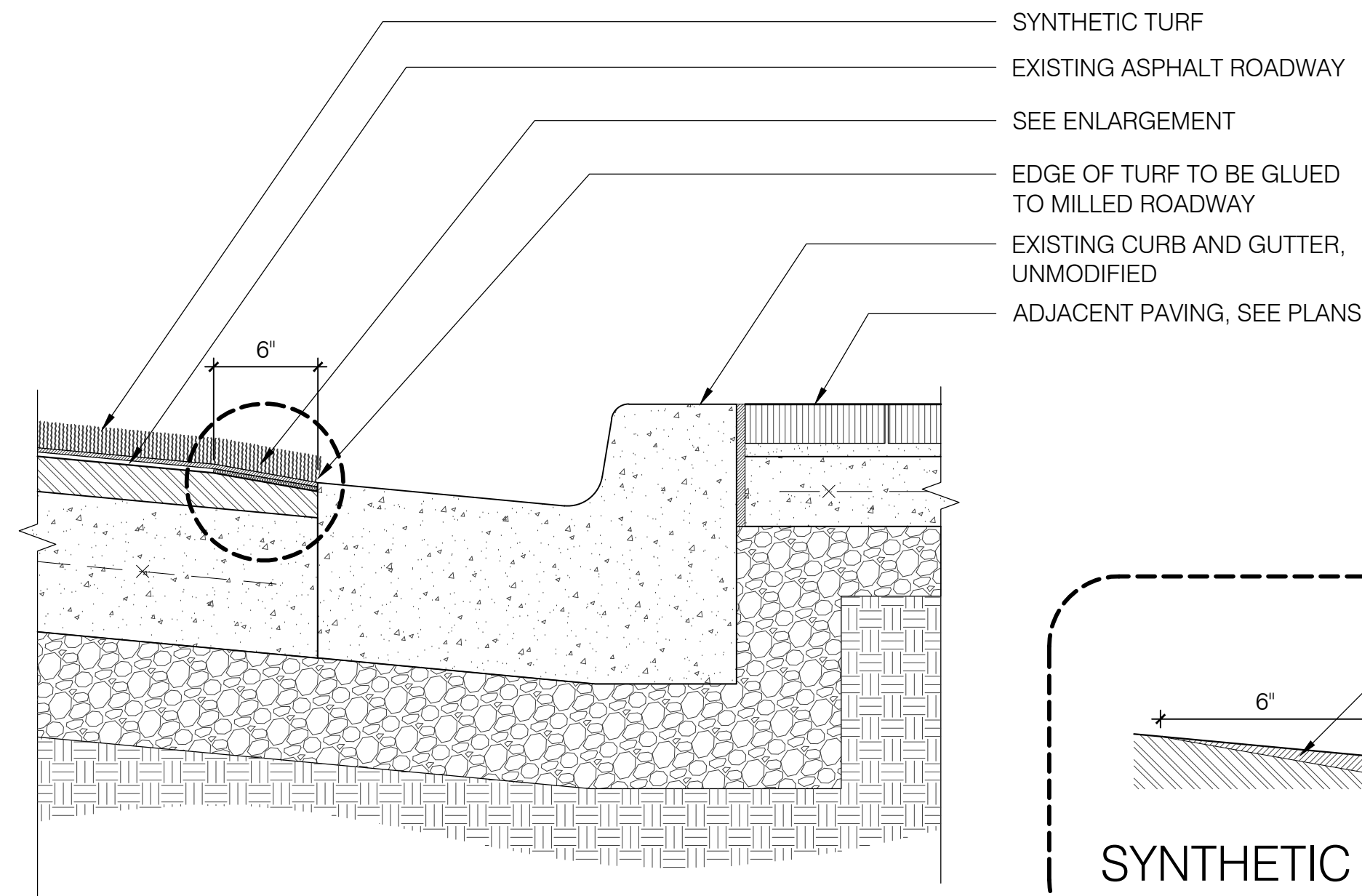
Exhibit 7: Ellsworth Drive - July 15 - Heat Map



- NOTES:
1. ALL CONDITIONS TO BE VERIFIED IN THE FIELD.
  2. CONTRACTOR AND SUPPLIER TO PROVIDE INSTALLATION RECOMMENDATIONS.
  3. ROADWAY WILL RECEIVE INTERMITTENT VEHICLE AND FIRETRUCK ACCESS. SYNTHETIC TURF SHALL ACCOMMODATE ALL APPLICABLE LOADS AND CONDITIONS.



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6"

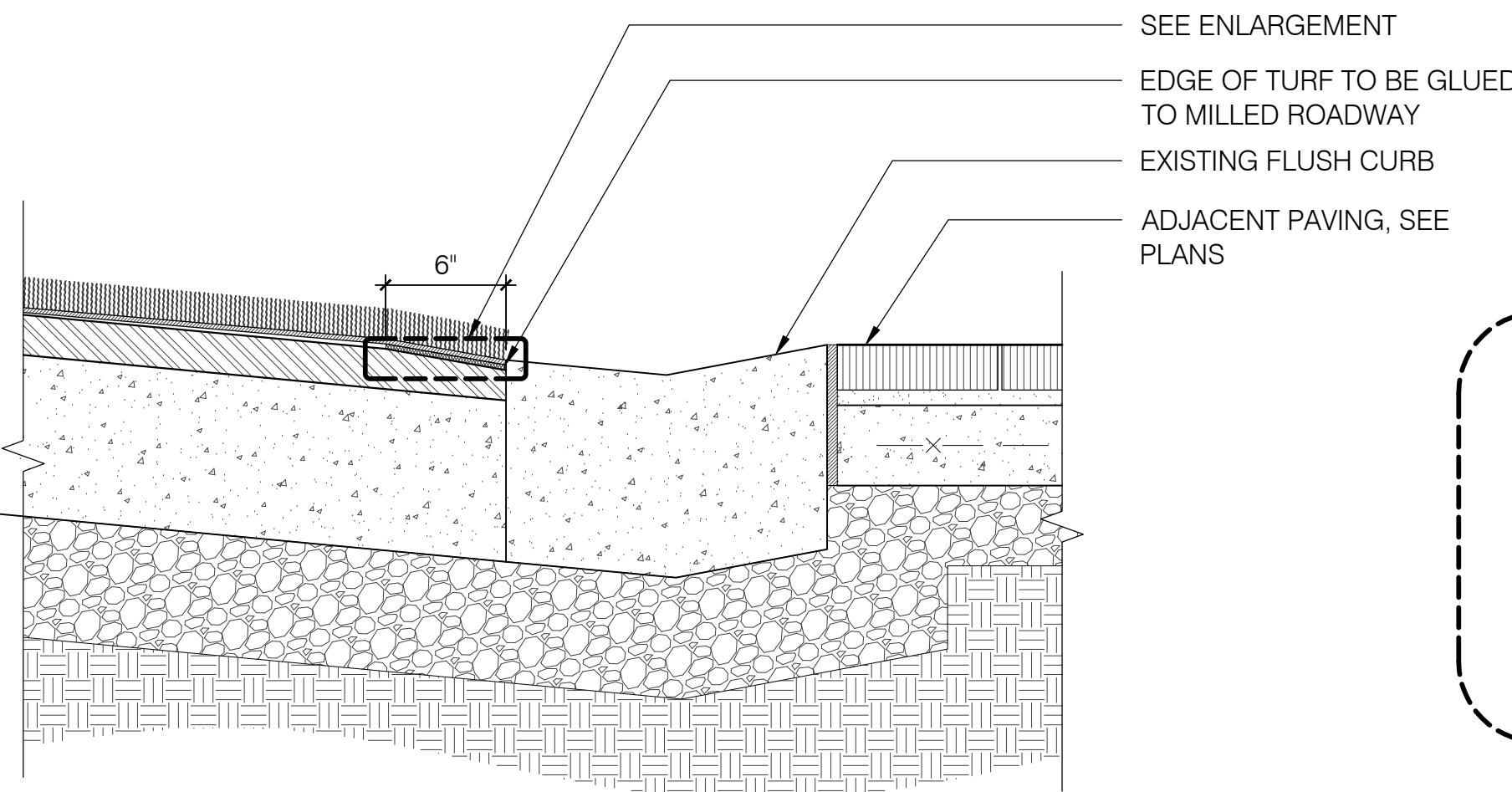
MILL CURB 1/2" TO ACCOMMODATE CARPET EDGE

SYNTHETIC TURF MILLED ROAD

1 SYNTHETIC TURF AT ASPHALT PAVING  
SCALE: 1 1/2" = 1'-0" SECTION

2 SYNTHETIC TURF ON EXISTING BRICK PAVING  
SCALE: 1 1/2" = 1'-0" SECTION

3 SYNTHETIC TURF AT CURB AND GUTTER  
SCALE: 1 1/2" = 1'-0" SECTION



6"

MILL CURB 1/2" TO ACCOMMODATE CARPET EDGE

4 SYNTHETIC TURF AT FLUSH CURB  
SCALE: 1 1/2" = 1'-0" SECTION

PROPERTY LINE	---
LIMIT OF WORK	---
MATCHLINE	---

OWNER

PETERSON COMPANIES	FOULGER-PRATT
12500 Fair Lakes Circle	12435 Park Potomac Ave
Suite 400	Suite 200
Fairfax, Virginia 22033	Potomac, MD 20854

CONSULTANT

O C U L U S

1611 CONNECTICUT AVE NW  
3RD FLOOR  
WASHINGTON DC 20009  
202-588-5454  
www.oculus.info

SEAL & SIGNATURE

PROJECT NAME

DOWNTOWN SILVER SPRING  
916 Ellsworth Drive  
Silver Spring, Maryland

KEY MAP

NOT FOR  
CONSTRUCTION

SUBMISSIONS/ REVISIONS	
2019-10-15	INITIAL SUBMISSION
2020-01-13	RESUBMISSION

SCALE: SEE DWGS

DATE: 10/15/2019

PROJECT NUMBER: W1901

DETAILS - SYNTHETIC TURF

DRAWING TITLE:

L0802

SHEET NUMBER:

DEVELOPER'S CERTIFICATE

The undersigned agrees to execute all the features of the Site Plan Approval No. 81999002M, including Approval Conditions, Development Program and Certified Site Plan.

Developer's Name: Peterson Companies

Contact Person: Todd Langford

Address: 12500 Fair Lakes Circle, Suite 400, Fairfax, VA 22033

Phone: 202.631.7582

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



Exhibit 1: Product Specification - 1: SYNLawn SYNTipede 243 ST243

Exhibit 1: Product Specification - 2: SY20027\_SuperYarn

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Exhibit 7: Ellsworth Drive - July 15 - Heat Map



| **SYNLAWN**®

# **CARE & MAINTENANCE** Manual

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SCM.v140324





### INTRODUCTION

Thank you for choosing SYNLawn®. Even though your SYNLawn® does not require the traditional maintenance of natural grass, there are maintenance procedures that can help protect your investment and extend the useful life of your SYNLawn® brand turf.

The following procedures are important in helping to preserve your turf.

- **Keep it clean**
- **Brush periodically**
- **Do no abuse**
- **Report any problems promptly to your SYNLawn® dealer**

### INITIAL REQUIREMENTS

SYNLawn® products/systems require a minimum two (2) week stabilization period. This period of time varies depending on local conditions, use, and product/system specifications. During this time, it may be necessary to make minor adjustments to the product and installation.

You should also review the Warranty provided to you for specific prohibitions and limitations confirmed therein.

If you have further questions, contact your local SYNLawn® dealer or contact SYNLawn® at 2680 Abutment Road, Dalton, GA 30721 or telephone us at 866-796-5296.

### CLEANING AND STAIN REMOVAL

#### I. Keep it clean

##### A. Dust, pollen, and airborne pollutants

Rainfall is the best cleanser. In areas where rainfall is scarce, an occasional water flush is beneficial to cleanse the turf. For lightly soiled areas, it may be necessary to sponge mop with a five (5) percent solution of low sudsing household detergent in hot water followed by a thorough rinsing with hot water. For heavily soiled areas, repeat procedure for lightly soiled areas follow with sponge mopping using a three (3) percent solution of household ammonia in hot water followed by a thorough rinsing with hot water.

Synlawn® makes no representation, guarantees or warranties, express or implied, regarding the information contained herein.



### B. Stains and other blemishes

The first rule is promptness. It is always easier to clean up a fresh spill than one that has dried and hardened. Remove any solid or paste-like deposit with a spatula or table knife. Blot up excess liquids with paper towels, a clean cloth, or a dry absorbent, such as kitty litter or fuller's earth. (Fuller's earth is an absorbent claylike earthy material and is often found as a component of kitty litter.) Dry absorbents can then be swept or vacuumed up afterwards.

Synthetic fibers have good resistance to staining. However, it is important to realize they are only one part of a sophisticated system of various components designed for overall performance. Some cleaning agents safe for the face fibers can be harmful to other components of the turf system. Therefore, cleaning agents are grouped into two sets, one of which can be used in liberal amounts directly on the turf surface, and the second of which should only be applied by rubbing a cloth soaked in the cleaner in order to minimize penetration of possible harmful agents below the turf surface. In the first group of cleaners which generally can be applied without any special precautions are the following:

- Simple Green bio-friendly cleaner. Follow the manufacturer's instructions.
- A warm, mild solution of granular household detergent or any low sudsing detergent for fine fabrics. Use approximately one teaspoon to one pint of water. This will handle most waterborne stains including:

Coffee	Ketchup	Cocoa	Blood
Tea	Butter	Ice cream	Urine
Fruit juices	Alcohol	Mustard	Dye
Vegetable juices	Cola	Glue	
Milk	Water colors	Latex paint	

- A three (3) percent solution of household ammonia in water may be used in lieu of household detergent for more stubborn stains.
- Do not use cleaners that contain chlorine bleaches or caustic cleaners (ph above (9) or highly acidic cleaners (ph. below 5).
- Rinse area thoroughly with clean cold water to remove any traces of soap or ammonia.
- Blot up excessive liquid.



The second group of cleaners must be applied sparingly with care taken to avoid penetration of the agent beneath the turf are the following:

- Mineral spirits or a grease spot remover like perchlorethylene (dry cleaning solution) of the type sold by most variety stores and supermarkets. In general, cleansers in this category should handle most oil-based stains including:

Asphalt and tar

Cooking oil

Floor wax

Motor oil & grease

Ballpoint ink

Suntan oil

Chewing gum

Shoe polish

Lipstick

Paraffin wax

Nail polish

Crayon



**Caution:** Mineral spirits and other petroleum based solvents are flammable. Do not smoke or permit open flames near where these are being used. Be sure the area is well ventilated where solvent cleaners are used.

### C. Animal Waste

Although all SYNLawn® products are pet friendly, there is additional maintenance necessary to keep odors to a minimum. Allow waste to dry and then dispose. Consider use of products such as Simple Green or Pro-vet-logic that are pet safe. Depending on the amount of usage and number of dogs, enzyme neutralizers may also be helpful to control odors. Neutralize with mixture of white distilled vinegar in an equal amount of water. Some odor control infills require flushing with water and some do not, so it's important to ask for specific recommendations from your local SYNLawn dealer in accordance with the infill product used for your installation.

### D. Mineral deposits

Apply a mixture of white distilled vinegar in an equal amount of water to grass and lightly brush. Flush thoroughly with water after application.

### E. Chewing gum or tree sap

In addition to dry cleaning fluid, chewing gum and tree sap can be removed by freezing. Aerosol packs of refrigerant are available from most carpet cleaning suppliers for this purpose, or dry ice can be used. After freezing, scrape with a knife.





### **F. Fungus or mold spots**

A one (1) percent solution of hydrogen peroxide in water can be sponged on to the affected area. Flush thoroughly with clean water after application.

### **G. Oil paints and more difficult stains**

Please consult your SYNLawn® dealer as these may require a commercial carpet cleaner.

**Caution! Do not use high-pressure water spray with stream force in excess of 300 psi as this can severely damage the turf and displace any infill material.**

## **BRUSHING**

### **II. Periodic brushing**

The frequency for suggested brushing is directly related to the amount of foot traffic you have in your turf area. Matting of fibers may occur in areas of high foot traffic, especially if fibers have become soiled with dirt and other airborne pollutants.

Periodic "cross brushing" of the turf with a Grandi Groomer rake can help restore the aesthetic appearance of the turf. "Cross brushing" means all brushing activity takes place against the grain, nap, or sweep of the turf fibers. By brushing against the turf, the fibers are "fluffed up". A brush with synthetic bristles should be used. The use of a Grandi Groomer is highly recommended.

**Caution! Never use a brush with metal or wire bristles as these will change the turf fibers.**

Take note to heavier trafficked areas for matting of fibers that might appear different than other areas that do not see heavy traffic. Brushing these areas is highly recommended as it will ensure the full life of your SYNLawn®. Brushing with a Grandi Groomer cannot hurt the turf, so brush as often as needed, again keeping in mind that the more traffic, the more frequent the brushing.

High traffic areas might include, but are not limited to:

- Commercial applications
- Multiple dogs
- Heavy play activity by children
- Paths in the yard that are traveled more often



### Protect Your Grass

Although your SYNLawn® brand turf is made of tough, durable fibers, certain precautions should be taken to prevent damage to the turf.

- **Ensure that your SYNLawn® is not exposed to reflected sunlight from windows, metallic or other reflective items as this may cause fiber shrinkage and/or melting of fibers.**
- **Avoid leaving any heat-absorbent material on the turf during daylight hours. Clear or dark plastic sheeting, articles made of metal, garden hoses, pool floats or toys for example will absorb heat at a higher rate than the turf and may cause localized shrinkage as the temperature may exceed the turf stabilization temperature.**
- Lighted cigarettes cannot ignite the turf, but they can damage the turf by fusing the tips of the fibers together. Cigarettes, fireworks, and open flames should be kept away from the turf.
- Furniture and equipment with sharp or jagged edges should not be placed on turf as this may puncture or tear the turf.
- Cap off or remove nearby sprinkler heads. Water from sprinkler systems can leave mineral deposits on turf that may cause discoloration.
- **Ensure recommended "infill" levels are maintained.**

### Report any issues/problems

Minor problems can become major problems if not corrected quickly. Any problem should be reported promptly to your local SYNLawn® dealer.

### Conclusion

The proper care and maintenance program can enhance the aging, usefulness, and aesthetics of your SYNLawn® brand turf. This manual attempts to encounter and answer the most frequently asked questions regarding your SYNLawn®. However, there are always unanticipated questions or needs so do not hesitate to call us!

**ASK YOUR SYNLawn® DEALER ABOUT THEIR LOW COST MAINTENANCE PROGRAM.**

Exhibit 1: Product Specification - 1: SYNLawn SYNTipede 243 ST243

Exhibit 1: Product Specification - 2: SY20027\_SuperYarn

Exhibit 3: Installation Method: L0802 Details - Synthetic Turf

Exhibit 4: Maintenance: C&M Guide 2018

**Exhibit 5: Specified Adhesive: SDS #34N-2 (2019-01-01)**

Exhibit 6: Runoff: SYNLawn 100 percent safe certification

Exhibit 7: Ellsworth Drive - July 15 - Heat Map



# Safety Data Sheet

## NORDOT® Adhesive/Prepolymer #34N-2

SDS Revision Date: 01/01/2019

### 1. Identification

#### 1.1. Product identifier

**Product Identity** NORDOT® Adhesive/Prepolymer #34N-2

**Alternate Names** Polyisocyanate Resin

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** See Technical Data Sheet.

**Application Method** See Technical Data Sheet.

#### 1.3. Details of the supplier of the safety data sheet

**Company Name** Synthetic Surfaces Inc.  
P.O. Box 241  
2450 Plainfield Avenue, Scotch Plains  
NJ 07076-0241

#### Emergency

**CHEMTREC (USA)** (800) 424-9300

**24 hour Emergency Telephone No.** (908) 233-6803

(908) 377-5112

**Customer Service: Synthetic Surfaces, Inc.** (908) 233-6803

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

Flam. Liq. 2;H225	Highly Flammable liquid and vapor.
Skin Irrit. 2;H315	Causes skin irritation.
Eye Irrit. 2;H319	Causes serious eye irritation.
Skin Sens. 1;H317	May cause an allergic skin reaction.
Resp. Sens. 1;H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2;H351	Suspected of causing cancer.
STOT SE 3;H336	May cause drowsiness or dizziness.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)

#### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



**Danger**

**Safety Data Sheet**  
**NORDOT® Adhesive/Prepolymer #34N-2**  
**SDS Revision Date: 01/01/2019**

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.  
H336 May cause drowsiness and dizziness.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.

**[Prevention]:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.  
P235 Keep cool.  
P240 Ground / bond container and receiving equipment.  
P241 Use explosion-proof electrical / ventilating / light / equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves / eye protection / face protection.

**[Response]:**

P302+352 IF ON SKIN: Wash with plenty of soap and water.  
P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.  
P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.  
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.  
P308+313 IF exposed or concerned: Get medical advice / attention.  
P314 Get Medical advice / attention if you feel unwell.  
P321 Specific treatment (see information on this label).  
P333+313 If skin irritation or a rash occurs: Get medical advice / attention.  
P337+313 If eye irritation persists: Get medical advice / attention.  
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.  
P362 Take off contaminated clothing and wash before reuse.  
P363 Wash contaminated clothing before reuse.  
P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

**Safety Data Sheet**  
**NORDOT® Adhesive/Prepolymer #34N-2**  
SDS Revision Date: 01/01/2019

**[Storage]:**

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

**[Disposal]:**

P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Butanone CAS Number: 0000078-93-3	33 – 36	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	[1][2]
Diphenylmethanediisocyanate CAS Number: 0000101-68-8	< 3	Carc. 2; H351 Acute tox. 4; H332 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317	[1][2]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

### 4. First aid measures

#### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
<b>Eyes</b>	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
<b>Ingestion</b>	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

**Safety Data Sheet**  
**NORDOT® Adhesive/Prepolymer #34N-2**  
SDS Revision Date: 01/01/2019

**4.2. Most important symptoms and effects, both acute and delayed**

**Overview**

Acute: Causes irritation to eyes, respiratory tract and skin.

Chronic: May cause serious and possibly irreversible pulmonary injury.

Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 3 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

**Inhalation**

May cause drowsiness or dizziness. May cause allergy or asthma symptoms of breathing difficulties if inhaled.

**Eyes**

Causes serious eye irritation.

**Skin**

May cause an allergic skin reaction. Causes skin irritation.

**5. Fire-fighting measures**

**5.1. Extinguishing media**

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder. Avoid contact with water.

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition: By fire: CO<sub>2</sub>, CO, Oxides of Nitrogen

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Keep cool.

Ground / bond container and receiving equipment.

Use explosion-proof electrical / ventilating / light / equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust / fume / gas / mist / vapors / spray.

**5.3. Advice for fire-fighters**

Self-contained breathing apparatus. Avoid contact with water.

**ERG Guide No.** ----

**6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8).

**6.2. Environmental precautions**

Do not allow spills to enter drains or waterways.

**Safety Data Sheet**  
**NORDOT® Adhesive/Prepolymer #34N-2**  
**SDS Revision Date: 01/01/2019**

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**6.3. Methods and material for containment and cleaning up**

Avoid open flames or sparks. Provide adequate ventilation. Absorb with sweeping/cleaning compound.

Follow practice for disposal of flammable organic solvent and be in accordance with Federal, State and Local regulations regarding environmental control.

**7. Handling and storage**

**7.1. Precautions for safe handling**

Avoid open flames, sparks, static electricity or other sources of ignition. When spraying, use respiratory protection approved for organic vapors, isocyanates and solvents. The TLV for airborne isocyanates is 0.005 ppm. Be vigilant about no smoking, grounding equipment to avoid static electricity, plus avoid other possible sources of ignition.

See section 2 for further details. - [Prevention]:

**7.2. Conditions for safe storage, including any incompatibilities**

Handle containers carefully to prevent damage and spillage.

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons applying this preparation.

Incompatible materials: Avoid contact with water.

Do not store containers in direct sunlight, hot "desert like" or other high heat conditions as the increase in internal pressure from heat may cause the containers to rupture and/or explode. Provide adequate ventilation.

See section 2 for further details. - [Storage]:

**7.3. Specific end use(s)**

No data available.

**8. Exposure controls and personal protection**

**8.1. Control parameters**

**Exposure**

CAS No.	Ingredient	Source	Value
0000078-93-3	Butanone	OSHA	TWA 200 ppm (590 mg/m3)
		ACGIH	TWA: 50 ppm STEL: 100 ppm
		NIOSH	TWA 200 ppm (590 mg/m3) ST 300 ppm (885 mg/m3)
		Supplier	No Established Limit
0000101-68-8	Diphenylmethanediisocyanate	OSHA	C 0.2 mg/m3 (0.02 ppm)
		ACGIH	TWA: 0.005 ppm Ceiling: 0.01 ppmSkin, S
		NIOSH	TWA 0.05 mg/m3 (0.005 ppm) C 0.2 mg/m3 (0.020 ppm) [10-minute]
		Supplier	No Established Limit

# Safety Data Sheet

## NORDOT® Adhesive/Prepolymer #34N-2

SDS Revision Date: 01/01/2019

### Carcinogen Data

CAS No.	Ingredient	Source	Value
0000078-93-3	Butanone	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000101-68-8	Diphenylmethanediisocyanate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;

### 8.2. Exposure controls

<b>Respiratory</b>	Approved for organic vapors, isocyanates and solvents.
<b>Eyes</b>	Chemical safety goggles
<b>Skin</b>	Wear overalls to keep skin contact to a minimum. Chemically resistant rubber or plastic
<b>Engineering Controls</b>	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

**Other Work Practices** Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

<b>Appearance</b>	Hazy, amber Liquid
<b>Odor</b>	Solvent odor
<b>Odor threshold</b>	Not Measured
<b>pH</b>	Not Measured
<b>Melting point / freezing point</b>	Not Measured
<b>Initial boiling point and boiling range</b>	Not Measured
<b>Flash Point</b>	21°F Tag Open Cup
<b>Evaporation rate (Ether = 1)</b>	Slower than ether
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Not Measured <b>Upper Explosive Limit:</b> Not Measured
<b>Vapor pressure (Pa)</b>	Not Measured
<b>Vapor Density</b>	Heavier than air
<b>Specific Gravity</b>	0.99
<b>Solubility in Water</b>	Insoluble
<b>Partition coefficient n-octanol/water (log Pow)</b>	Not Measured

# Safety Data Sheet

## NORDOT® Adhesive/Prepolymer #34N-2

SDS Revision Date: 01/01/2019

Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
VOC Content (theoretical)	346 g/l
% Non-Volatile	64 - 67%

### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Hazardous Polymerization will not occur.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

Contact with moisture and other materials which react with isocyanates.

### 10.5. Incompatible materials

Avoid contact with water.

### 10.6. Hazardous decomposition products

By fire: CO<sub>2</sub>, CO, Oxides of Nitrogen

## 11. Toxicological information

### Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Butanone - (78-93-3)	2,737.00, Rat - Category: 5	6,480.00, Rabbit - Category: NA	32.00, Mouse - Category: NA	No data available	No data available
Diphenylmethanediisocyanate - (101-68-8)	4,700.00, Rat - Category: 5	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

# Safety Data Sheet

## NORDOT® Adhesive/Prepolymer #34N-2

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Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	1	May cause allergy or asthma symptoms of breathing difficulties if inhaled.
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	2	Suspected of causing cancer.
STOT-single exposure	3	May cause drowsiness or dizziness.
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Butanone - (78-93-3)	400.00, Cyprinodon variegatus	520.00, Daphnia magna	500.00 (96 hr), Skeletonema costatum
Diphenylmethanediisocyanate - (101-68-8)	Not Available	129.70, Daphnia magna	Not Available

### 12.2. Persistence and degradability

There is no data available on the preparation itself.

### 12.3. Bioaccumulative potential

Not Measured

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

### 12.6. Other adverse effects

No data available.



# Safety Data Sheet

## NORDOT® Adhesive/Prepolymer #34N-2

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### 13. Disposal considerations

#### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

### 14. Transport information

1. Carrier must be hazmat certified.
2. Packaging: five-gallon pail.
3. Gross weight: ~46.5 lbs.
4. Dimensions: ~12" diameter x 13" h.
5. This item is not stackable.
6. UN Number: 1133.
7. UN Packaging Group: II.

### 15. Regulatory information

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

**Toxic Substance Control Act (TSCA)** All components of this material are either listed or exempt from listing on the TSCA Inventory.

**US EPA Tier II Hazards** Fire: Yes

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes

Delayed (Chronic): Yes

#### EPCRA 311/312 Chemicals and RQs (lbs):

Butanone (5,000.00)

Diphenylmethanediisocyanate (5,000.00)

#### EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### EPCRA 313 Toxic Chemicals:

Diphenylmethanediisocyanate

#### Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### New Jersey RTK Substances (>1%):

Butanone

Diphenylmethanediisocyanate

# Safety Data Sheet

## NORDOT® Adhesive/Prepolymer #34N-2

SDS Revision Date: 01/01/2019

### Pennsylvania RTK Substances (>1%):

Butanone

Diphenylmethanediisocyanate

## 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this product or information, the safety of this product, or the hazards related to its use. The information and product are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use thereof.

End of Document

Exhibit 1: Product Specification - 1: SYNLawn SYNTipede 243 ST243

Exhibit 1: Product Specification - 2: SY20027\_SuperYarn

Exhibit 3: Installation Method: L0802 Details - Synthetic Turf

Exhibit 4: Maintenance: C&M Guide 2018

Exhibit 5: Specified Adhesive: SDS #34N-2 (2019-01-01)

**Exhibit 6: Runoff: SYNLawn 100 percent safe certification**

Exhibit 7: Ellsworth Drive - July 15 - Heat Map



| **SYNLAWN®**

# CERTIFICATION OF SAFETY



What does 100% Safe mean? It means that SYNLawn guarantees that every product made meets EPA, Consumer Product Safety Commission, Prop 65 and all California requirement and have been tested to ensure they uphold the highest standards in the synthetic grass industry.

**100% Safe – for kids, for pets, for the environment. Made in the USA. 100% recyclable.**



Exhibit 1: Product Specification - 1: SYNLawn SYNTipede 243 ST243

Exhibit 1: Product Specification - 2: SY20027\_SuperYarn

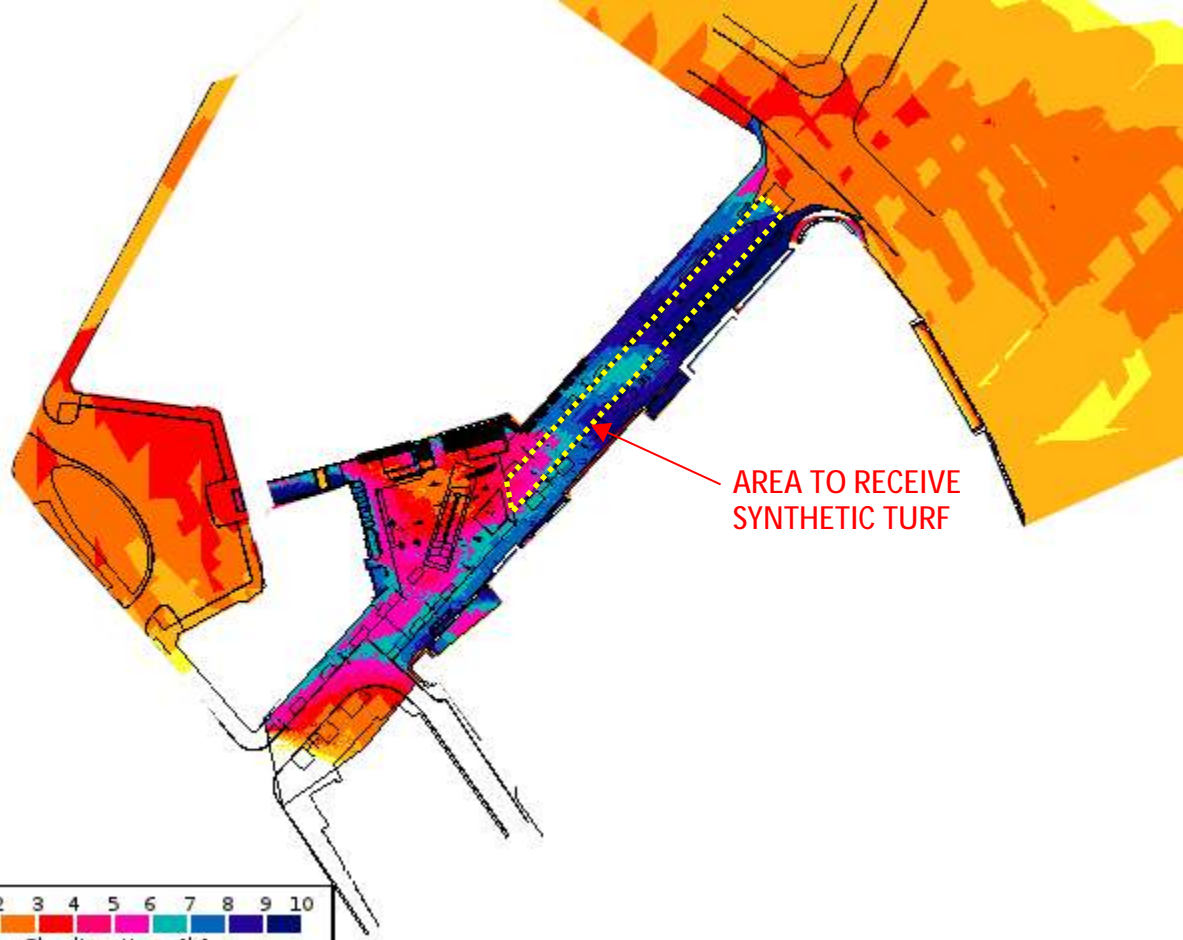
Exhibit 3: Installation Method: L0802 Details - Synthetic Turf

Exhibit 4: Maintenance: C&M Guide 2018

Exhibit 5: Specified Adhesive: SDS #34N-2 (2019-01-01)

Exhibit 6: Runoff: SYNLawn 100 percent safe certification

**Exhibit 7: Ellsworth Drive - July 15 - Heat Map**





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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

FIRE TECHNOLOGY DEPARTMENT  
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## EVALUATION OF THE EXTERNAL FIRE RESISTANCE CHARACTERISTICS OF ROOF COVERING SYSTEMS IN ACCORDANCE WITH ASTM E108-17, STANDARD TEST METHODS FOR FIRE TESTS OF ROOF COVERINGS, CLASS A SPREAD OF FLAME TESTING

**MATERIAL ID: ST243**  
**TRADE NAME: SYNTipede 243**


**FINAL REPORT**  
**Consisting of 8 Pages**

**SwRI® Project No.: 01.24104.01.1201**  
**Test Date: June 5, 2019**  
**Report Date: July 2, 2019**


**Prepared for:**

**Synlawn**  
**2680 Abutment Road SE**  
**Dalton, GA 30721**

**Prepared By:**

  
**Natasha Albracht**  
**Research Engineer**  
**Material Flammability Section**

**Approved By:**

  
**Matthew S. Blais, Ph.D.**  
**Director**  
**Fire Technology Department**

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Benefiting government, industry and the public through innovative science and technology



## 1.0 INTRODUCTION

This report describes a fire performance evaluation conducted for Synlawn in accordance with ASTM E108-17, *Standard Test Methods for Fire Tests of Roof Coverings*, Class A Spread of Flame (SOF) test requirements. Testing was conducted at the Fire Technology Department of Southwest Research Institute (SwRI), located in San Antonio, Texas.

This test method should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all the factors that are pertinent to an assessment of the fire hazard of a particular end use.

This report describes the testing of the assembly tested and the results obtained. The results presented in this report apply specifically to the material tested, in the manner tested, and not to the entire production of these or similar materials, nor to the performance when used in combination with other materials.

## 2.0 SAMPLE DESCRIPTION

SwRI received samples on April 24, 2019, and the test deck build and installation happened at a later date by SwRI personnel. The sample is described below in Table 1.

**Table 1. Sample Description.**

Material ID	Description	Color
ST243	Tufted synthetic turf with 15/18 PP 2-part/20 oz EnviroLoc backing.	Field Green/Apple

## 3.0 TEST SETUP AND CRITERIA

Class A tests are applicable to roof coverings that are effective against severe test exposure, afford a high degree of fire protection to the roof deck, do not slip from position, and do not present a flying brand hazard. When a roof covering is restricted for use on noncombustible decks (steel, concrete or gypsum) only the spread of flame test is required. To be regarded as Class A, a roofing system shall meet the requirements of two spread of flame tests. Each of the 3 ft-4 in. × 8 ft test decks were inclined at a slope of 1/2":12 and were exposed to a 1400°F ± 50°F flame for 10 min. All tests were performed in the presence of a 1056 ± 44-ft/min air velocity.

In order to meet acceptance criteria in accordance with ASTM E108-17, a roof covering material shall meet the following conditions when subjected to the particular class of fire tests:

1. At no time, during or after, the Class A spread of flame test:

- Any portion of the roof covering material be blown or fall off the test deck in the form of flaming or glowing brands that continue to glow after reaching the floor,
  - The roof deck be exposed (except for roof coverings restricted to use over noncombustible deck), or
  - Portions of the roof deck fall away in the form of particles that continue to glow after reaching the floor.
2. During the Class A spread of flame tests, the flaming shall not spread beyond 6 ft (1.8 m) and there shall be no significant lateral spread of flame from the path directly exposed to the test flame.

#### **4.0 RESULTS**

The material identified as *ST243* **passed** the Class A SoF tests according to the requirements of ASTM E108-17. Visual observations are presented in Appendix A and photographic documentation is in Appendix B.

**APPENDIX A**  
**VISUAL OBSERVATIONS**  
**(CONSISTING OF 1 PAGE)**

Test ID: #1  
Material ID: ST243  
Ambient air temperature: 77°F      Relative humidity: 55%

Time (min:s)	Observations
00:00	Start of test; burner on.
10:00	Burner off. Turf melted in the flame path. PASS

#### Flame-Spread Distance and Time

Distance	1 ft	2 ft	3 ft	4 ft	5 ft	6 ft	7 ft	8 ft
Time (min:s)	—	—	—	—	—	—	—	—

Test ID: #2  
Material ID: ST243  
Ambient air temperature: 77°F      Relative humidity: 52%

Time (min:s)	Observations
00:00	Start of test; burner on.
10:00	Burner off. Turf melted in application flame path. PASS

#### Flame-Spread Distance and Time.

Distance	1 ft	2 ft	3 ft	4 ft	5 ft	6 ft	7 ft	8 ft
Time (min:s)	—	—	—	—	—	—	—	—

**APPENDIX B**  
**PHOTOGRAPHIC DOCUMENTATION**  
**(CONSISTING OF 2 PAGES)**



**Figure B-1. SoF Test #1. Test setup.**



**Figure B-2. SoF Test #1. Sample after flame exposure.**





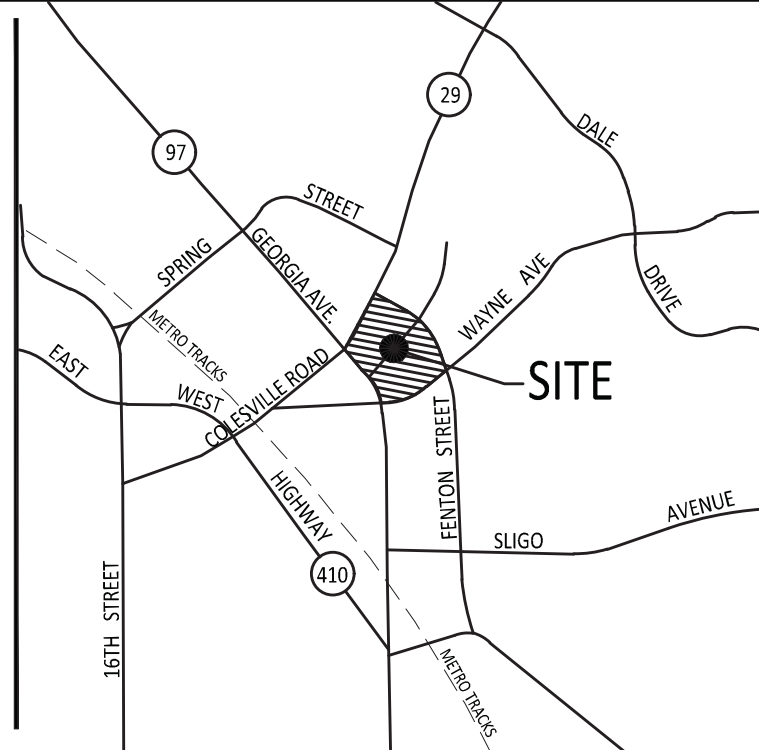
**Figure B-3. SoF Test #2. Test setup.**



**Figure B-4. SoF Test #2. Sample after fire exposure.**

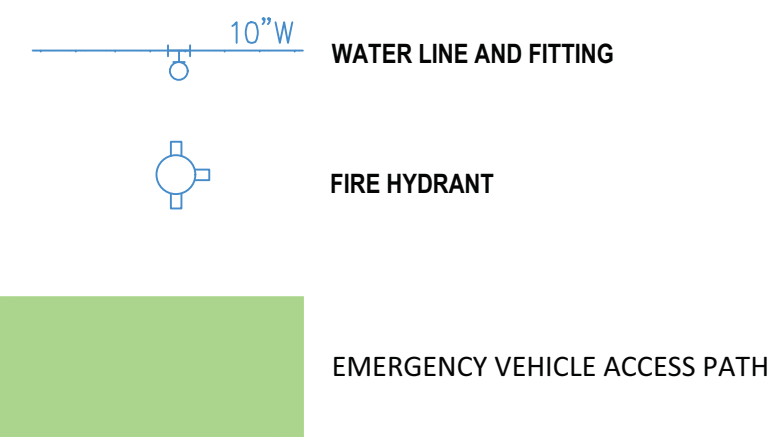


E-FILE STAMP



VICINITY MAP  
SCALE: 1" = 2000'

LEGEND



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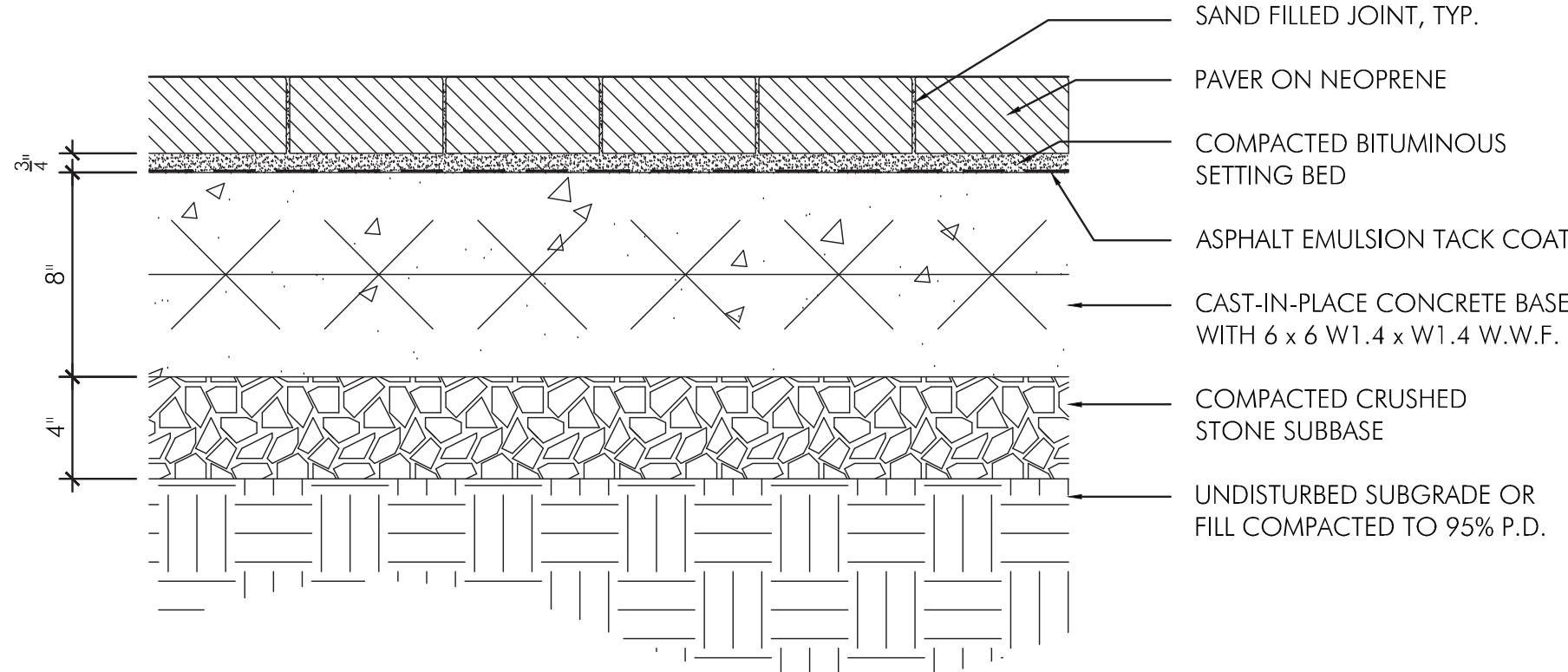
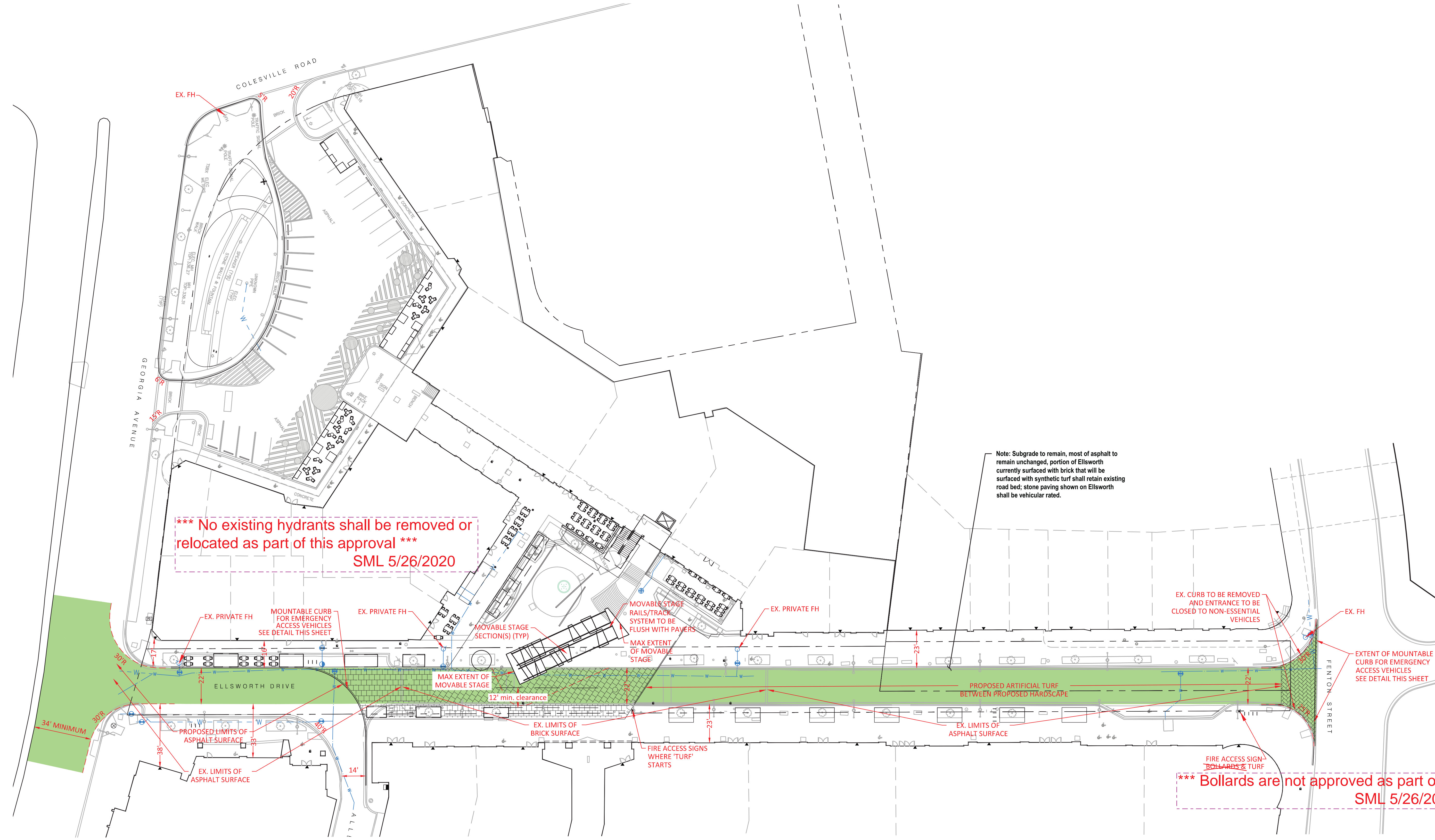
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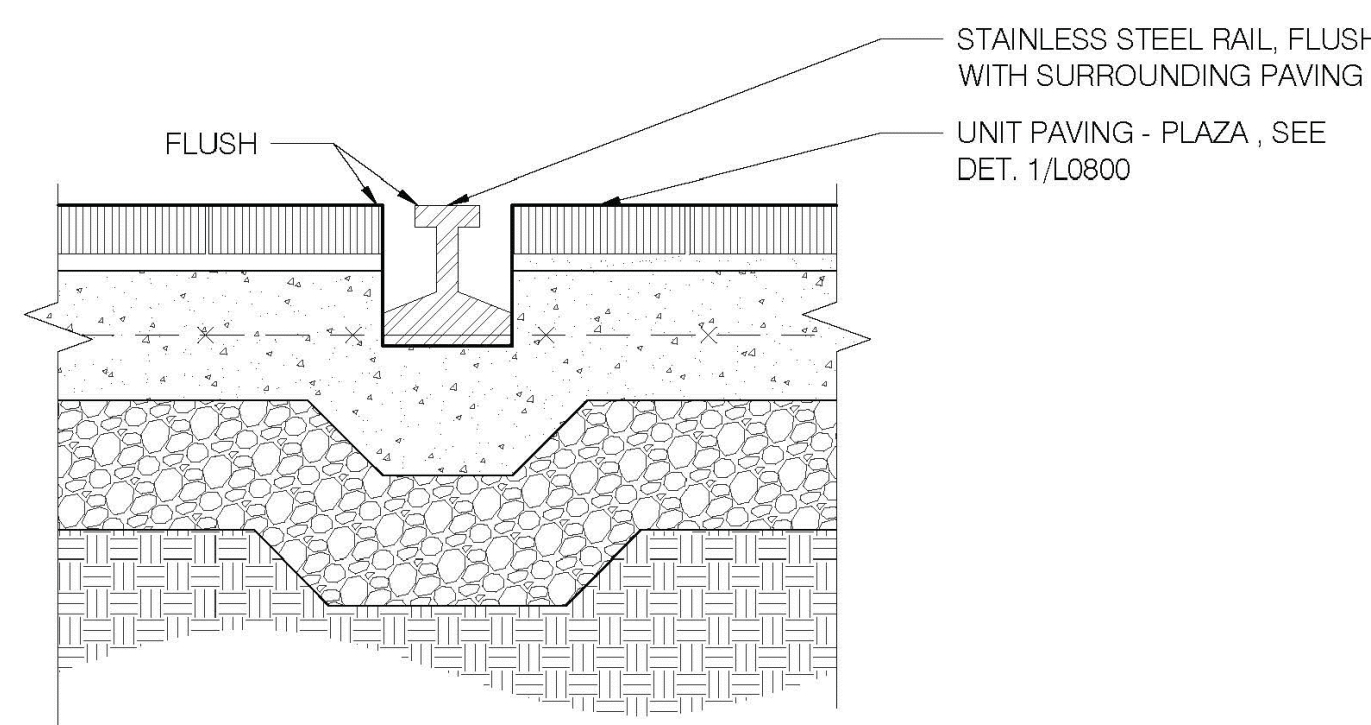


2 UNIT PAVING ON GRADE - VEHICULAR  
NOT TO SCALE



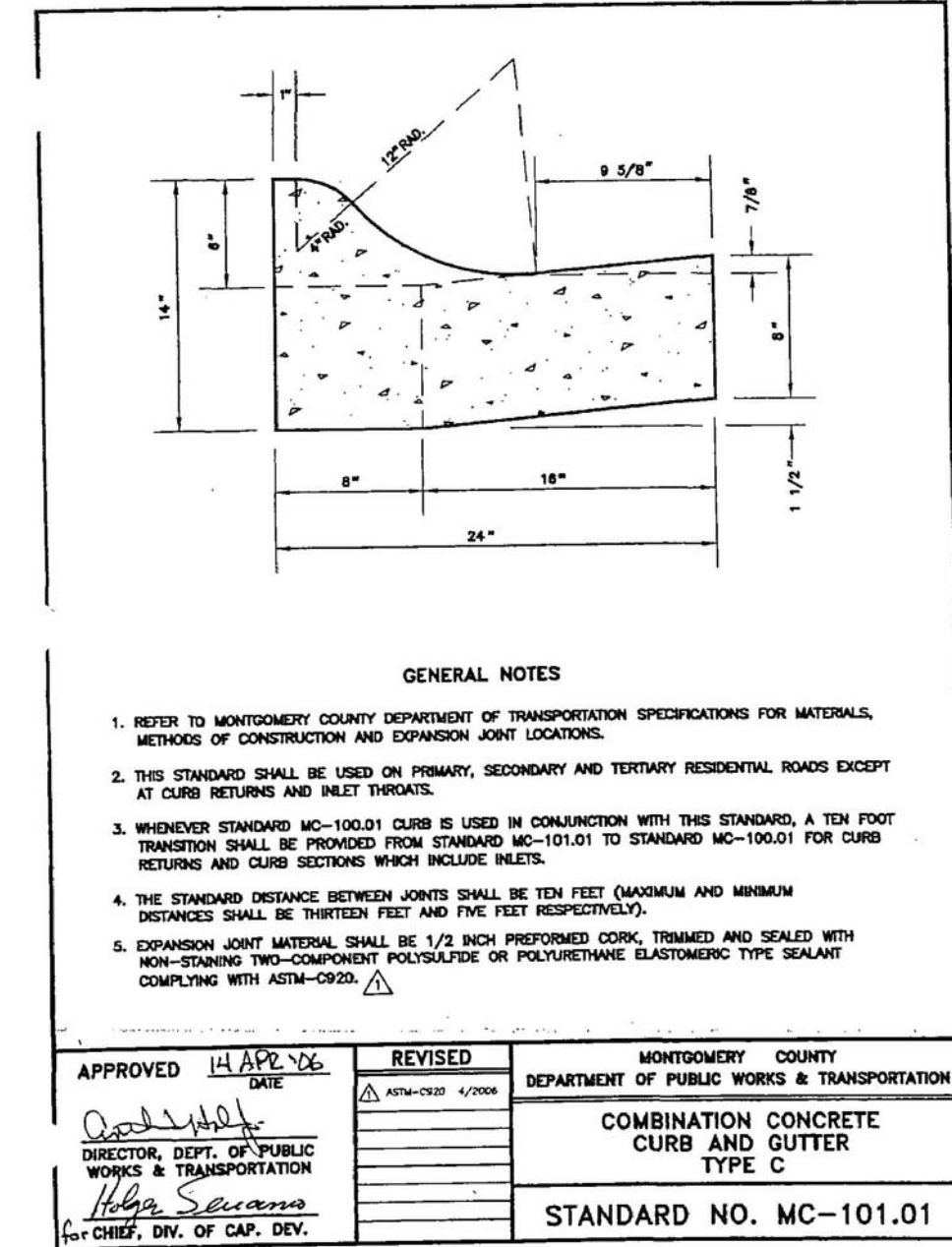
3 FIRE ACCESS SIGN  
NOT TO SCALE

\*\*\* All fire department vehicular access surfaces and subgrades shall meet minimum MCDOT tertiary road load bearing capacity \*\*\*  
SML 5/26/2020



STAGE LAYOUT - GENERAL NOTE:  
1. STAGE NOT IN CONTRACT, DESIGN & FABRICATION BY OTHERS.  
2. THE EDGE OF THE CLEAR SPACE FOR THE FIRE TRUCK ACCESS AT THE STAGE AREA IS SET BY A FIXED STAGE ELEMENT. THIS 12-FOOT CLEAR SPACE IS MAINTAINED AT ALL TIMES. BY DESIGN, THE MOVEABLE SEATING ELEMENTS THAT FORM THE STAGE MOVE ALONG FLUSH STEEL RAILS EMBEDDED IN THE PAVEMENT. THE STEEL RAILS AND SEATING ELEMENTS NEVER INFRINGE ON THE 12-FOOT CLEAR SPACE. IN ADDITION TO THE 12-FOOT CLEAR SPACE, A FIRE TRUCK HAS ADDITIONAL SPACE TO MANUEVER THROUGH THE ADJACENT LOW PLANTING AREA. AS ELLSWORTH DRIVE WOULD NOW BE PEDESTRIAN-ONLY, THE STAGE WAS LOCATED TO PROVIDE MAXIMUM VISIBILITY FROM EITHER END OF ELLSWORTH DRIVE.

4 RAIL/TRACK SYSTEM  
NOT TO SCALE

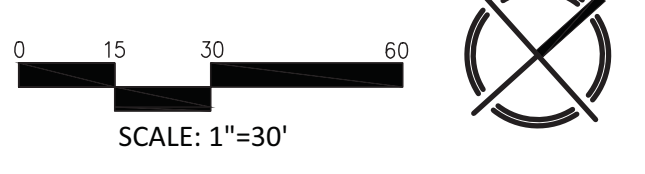


1 MOUNTABLE CURB DETAIL FOR FIRE ACCESS VEHICLE  
NOT TO SCALE

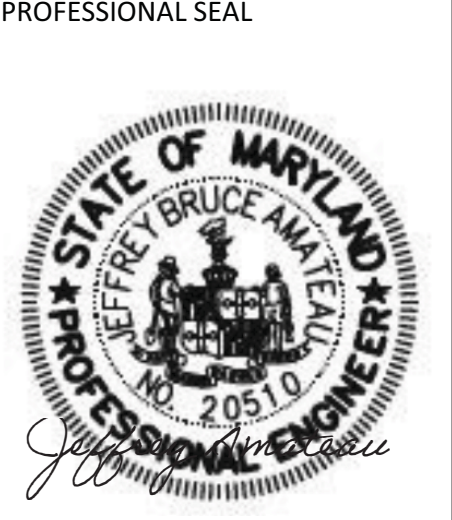
Jeffrey B Amateau

Digitally signed by Jeffrey B Amateau  
DN: c=US, o=Unaffiliated, ou=A01427E00000165143289700000FC  
85, cn=Jeffrey B Amateau  
Date: 2020.05.22 07:09:54 -04'00'

FIRE CODE ENFORCEMENT  
Fire Department Access Review  
Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from omissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation.  
BY: SML\* PM: 43 DATE: 5/26/2020  
\*\*\* SEE NOTES THIS SHEET



REVISIONS	DATE
PER INTAKE REVIEW	2019-1112



**DOWNTOWN SILVER SPRING**  
13TH ELECTION DISTRICT  
MONTGOMERY COUNTY,  
MARYLAND  
WSSC GRID: 210NW01  
TAX MAP: JN343

**DETAILED PLAN  
FIRE ACCESS PLAN**

DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DATE ISSUED: \_\_\_\_\_  
VKA PROJECT NO. 81999002M  
SHEET NO. 1 OF 1