TOWN OF SOUTH WINDSOR
PLANNING & ZONING COMMISSION
APPLICATION FORM

Application Number: 19-44P
Official Receipt Date: 10-15-19
Munis Application #: 201902149

RECEIVED
SEP 24 2019
SOUTH WINDSOR PLANNING DEPT.

APPLICANT: Cooley Realty LLC
PROJECT NAME: Powerscreen New England
COMPLETE LOCATION OF PROPERTY: 140 + 240 Nutmeg Road South
OWNER OF RECORD ON LAND RECORDS: Cooley Realty LLC
OWNER ADDRESS: 140 Nutmeg Road South, South Windsor, CT 06074
GIS PIN # 65100140 + 65100240 ZONE I

NAME, ADDRESS, TELEPHONE & EMAIL ADDRESS OF PERSON TO WHOM INQUIRIES SHOULD BE DIRECTED:
J.R. Russo + Associates LLC, Attn. Timothy Coon, P.O. Box 938
East Windsor, CT 06088 tcoon@jrrusso.com 860-623-0569 Estimated presentation time:

THIS APPLICATION IS FOR: (Check all that apply):

- ☐ Zone Change to _____ (Public Hearing and Certificate of Mailing Required)
- ☐ Open Space Subdivision/Resubdivision (Public Hearing and Certificate of Mailing Required)
- ☐ Subdivision ☐ Minor ☐ Major
- ☐ Resubdivision (Public Hearing Required) ☐ Minor ☐ Major
- ☐ Conditional Subdivision
- ☐ Special Exception to Table _____ (Public Hearing and Certificate of Mailing Required)
- ☒ Site Plan of Development ☐ New ☒ Modification Building(s) Sq Ft 0
- ☐ General Plan of Development
- ☐ Earth Filling (Sec. 7.6) and/or Earth Removal (Sec. 7.16) (Public Hearing and Certificate of Mailing Required)
- ☐ Regulation Amendment ☐ Zoning ☐ Subdivision - Attach proposed amendment (Public Hearing Required)
- ☐ Temporary and Conditional Permit (Public Hearing Required) for _____
- ☒ Temporary and Conditional Permit Renewal for Commercial Display
- ☐ Detached In Law Apartment or ☐ Accessory Apartment (Public Hearing and Certificate of Mailing Required)
- ☐ Major Home Occupation (Certificate of Mailing Required) for _____
- ☐ Other (explain in detail) _____

PLEASE NOTE: An Application Pending Sign is required to be posted on the property for all applications ten (10) days prior to being heard by the Commission.

Signature of Applicant
Cathal Sheelan
Print Name of Applicant

Signature of Property Owner
Cathal Sheelan
Print Name of Property Owner

Revised 1/9/2017

RUSSO
SURVEYORS · ENGINEERS
1 Shoham Rd · East Windsor, CT 06088
CT: (860) 623-0569
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LETTER OF TRANSMITTAL

DATE: 9-24-19	JOB NO. 2018-008A
ATTN: Michele Lipe	
RE:	
Powerscreen New England	
140 & 240 Nutmeg Road South	

TO Planning Department
1540 Sullivan Ave.
South Windsor, CT 06074

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover Via delivery, the following items:

☐ Cover Letter ☒ Paper Prints ☐ Mylars ☐ Specifications ☐ Report ☒ Other

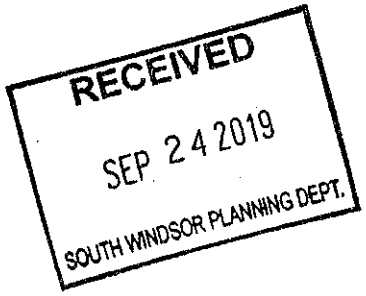
COPIES	DATE	SHEET NO.	DESCRIPTION
3	9-23-16	-/4	Site Plans
1	9-23-19		Application & Checklist
2	9-23-19		Drainage Report
1			List of Abutters
1	8/30/19		Check No. 0104

THESE ARE TRANSMITTED (as checked below):

☒ For approval ☐ For your use ☐ For review and comment ☐ As requested

☐ For signature ☐ For your records ☐ Returned after loan to us ☐ For bids due_____

REMARKS:



cc: Cooley Realty LLC

SENT BY: Timothy Coon

TOWN OF SOUTH WINDSOR CHECKLIST
REQUIRED INFORMATION SITE PLANS

APPLICANT Cooley Realty LLC

PROJECT NAME Powerscreen New England

This checklist must be signed by plan preparer (P.E./L.S.) declaring that all required information is provided. Items 1-7 are required for all applications; items 8-11 required where appropriate.

Check mark for each item supplied.

✓ 1. On each sheet for plans or maps, title block with the following information:

✓ a. Name, address and telephone of applicant.

✓ b. Name, address and telephone number of Land Surveyor or Professional Engineer.

✓ c. Name of Development.

✓ d. Date when drawings were made.

✓ 2. Key Map: An overall map drawn to a scale of 1 inch equals either 100 feet or 200 feet. This map will show the overall design of the Development and surrounding property within 500 feet.

✓ a. Data block which gives needed zoning information such as percentage of lot coverage, acreage of tract, number of apartment units, parking requirements, etc.

✓ b. Outline of buildings.

✓ c. Layout of streets.

✓ d. Surrounding property boundaries-within 500 feet.

✓ e. Names of abutting property owners.

NA f. Proposed open spaces and recreation areas.

✓ g. Driveway cuts on abutting properties and any properties across from proposed site.

✓ h. Distance to and name of nearest intersection street.

NA 3. Architectural Elevations: See attached checklist for Architecture and Design Review.

✓

4. Plot Plan: A layout map of the proposed site drawn to a scale of 1 inch equals 40 feet on either of the following size sheets: (1) 24" x 36" with a 3/4" ruled margin; (2) 18" x 24" with a 1/2" ruled margin, containing the following data:

✓

   a. Distance and bearings of all boundary lines and acreage of site. Iron pins required at all property angle points and shown on map.

NA

   b. Proposed streets and street lines with center line station, curve data, and parking spaces.

✓

   c. Building lines in accordance with zoning regulations.

NA

   d. Proposed buildings and other structures, including signs, outside lighting, and dumpsters (on concrete pad and screened).

✓

   e. Easements, noting grantors, grantees, and purpose must be shown in table format, e.g. below

Grantor	Grantee	Type of Easement	Date Filed	Vol/Pg

✓

   f. Names of abutting property owners.

NA

   g. Monuments will be indicated at corners and angles of all streets and at all points of curvature and tangency. The monumented points within proposed site shall be coordinated. These coordinates shall appear in tabular form on the plot plan. The accessibility of these CGS points shall be determined by the Town Engineer.

NA

   h. All open space or other common or public land uses shall be indicated.

✓

   i. A-2 certification; P.E./L.S. Seal.

✓

5. Topographic Map: A map drawn to a scale of 1 inch to 40 feet on sheets not exceeding 24 inches by 36 inches, including ruled margins shall in addition to the requirements of the plot plans show the following:

✓

   a. All existing and proposed buildings.

✓

   b. Curb Lines and pavement width, sidewalks.

✓

   c. Existing and proposed sanitary sewers.

✓

   d. Existing and proposed water and all existing utilities.

✓ e. Present wooded area indicated by foliage lines. Any trees to be saved should be shown.

✓ f. Existing and proposed contours shall be shown in not less than two-foot intervals, but in cases of relatively level land, the contours shall be one-foot intervals and spot elevations.

✓ g . Regulated wetlands and 100-year floodplain or note that none are present.

✓ h. Proposed storm drainage system, showing all catch basins, endwalls, manholes, lengths and sizes of pipes and elevations of structures. (Maximum distance between catch basins shall be 300 feet and minimum size of storm drain lines shall be 15 inches, within Town ROW.) If plan/profile sheet is provided all of this does not need to be shown. Only top of frame elevations and inverts of open discharge pipe shall be shown on this plan.

NA i. Connections of all springs into proposed storm drainage system as needed.

✓ j. Location and indications of existing brook channels, and 100-year flood limits.

✓ k. A-2 & T-2 Certification; P.E & L.S. Seals.

✓ 6. Landscaping plan

✓ 7. Drainage calculations: - Zero Runoff Increase per attached guidelines.

NA 8. Traffic Report

NA 9. Site Lighting Plan

NA 10. Plans and Profiles: A plan and profile of the proposed streets drawn on plan/profile paper of scales 1 inch to 40 feet horizontally, and 1 inch to 4 feet vertically on sheets not exceeding 24 inches by 36 inches, including ruled margins and containing the following:

NA a. Layout of streets in sections coordinated by stations with the profile.

NA b. Street plan showing roadways, drainage, sanitary sewer (including house sewer), foundation drains, lot lines, buildings including all utilities with elevations (top frame and inverts), size, type, length, slopes of pipes.

NA c. Sight line at driveway & street intersections.

NA d. Profile of roadway showing existing and finished grades. Roadway profile will show all tangent grade and all vertical curve information.

NA e. Profile will show all catch basins and all drainage lines between catch basins with all invert and top of frame elevations, sizes, lengths and slopes of pipes.

NA f. Where any storm drainage line discharges into an existing brook sufficient profile of this brook will be shown to determine conditions.

NA g. CGS datum shall be used on all sites accessible to these controls. The Town Engineer shall, based on standard engineering practices, determine the accessibility of these controls.

NA h. Profiles shall show all sanitary sewer lines and manholes, including elevations, (inverts, top of frame) sizes, lengths, and slopes of pipes. Top of foundation elevations for building shall be shown.

NA 11. Open Space Site Improvement Plans: For sites which require or include a provision for open spaces, a plan which contains data for site improvement may be required. This map shall be drawn to a scale of 1 inch equals 40 feet.

NA 12. Sanitary Report: Where individual sanitary sewage disposal systems are proposed, the final plans shall include a Sanitary Report certified by a Professional Engineer. The report shall demonstrate the feasibility of the proposed individual systems.

PLAN PREPARER (P.E./L.S.)

DATE

February 2002; Rev. 4-04

Bodycote Hooven Inc.
12700 Park Central Dr. #700
Dallas, TX 75251-1518

Hale Realty LLC
P.O. Box 300
Manchester, CT 06045-0300

Rolling Frito-Lay Sales LP
1412 Main Street Suite 1500
Dallas, TX 75202

255 Nutmeg Road LLC
255 Nutmeg Road
South Windsor, CT 06074

Town of South Windsor
1540 Sullivan Avenue
South Windsor, CT 06074

Alvarez Associates LLC
223 Nutmeg Road
South Windsor, CT 06074

Nutmeg Rd. South Associates LLC
P.O. Box 8385
Manchester, CT 06042

Four S LLC
c/o Peter Schmidt
34 Brian Drive
Bolton, CT 06043

Penn Hills LLC
54 Aspen Drive
South Glastonbury, CT 06073

State of Connecticut
Prop. Mngmt. Unit Office of Rail
50 Union Ave., 4th Floor West
New Haven, CT 06519

F&M Stella LLC
25 Lake Street
Vernon, CT 06066

Mercury Realty Company LLC
P.O. Box 945
Farmington, CT 06034

DRAINAGE REPORT

Powerscreen New England
240 Nutmeg Road South
South Windsor, CT

Revised September 23, 2019

Prepared for:

Cooley Realty LLC
140 Nutmeg Road South
South Windsor, CT 06074

Project No. 2018-008

Prepared by:

J.R. Russo & Associates, LLC
Land Surveyors & Professional Engineers
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I. INTRODUCTION

A. Project Description

Powerscreen New England is proposing to construct an approximate 1.5 acre gravel storage yard at 240 Nutmeg Road South in South Windsor. Runoff from the development will be directed via overland flow to a proposed infiltration basin where it will infiltrate back into the ground prior to overflowing into the existing stormwater management basin that serves the surrounding industrial park. The proposed infiltration basin was designed with a capacity in excess of the required Water Quality Volume (WQV) for the site to provide stormwater treatment. The detention required to ensure that the post development peak flows will not exceed predevelopment levels is provided by the existing detention basin that serves the surrounding industrial park.

B. Existing Conditions

The project site at 240 Nutmeg Road South was part of a larger 76.7 acre parcel of land that was originally approved as the Governor's Square Business Center in the early 1980s. The initial development at that time included, the construction of Nutmeg Road South, two industrial parcels, and a series of drainage ditches to convey stormwater runoff from the site to a new detention basin constructed at the western end of the site (referred to as Basin #1). Nutmeg Road South and the detention basin were ultimately turned over to the Town of South Windsor. This detention basin discharges to an existing waterway and culvert system which crosses under Rte. 5 and eventually Newberry Brook.

In 1989, the overall parcel was split as part of the Constitution Landing Re-subdivision. The re-subdivision included the two existing developed parcels and creation of 9 additional parcels, including the 3.55 acre subject parcel. In addition, the re-subdivision included the construction of a second detention basin to serve the development. A portion of this basin, referred to as Basin #2, occupies the northern end of the subject parcel. This basin is equipped with an outlet structure with a low flow orifice and secondary weir which overflow into a 48"x72" box culvert that conveys the flow to Basin #1. The original ditch system serving the initial development discharges into Basin #2. It should be noted that Basins #1 and #2 were designed and constructed to accommodate the full build-out of the Constitution Landing Re-subdivision, including the subject parcel.

With the exception of the Basin #2, located on the northern portion of the site, the subject parcel is relatively flat and currently undeveloped. Two drainage ditches extend south from the detention basin along the eastern and western boundaries of the site. Runoff from the site makes its way into these drainage ditches and ultimately Basin #2. Wetlands at the site associated with Basin #2 and the drainage ditches were identified by Davison Environmental and are shown on the project plans.

Based on a review of the USDA Soil Survey of Hartford County, site soils are classified as Udorthents-Urban Land complex and Walpole sandy loam (See Soils Map in Appendix 1). The USDA Soil Survey defines groups of soils into Hydrologic Soil

Groups (HSG) according to their runoff-producing characteristics. Soils are assigned to four groups (A, B, C, and D Groups). In group A, are soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They typically are deep, well drained, and sandy or gravelly. In group D, at the other extreme, are soils having a very slow infiltration rate and thus a high runoff potential. They have a hardpan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other nearly impervious material. The HSG classification of Udorthents-Urban Land and Walpole soils are HSG B.

II. STORMWATER RUNOFF ANALYSIS

A. Peak Discharge

As mentioned above, the existing detention basins #1 and #2 were designed to provide the necessary detention for the full build-out of the surrounding industrial area, including the subject parcel. In 2016 Carla's Pasta, located within the Constitution Landing development, proposed a building expansion and was asked by the Town to demonstrate that Basin #2 could accommodate it. In response, Design Professionals (DP) performed drainage calculations utilizing Hydroflow Hydrographs version 2013 computer modeling software to model the pre- and post development discharge rates contributing to Basin #2 to evaluate the impacts of the Carla's Pasta development. Their report concluded that Basin #2 has sufficient capacity for their development. A copy of the DP report dated February 25, 2016 is provided in Appendix 2.

In order to demonstrate that Basin #2 has sufficient capacity for the proposed development at the subject parcel, a similar drainage analysis has been completed. J.R. Russo & Associates LLC does not use the Hydroflow software used by DP, but rather uses Microcomputer System's HydroCAD™ Stormwater Modeling System. Fortunately, both of these softwares employ the TR-55 & TR-20 methodology, which allowed for the use of DP input data into the HydroCAD software. The resulting calculations for the pre- and post development conditions are provided in Appendix 3 and 4, respectively. As in the DP report, the pre-development analysis reflects the conditions prior to the construction of Basin #2. The post development condition reflects the current condition (including the Carla's Pasta addition), modified to include the 1.5 acres of impervious coverage resulting from the development of subject parcel. The only other modifications to the input data was to update the flowlines and lengths of the twin 42-inch culverts connecting the ditch system to Basin #2 and weir elevation of the Basin #2 outlet structure based on as-built information. The infiltration provided by the proposed infiltration basin on the subject parcel was ignored. Thus, the results over-estimate the peak discharges.

The analysis was completed for the 2-year, 10-year, 50-year and 100-year, 24 hour design storms. As shown in the Table below, even with the proposed development of the subject parcel, the capacity of Basin #2 is sufficient to ensure that the post-development peak

flows are less than the pre-development peak flows. In addition, the peak elevation in Basin #2 during the 100-year storm is calculated to be 68.36, which provides more than 1-foot of freeboard from the top of the berm at elevation 69.73.

TABLE 1 - PEAK FLOW COMPARISON

	2-Year	10-Year	50-Year	100-Year
Pre	10.5	25.8	41.4	48.9
Post	10.0	15.0	17.9	25.5

B. Pipe Sizing

The only proposed pipe is the 15-inch culvert leading from the proposed infiltration basin under the access road to discharge into the wetland. HydroCAD was used to analyze this basin and outlet pipe system to ensure it has sufficient capacity. The roughness coefficient used for pipe is 0.012. The analysis was computed for the 2-year, 10-year, 25-year and 100-year design storms (Appendix 5). For the purpose of sizing the pipe, the infiltration provided by basin was ignored. Thus, the results are conservative. The analysis indicates that the pipe has sufficient capacity to convey up to the 25-year design storm without the basin overtopping. During the 100-year storm event, the basin will overtop; however, the small amount of overflow will simply flow into the existing swale east of the gravel area, and ultimately make it to the same location, the stormwater basin at the north end of the site. As a result, the 15-inch culvert size is believed to be adequate.

C. Treatment

Runoff from the proposed gravel yard is designed to sheet flow in a southerly direction to the proposed infiltration basin. The infiltration basin was sized to accommodate the Water Quality Volume in accordance with the CT Stormwater Quality Manual. Calculations of the required WQV and basin size are provided in Appendix 5.

D. Summary of Results

The proposed design and analysis indicates that there will be no increase in peak runoff off from the site for the indicated design storms. In addition, the proposed infiltration basin will provide treatment of the discharge prior to discharge from the site.

NOTE:

RE: Project Name ____Powerscreen New England_____Appl # __19-44P____

Address: _____140 and 240 Nutmeg Road South_____

The complete STORMWATER MANAGEMENT REPORT is available for review in the Town of South Windsor Planning Department located on the second floor of Town Hall, 1540 Sullivan Avenue.

By:_____