**FINAL RE-SUBDIVISION**

**PLPZ 202100339**

To divide the property into two (2) building lots with a third parcel of land reserved for open space use.

**LOCATION:**

7 Dempsey Lane

**EXISTING ZONING:**

RA-2 (2-acre minimum)

**PARCEL SIZE:**

12.2752-acres

**UTILITIES:**

Well and Private Septic System for each proposed lot

<table>
<thead>
<tr>
<th>EXISTING</th>
<th>REQUESTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Dempsey Lane 12.2752-acres</td>
<td>4.8060-acres</td>
</tr>
<tr>
<td>Lot 2 Exclusive of Accessway and Excluded Land</td>
<td>4.9684-acres</td>
</tr>
<tr>
<td>Accessway</td>
<td>0.2498-acres</td>
</tr>
<tr>
<td>Excluded Land</td>
<td>0.0415-acres</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.2597-acres</strong></td>
</tr>
<tr>
<td><strong>Open Space Parcel</strong></td>
<td><strong>2.2095-acres</strong></td>
</tr>
</tbody>
</table>

**APPLICATION SUMMARY:**

An application for final re-subdivision, PLPZ202100339, was submitted to the Planning & Zoning Commission requesting to subdivide 7 Dempsey Lane into 2 lots with a proposed open space parcel in the RA-2 zone. The two lots are noted as Lot 1 and Lot 2 in this application and are proposed to be 4.8060-acres and 5.2597-acres (4.9684-acres for zoning purposes, less the accessway and excluded land) respectively, and an open space parcel of 2.2095-acres (equal to 18% of the total acreage to be subdivided) termed Parcel "D". A previous re-subdivision application, PLPZ201900483, was submitted and approved, however, the approval expired because the mylar filing was not completed within the required timeframe.

**ISSUES / RECOMMENDATIONS:**

The applicant should address the following items:

1. **The Inland Wetlands Agency** issued a permit, Permit #2019-074, on 7/2/2019. The permit expires on 6/24/2024.
2. **The Zoning Enforcement Officer** issued comments on 9/8/21 that the proposal meets the requirements of the Building Zone Regulations, excluding sections 6-15 and 6-17, and is Ok for Zoning Permit Sign-off.
3. **The DPW Engineering Division** issued comments on 9/8/21 indicating acceptance of the drainage plan and report in concept with revisions required prior to Zoning Permit endorsement.
4. **The Conservation Department** – comments on the pending application have not yet been submitted. Conservation issued comments on the previous submittal, on 12/30/19 which include several recommendations for landscaping, increasing permeability and reducing new impervious, etc..
5. **The Health Department** issued comments on 8/25/21 indicating approval of 7 bedroom septic systems on each lot. The comments note that the existing wells will be abandoned and new wells drilled. Health has no objection to the approval of the project.
6. **Lot Shape and Area** – The Commission should note that the two proposed lot shapes meet the standards set forth in Section 6-205 of the Building Zone Regulations for both lot shape and lot area.
7. **Declaration of Open Space Restrictions** – The applicant included a draft Declaration of Open Space Restrictions in their application that names the proposed open space, “Open Space Parcel D”.
8. **Open Space** – The “Open Space Parcel D” is noted to be 2.2095 acres in size, which is 18% open space area. The Commission may review Sections 6-296, 6-297 and 6-298 of the Greenwich Subdivision Regulations (GSR) to determine if the proposed open space meets the intent of the Regulations.
9. **Plan of Conservation and Development (POCD)** – The Commission may ask the applicant to show they meet objective 4.6(b) of the POCD, and the new open space they are proposing has no more than 20% wetland.

10. **Existing Site Grading** – The two proposed lots are on the eastern side of the parcel, which consists of moderately sloping land and utilizes the area of the existing dwelling for the proposed two (2) future development sites. To the west of this area, the site slopes down at a very rough 17.5% +/- to a wetlands area.

11. **Proposed Site Grading** – +/- 3.5-acres of site disturbance is proposed for the two-lot development. The Commission may ask the applicant to see if all of this is necessary grading, or if some of it is for more aesthetic purposes.

12. **Soil Excavation and Fill** – The applicant is proposing to need an additional 474 +/- cubic yards of fill to complete the design.

13. **Existing Trees** – Roughly 46 mature trees are noted to be removed and about 20 mature trees are noted to be protected with the proposed project.

14. **Driveway Access** – The proposed application adds an additional curb-cut to Dempsey Lane. The applicant is also not reusing the existing curb-cut and is proposing two new ones.

15. **Permeable Pavement Courtyard** – The Commission may ask the applicant to explain why they are only proposing one of the two courtyards on the plan to utilize permeable pavement, as noted in the Drainage Report.

16. **Two In-Ground Infiltration Systems** – The Commission may ask the applicant to consider the placement and need for the two proposed in-ground infiltration systems. Perhaps a different drainage system would help avoid slope and soil disturbance.

17. **Construction Parking Plan** – The Commission may request the erosion and sedimentation control plan be revised to account for construction parking. This would ideally help to reduce soil compaction that leads to increased runoff and root/plant damage.

**DEPARTMENT COMMENTS:**

<table>
<thead>
<tr>
<th>Department</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH DEPT.</td>
<td>see attached memo of 8/25/2021</td>
</tr>
<tr>
<td>IWWA</td>
<td>see attached Permit #2019-074</td>
</tr>
<tr>
<td>ZEO</td>
<td>see attached memo of 9/8/2021</td>
</tr>
<tr>
<td>ENGINEERING</td>
<td>see attached memo of 9/8/2021</td>
</tr>
<tr>
<td>CONSERVATION</td>
<td>see attached memo of 12/30/19</td>
</tr>
</tbody>
</table>

**PROPOSAL:**

An application for final re-subdivision was submitted to the Planning & Zoning Commission requesting to subdivide 7 Dempsey Lane into 2 lots with a proposed open space parcel. The two lots are noted as Lot 1 and Lot 2 in this application and are proposed to be 4.8060-acres and 5.2597-acres (4.9684-acres for zoning purposes, less the accessway and excluded land) respectively, and an open space parcel of 2.2095-acres (equal to 18% of the total acreage to be subdivided) termed Parcel “D”. All lots are within the RA-2 zone.

Both proposed residential lots, Lot 1 and Lot 2, will consist of a single-family dwelling, driveway, pool and patio, septic system, stormwater management controls and landscaping.

**EXISTING PROPERTY:** Dempsey Lane currently has six (6) single-family residential driveways connect to it and is roughly +/- 800 feet long. 7 Dempsey Lane is near the end of cul-de-sac, on the north end. If approved as presented, this application will add an additional curb cut to Dempsey Lane.

7 Dempsey Lane is bordered by single family homes that are within the RA-2 zone, and it is also within the RA-2 zone.

The property is improved with a single-family dwelling, driveway, patio, pool, septic system and landscaping with many mature trees. According to the tax card, the dwelling was constructed in 1966. The existing dwelling is noted to be removed on the “Subdivision Map” provided by the applicant.

**POCD:** Objective 4.6(b) on page 88 of the POCD encourages the designated open space area to reflect the character of the land and contain no more than 20% of wetlands. The proposed site plan only depicts
the eastern edge of the wetlands, leaving the western side undefined. To have a better understanding of the land, and to help confirm compliance with the POCD objectives, the western edge of the wetlands should be delineated and shown more clearly.

**WETLANDS:** The western portion of the parcel contains wetlands. The Inland Wetlands and Watercourses Agency (IWWA) reviewed the subdivision and the conceptual development plans for each of the two (2) building lots and issued a permit for their development. It is Permit #2019-074 and expires on 6/24/2024.

**ZONING:** The Commission should note that the proposed lot shapes, Lot 1 and Lot 2, meet the standards set forth in Section 6-205 of the Building Zone Regulations for both lot shape and area.

The applicant is proposing an open space parcel of 2.2095-acres in size. This parcel labelled on the applicant’s proposed subdivision map describes the parcel as “Open Space Parcel “D” 2.2095 acres 18%”. (2.2095 / 12.2752 x 100 = 17.9997)

The Commission may review Sections 6-296, 6-297 and 6-298 of the Greenwich Subdivision Regulations (GSR) to determine if the proposed open space meets the intent of the Regulations.

**DRAINAGE:** The site mainly discharges to the onsite wetland on the western side of the property. A small watershed discharges to the northeasterly property corner area as well. The proposed redevelopment of the parcel is noted to increase the total impervious coverage of the site by approximately 14,132 sq.ft.

The applicant is proposing Low Impact Development (LID) and Best Management Practices (BMP) strategies as noted:
- Two permeable pavement driveway designs
- Two traditional drywalls
- One raingarden filtration system
- One permeable pavement courtyard

**BACKGROUND / TITLE SEARCH:** The applicant submitted a deed history tracking 7 Dempsey Lane back to 1905 under Application PLPZ201900483 and that has been included with the current Staff Report.

The property filed only one previous application with the Planning and Zoning Department. It was for a preliminary subdivision plan for a three (3) lot subdivision and it was denied at a special meeting on 6/30/98.

**APPLICABLE REGULATIONS:**
- 6-205 – Schedule of Required Open Spaces, Limiting Heights and Bulk of Buildings
- 6-258 – Authority for Regulations
- 6-261 – Definitions
- 6-269 – Record Sheets; Contents
- 6-270 – Construction Sheet; Contents
- 6-271 – Health Dept. Report; Sewage Disposal Facility
- 6-278 – Signing of Subdivision Plan
- 6-279 – Filing with Clerk
- 6-283 – Conformity with Plan of Development; Zoning Regulations.
- 6-296 – Natural Features; preservation.
- 6-297 – Parks and Playgrounds; standards.
- 6-298 – Ownership of Park and Playground or Open Space Land; Proof; Filing.
- 6-304 – Lot Dimensions
ZONING ENFORCEMENT

Project No. PLPZ202100339

Reviewed for Planning and Zoning Commission.

TITLE OF PLAN REVIEWED: Calderini

LOCATION: 7 Dempsey

PLAN DATE:

ZONE: RA-2

☐ Ok for Zoning Permit Sign-off with the following revisions:

☐ Resubmit the following prior to Site Plan/ Subdivision approval:

☒ The subject site plan/subdivision meets the requirements of the Building Zone Regulations, excluding sections 6-15 and 6-17, and is Ok for Zoning Permit Sign-off.

Reviewed by: Jodi Couture

Date: 9/8/2021

Note: These comments do not represent Building Inspection Division approval. Plans subject to review by ZEO at time of building permit application.
DEPARTMENT OF PUBLIC WORKS – ENGINEERING DIVISION
SITE DEVELOPMENT REVIEW

Engineering Project No. 19-4(6)  Department Project No. PLPZ202100339  Submittal Received Date: 8/2/2021

Submittal Reviewed For: Planning and Zoning  Traffic Review Requested: No  Review Type: Final Subdivision

PLAN SET INFORMATION

Plan Title: Grand Development, LLC  Project Address: 7 Dempsey Lane


DRAINAGE SUMMARY REPORT INFORMATION


Reviews provided by the Engineering Division are for compliance with the Town’s “Roadway Design Manual and Standard Construction Details” and “Drainage Manual” as amended. Reviews are based upon the information and plans provided. Comments pertaining to the Town’s manuals are not all encompassing. Other reviewing entities may provide additional comments regarding consistency with these manuals in accordance with their jurisdictions. Review of sanitary sewer and septic systems are not reviewed by the Engineering Division.

All New Submittals for Commission Meetings must be received by the Engineering Division four weeks before scheduled Commission Meeting.

All Revised Submittals for Commission Meetings must be received by the Engineering Division three weeks before scheduled Commission Meeting.

Reviewed by: Juan Paredes, P.E. - Civil Engineer II  Date: 09/08/2021

COMMENTS AND CONDITIONS OF APPROVAL: Resubmit Prior to Zoning/Building Permit Approval

1. A revised Form SC-100 needs to be submitted.
2. A revised Form SC-107 needs to be submitted for each lot.
3. The Drainage Summary Report is acceptable in concept regarding the types of BMPs proposed. The following revisions and additional information must be submitted:
   a. A full complete report must be submitted.
   b. The WQV for the watershed area to the RG1 is 1,645 CF and the provided storage is 1,788 CF. Revise all computations in report.
   c. The drawdown computation for PP1 needs to use 1.56 in/hr.
   d. The drawdown computation for RS1 and RS2 needs to use 1.88 in/hr.
   e. The conveyance computations and outlet protection computations must be submitted prior to building permit.
   f. Revise all other calculations.
4. The construction plan set needs to be revised as follows:
   a. Existing Conditions Survey Sheet
      i. Prepared according to the Minimum Standards for Surveys and maps in Connecticut.
      ii. Show a note certifying the survey A-2.
iii. Show a note certifying the survey T-2.
iv. Show topography at contour intervals of two feet for the property and Right-of-Way. If possible, include contours ten feet beyond the property limits for neighboring parcels.
v. Show topography flatter than 2% with additional spot elevations and contour intervals of one foot.
vi. Show spot elevations throughout the property and Right-of-Way.
vii. Show a note for a referenced or assumed elevation datum (the FEMA datum shall be used for site’s located within a Flood Hazard Zone).
viii. Show one (1) permanent benchmark on the site within one hundred feet of the proposed construction.
ix. Show notes for referenced plans.
x. Show the entire Town of Greenwich Right-of-Way for the property frontage (drainage, curbs, sidewalk, trees, bushes, shrubs, walls, contours, etc.).
xi. Show the entire Town of Greenwich Right-of-Way in both directions for the minimum required sight distance if a new driveway curb cut is proposed.
xii. Show storm drainage, sewer, water, etc.
xiii. Show roads, buildings, driveways, patios, walks, walls and other structures.
xiv. Show utilities and easements.
b. Site Plan Sheets
   i. A control structure must be added to RS1 for the 6” overflow at 294.60. The pipe from the Cultec System must be at invert elevation 293.90 not 294.60.
   ii. The callout for RG1 says the surface area at the top of berm (308.00) is 1,134 SF, which is less than the area at top of sod (1,200 SF). This needs to be revised. The 1,200 SF needs to be within the bottom area of the rain garden and not under the berm.
   iii. The weirs have a width of 2-feet in the report and the plan needs to be revised to match.
c. Construction Details Sheets need to be added.
d. Building/House Section or Elevation Sheet
   i. Show one section or elevation of the building/house.
   ii. Show all elevations to the deepest footings on section/elevation.
   iii. Show existing and proposed grade elevation on section/elevation.
   iv. Show existing mottling elevation on section/elevation.
   v. Show existing groundwater elevation on section/elevation.
   vi. Show existing ledge elevation on section/elevation.
   vii. Sheet shall be sealed and signed by a State of Connecticut Professional Engineer or Architect.
5. The draft Operations and Maintenance Plan Report for Lot 1 & 2 shall be revised as needed and submitted with the zoning/building permit submittal.

Standard Conditions for Each Submittal

1. The Engineering Division will no longer keep any records for the submittals. All records for the submittal shall be obtained from the Town of Greenwich Department/Division that has taken in applications and/or submittals. These documents are maintained within each office (e.g. P&Z, IWWA, and DPW Building and Highway Divisions).
2. All revisions to the reports and plans must follow the requirements in the Town of Greenwich Drainage Manual February 2014 as amended.
3. All revisions must be accompanied by a point-by-point written response to the Engineering Division’s comments.

Standard Conditions of Approval

1. The Operations and Maintenance Plan Report must include the following for the Certificate of Occupancy:
   b. The final completed Exhibit A, and B
   c. The Maintenance Declaration needs to be filed on the Town of Greenwich Land Records prior to a Certificate of Occupancy. A review of the documents above must be completed before filing on the Town of Greenwich Land Records.
2. The Town of Greenwich – Standard Construction Notes for Site and Subdivision Plans are conditions that must be met.
3. All requests for a Temporary Certificate of Occupancy (T.C.O.) or a Certificate of Occupancy (C.O.) shall be submitted one month before the T.C.O. or C.O. is required.

4. The submittal for a Temporary or Final Certificate of Occupancy must include the following:
   c. Field Inspection Record (All required photos) – Form SC-106 – Sealed and Signed by a Connecticut Licensed Professional Engineer.
   d. Bioretention Soil Testing Certification Sign-Off (as applicable with the bioretention soil gradation test and the phosphorous test for the mixed soil) – Form SC-104 – Sealed and Signed by a Connecticut Licensed Professional Engineer.
   h. A Letter discussing all the work that remains to be completed (Only for a Temporary Certificate of Occupancy Submittal).
The Health Department has approved new 7 bedroom septic system designs for both Lots 1 and 2. The existing well is proposed to be abandoned and new wells are proposed to be drilled to serve each residence. Based on this the health Department will recommend approval of this proposal.

Michael Long
Greenwich Health Department

Hello All,

Please find the attached routing sheet and link for a Final Resubdivision at 7 Dempsey Lane.

https://greenwichct-my.sharepoint.com/:f:/g/personal/katie_deluca_greenwichct_org/EunNV64x1fVOMd_zljx4LrUBJAM2Rzm1fhnAMZYvqYT62g?e=G4XOFv
This is tentatively scheduled for Sept. 14th.
Thank you,

Bianca Dygert
Planner II

Town of Greenwich
Land Use - Planning & Zoning
101 Field Point Road
Greenwich, CT 06830-6463
Ph. (203) 622-7894
Office Fax. (203) 622-3795
Direct Fax. (203) 861-6113
Bianca.Dygert@greenwichct.org

www.greenwichct.gov
MEMORANDUM

TO: Jacalyn Pruitt, Planner II
FROM: Aleksandra Moch, Environmental Analyst
DATE: December 30, 2019
RE: Elizabeth M. Grant and Thomas Angell, Co-Executors of the Estate of Marie D. Schwartz, 7 Dempsey Lane, PLPZ 2019 00483

I have reviewed the above-referenced plans and visited the site. The following comments are offered for your consideration:

1. The proposed subdivision offers an open space area located within the western section of the parcel. The site plan depicts only the eastern edge of the wetland leaving the western side undefined. The objective 4.6(b) of the new Plan of Conservation and Development encourages the designated area of an open space to reflect the character of the land and contain no more than 20% of wetland. Topographic analysis indicates potential for the set aside area to contain a section of an upland. To have a better understanding of the land, the western edge of the wetland should be delineated and shown on the survey.

2. The eastern section of the property is almost level, while the western portion contains wetland with sloping transition between them. The sloping area in between provides a vegetative transition between the lawned upland and a high quality wooded wetland area. The Low Impact Development principles embraced in Greenwich Drainage Manual (section 4.7.1) call for limited site disturbance, preservation of natural soils, and vegetative cover. Both new lots have ample space over the level lawn area to fit a very comfortable construction envelope with minimal grading, soil loss, and tree removal.

The proposed plan fails to respect the above principles. The extent of the combined site disturbance (3.5 acres) not only shows unnecessary grading over the majority of the level terrain, but also encroachments upon a steep slope. While soil may appear static, it is a dynamic system that in time, has matured to provide ecological services. Unnecessary disturbance and fill should be avoided and the applicant should reconsider “aesthetic grading” and allow the gentle undulations
of the landscape to remain intact. This intensive site disturbance will have several environmental consequences, including the following.

- Grading and soil disturbance on the slope will result in more severe erosion and more challenging soil stabilization. The soils at the site have highly erodible substrate (Paxton soil), and disturbance provides unnecessary risk of erosion and sedimentation.

- Added fill results in loss of indigenous soil engaged in nutrient cycling, water and air circulation, wildlife habitat (especially microbes, which are crucial for plant nutrient absorption), filtration and buffering, and preservation of land history.

- Loss of 50 mature trees will be detrimental due to the impact to converting solar energy into biomass, providing food source to wildlife, controlling microclimate of the area (which not only is a natural resource issue, but also helps regulate temperatures in the built environment), releasing oxygen and sequestering carbon, contributing to the soil development, supporting and creating wildlife habitat, controlling water storage and usage. The applicant should explore alternatives to reduce the extent of tree loss, provide a list of the trees noting the ones that can be preserved and note the reason the others need to be cut. A tree save plan would be beneficial to ensure the intent to save trees is properly accommodated.

- Morphological changes will impact natural drainage patterns. Existing micro topography retains water in landscape vs. a smooth graded slope that promotes runoff.

- Post-filling environment will require more intensive use of irrigation due to low content of organic matter and clay particles in imported material. In addition, nutrient poor fill will require more intensive use of fertilizers and pesticides.

- Extensive site disturbance within the area infested with invasive species is very risky. The seed bank existing in soil, once uncovered, will expose new areas to the invasion. Seeds could be carried by water and wind so the downslope location of a high quality wetland will be threatened.

To employ some of the LID principles, it is recommended the applicant move the proposed drainage and septic system off the slope or as far up-slope as possible. If needed, more soil testing for septic should be done to tighten the construction envelope. The opportunity to preserve more trees should be explored and the grading reduced to the necessary minimum.

3. The overall area of the proposed hard surface is 32,819 sq. ft., with one of the largest areas belong to the driveways and motor courts. The motor courts situated on the front of the residences are very large at 3,600 sq. ft. each. The applicant should consider reducing the areas. While reduction of hardscape is most
desirable, the applicant should provide permeable pavement for all driveways and courtyards that remain.

4. The proposed drainage system will consist of in-ground infiltration systems, a rain garden, and a stone reservoir located underneath a permeable motor court. To avoid slope disturbance, the two in-ground infiltration systems should be relocated over the level area or the applicant should reduce the overall impervious surface, so they can be eliminated. A rain garden, which provides an additional measure of bio-filtration, could be considered instead.

5. Due to the high erodibility of Paxton soil, the proposed soil erosion and sediment control measures are not adequate. A more comprehensive plan should be provided following the recommendations of the IWWA staff. In addition, a planting plan showing the long-term stabilization is recommended. The plan should limit the lawn cover and favor native species, which will boost the environmental values of both lots.

6. The area of the slope is heavily affected by invasive species. The applicant offered to the IWWA to control them by replanting the area with a native meadow. It is recommended a plan is provided to include more details, time frame, and maintenance schedule. Due to the high quality of the wetland area, it is recommended trees be planted along the wetland edge to preserve the shade and provide a gradual transition from a wooded swamp to the sloping meadow.

7. The square footage of both houses is notably large. The applicant should consider reducing the carbon foot-print of each of them by incorporating solar or geothermal energy sources into the house designs.

8. The erosion and sedimentation control plan should be revised to account for construction vehicles. For sites such as this, it is not unusual to see 15-20 cars and subcontractor vehicles. As workers jockey to find parking, unintended soil compaction and tree damage often results.

cc: Conservation Commission
<table>
<thead>
<tr>
<th>Document</th>
<th>Date</th>
<th>Recorded Date</th>
<th>Grantor/Grantee</th>
<th>Vol./Pag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warranty Deed</td>
<td>08/11/1905</td>
<td>08/15/1905</td>
<td>William J. Smith to Henry Schaefer</td>
<td>103/99</td>
</tr>
<tr>
<td>Executor's Deed</td>
<td>08/17/1943</td>
<td>08/20/1943</td>
<td>Corn Exchange Bank Trust Company, as Executor and Trustee under the law will and testament of Henry Schaefer to Weefore Company</td>
<td>388/489</td>
</tr>
<tr>
<td>Quit Claim Deed</td>
<td>12/06/1945</td>
<td>12/19/1945</td>
<td>Weefore Company to The Millbrooke Holding Company</td>
<td>391/597</td>
</tr>
<tr>
<td>Warranty Deed</td>
<td>09/27/1946</td>
<td>09/27/1946</td>
<td>The Millbrook Holding Company to Myron A. Wick, Jr. and Elizabeth D. Wick</td>
<td>415/165</td>
</tr>
<tr>
<td>Warranty Deed</td>
<td>09/19/1952</td>
<td>10/01/1952</td>
<td>Myron A. Wick, Jr. and Elizabeth D. Wick to Hobart W. R. Wheeler</td>
<td>483/246</td>
</tr>
<tr>
<td>Quit Claim Deed</td>
<td>01/10/1964</td>
<td>01/16/1964</td>
<td>A. Porter Waterman and Rodney H. Waterman to Hobart W. R. Wheeler</td>
<td>698/532</td>
</tr>
<tr>
<td>Warranty Deed</td>
<td>01/15/1964</td>
<td>01/16/1964</td>
<td>Hobart W. R. Wheeler to Virginia B. Kirkwood</td>
<td>699/535</td>
</tr>
<tr>
<td>Warranty Deed</td>
<td>09/30/1971</td>
<td>10/01/1971</td>
<td>Virginia B. Kirkwood to Arnold Schwartz</td>
<td>822/646</td>
</tr>
<tr>
<td>Executor's Deed</td>
<td>09/08/1981</td>
<td>09/14/1981</td>
<td>Thomas P. Ford and Marie D. Schwartz, Executors of the Estate of Arnold Schwartz to Marie S. Schwartz</td>
<td>1234/16</td>
</tr>
<tr>
<td>Quit Claim Deed</td>
<td>06/29/1988</td>
<td>07/01/1988</td>
<td>Marie D. Schwartz to John T. Whitmer and Rosemary L. Whitmer (LESS AND EXCEPTING)</td>
<td>1840/60</td>
</tr>
<tr>
<td>Quit Claim Deed</td>
<td>06/29/1988</td>
<td>07/01/1988</td>
<td>Marie D. Schwartz to Dorothy F. Whitmer (LESS AND EXCEPTING)</td>
<td>1840/76</td>
</tr>
<tr>
<td>Notice for Land Records</td>
<td>04/26/2018</td>
<td>05/21/2018</td>
<td>Marie D. Schwartz to Marie D. Schwartz, deceased</td>
<td>7385/26</td>
</tr>
</tbody>
</table>
BOOK 103—WARRANTEE DEED.

To all People in whom these Presents shall come, GREETING:

KNOW YE THAT, I, WILLIAM J. SMITH, of the Town of Greenwich, County of Fairfield, and State of Connecticut,

For the consideration of One ($1.00) Dollar and other valuable considerations, Do Deed

received to my full satisfaction of Henry Schaefer, of the City, County and State of New York,

Do give, grant, bargain, sell and convey unto the said HENRY SCHAEFER,

all that certain tract of land situated in the Town of Greenwich, County of Fairfield, and State of Connecticut, bounded and described as follows: to wit—Beginning at the Northwest corner of the tract hereby conveyed at the point formed by the intersection of the division line between land hereby conveyed and land of Cornelius Reed, said West line of North Street and running thence along the west line of North Street, South 4° 12' West 373.2 feet, South 6° 44' West 395.7 feet and South 6° 25' East 264.4 feet to land of John H. Chocover, thence along land of said Chocover, South 69° 10' West 700.2 feet, South 7° 42' East 795.3 feet, South 77° 25' East 304.7 feet, North 77° 05' East 555.5 feet to land of J. Edward Ackley, thence along land of said Ackley North 127° 26' East 352.5 feet to land of Cornelius Reed, thence along land of said Reed North 67° 25' East 42.7 feet, North 67° 25' East 527.3 feet, South 67° 25' East 905.4 feet, South 77° 14' East 527.3 feet South 77° 14' East 527.3 feet, South 77° 45', East 245.5 feet and South 76° 49' East 227.8 feet to the place of beginning, and containing Twenty seven and fifty seven one thousandths (27.57) acres.

Bonded Northwesterly by land of Cornelius Reed, Eastwardly by North Street, Southwesterly by land of Zora H. Chocover, and Westerly by land of J. Edward Ackley, and land of Cornelius Reed.

RECEIVED

PLANNING & ZONING

COUNTY COMMISSIONERS

Nov 12 2019

IN WITNESS WHEREOF, I have hereunto set my hand and seal this sixteenth day of August, A. D. 1893.

JOHN J. SMITH
Geo. B. Borens.

STATE OF CONNECTICUT

Fairfield County

Personally appeared WILHELMUS H. SCHAEFER, of the forgoing instrument, and acknowledged the same to be his free act and deed before me.

Geo. B. Borens

(Notary Seal) Notary Public, Connecticut.
Gertrude Brown Pollack                                      John W. Rues
Elsie Magid                                                Executor as aforesaid
Susan Leavitt Ries                                         Gregg Neville
Gertrude Brown Pollack                                      (L. S.)
STATE OF NEW YORK                                      COUNTY OF NEW YORK
Notice: New York City, August 18, A. D. 1945.
Personally appeared: JOHN W. RUES and GREG RIVES, Executors as aforesaid, signers and seals of
the foregoing instrument, and acknowledged the same to be their free act and deed as such
Executors, before me.
(Notary Seal)
Gertrude Brown Pollack, Notary Public.
Notary Public. New York County
County Clerk of Kings Co. Fills No. 260, Reg. No. 10125
N. T. Co. Files No. 326, Reg. No. 11743-1865.
County Clerk's No. No. 1943. Commission Expires March
30, 1948.

STATE OF NEW YORK.
COUNTY OF NEW YORK.
No. 17751

I, ARTHUR C. NATION, County Clerk and Clerk of the Supreme Court, New York County, the said
being a Court of Record held by law a seat, do hereby certify that GERTHUS BROWN POLLACK
whose name is subscribed to the annexed deposition, certificate of acknowledgment of proof,
be the time of taking the same a NOTARY PUBLIC acting in and for said County, duly com-
missioned and sworn, and qualified to act as such, that he has filed in the Clerk's office of
the County of New York a certified copy of his appointment and qualification as a Notary Pub-
lic for the County of Kings with his autograph signature; that as such Notary Public he was
authorized by the laws of the State of New York to protest notes, to take and certify depos-
tions, to administer oaths and affirmations, to take affidavits and certify the acknowledgment
of proof; and to certify written instruments for leases, mortgages and indentures, to be read in evidence or recorded in this State.
And further, that I am well acquainted with the handwriting of such Notary Public, or have compared the signature of such officer with his
autograph signature filed in my office, and believe that the signature on the said annexed instrument is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal this 18th day of
Aug., 1945.

[Seal]

[Signature]

Received for Record Aug. 19, 1945.

TOWN CLERK.

Deed

TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW ALL MEN BY THESE PRESENTS THAT we, at the County of Greenwich, within and for the County of Greenwich,
the 5th day of June, A. D. 1945, upon the written application of the Corp Exchange Bank
Trust Company, a corporation organized and existing under the laws of the State of New York
and located in the City, County and State of New York, as successor executor of and trustee
under the last will and testament of Henry Schnare, late of the Town of Greenwich in the
County of Fairfield and State of Connecticut, deceased, praying that said court order the sale
of certain real estate owned by said decedent at the time of his decease, and expose it to
sell and convey the same; it was ordered, adjourned and desired that said successor executor
and trustee sell the real property hereinafter described, at public auction, either as a whole
or in parts, as it may seem for the best advantage of said estate, and to give a deed of
conveyance thereof, as by reference to the files and records of said court will more fully
appear; and

WITNESSE, the said executor and trustee in pursuance of the power, authority and direction to
be given as aforesaid, hereunto and for the public auction the real property hereinafter described to

[Details of the deed follow here]
The WEERN CORPORATION, a corporation organized and existing under the laws of the state of Delaware and located in said Greenwhich, now
therefore, know ye, that the CORN EXCHANGE BANK TRUST COMPANY, as executor and trustee as aforementioned, by RALPH PETERS, Jr., its President, in pursuance of the power, authority and direction aforesaid, and in consideration of the sum of twenty thousand ($20,000) dollars, received to its full satisfaction of the said WEERN CORPORATION, the receipt whereof is hereby acknowledged, does give, grant, bargain, sell, convey and assign unto the said WEERN CORPORATION, all the right, title and interest which the said Henry Schefer had at the time of his decease, or which it, as executor and trustee as aforesaid, has in and to:

all that certain tract of land, with the buildings thereon, situated in said Greenwich, in quantity twenty, seven and five tenths (35,000) acres, bounded and described as follows:

Beginning at a point on the westerly line of North Street where the same is intersected by the dividing line between the premises herein described and land of Helen G. Flane, thence running along the westerly line of North Street south 4° 12' west three hundred seventy two and 2/10 (372.2) feet, south 6° 44' west one hundred ninety five (195) feet and south 6° 85' west two hundred forty four and 7/10 (246.7) feet to land of Bremer, Inc., thence along land of said Bremer, Inc. north 80° 10' west one hundred sixty nine and 9/10 (169.9) feet, north 79° 42' east four hundred seventy five and 9/10 (75.3) feet, north 79° 57' west three hundred four and 7/10 (304.7) feet, north 78° 10' west one hundred seventy two and 9/10 (172.9) feet and north 78° 45' west five hundred fifty five and 6/10 (550.6) feet to land of Heiler Corporation, thence along land of said Heiler Corporation north 12° 58' east four hundred fifty three and 0/10 (453.3) feet to land of William T. Dewar and Mary Wheeler Dewar, thence along land of William T. Dewar and Mary Wheeler Dewar and land of Helen G. Flane north 80° 08' east forty nine and 7/10 (49.7) feet, north 80° 25' east five hundred forty seven (547) feet and north 79° 06' east eighty six and 9/10 (86.9) feet, thence along land of Helen G. Flane the following courses and distances: north 79° 15' east one hundred fifty nine and 1/10 (159.1) feet, south 79° 14' east one hundred eighty six and 3/10 (186.3) feet, south 77° 43' east two hundred twenty seven and 0/10 (227.8) feet to the westerly line of North Street at the point or place of beginning; said tract being bounded northerly by land of William T. Dewar and Mary Wheeler Dewar and land of Helen G. Flane, then westerly and then northerly all by land of Helen G. Flane, easterly by land of Bremer, Inc. and westerly by land of the Heiler Corporation.

Said premises are conveyed subject to the zoning and town planning commission laws, rules and regulations as established in and for the town of Greenwich, any state of facts that an accurate survey of said premises would show and the tax of the town of Greenwich on the list of June 1, 1943, which tax the grantee assumes and agrees to pay as part of the consideration hereof.

TO HAVE AND TO HOLD the above granted and bargained premises, with the privileges and appurtenances thereto, unto the said grantee, its successors and assigns forever, to their own proper use and behoof. And the said executor and trustee does hereby convey with the said grantee, its successors and assigns, that it has full power and authority, as executor and trustee as aforesaid, to grant and convey the above described premises in manner and form as aforesaid, and for itself and its successors does further covenant to warrant and defend the same to the said grantee, its successors and assigns, against the claims of any person or persons whatsoever, claiming by, from or under it, as executor and trustee as aforesaid.

IN WITNESS WHEREOF, said Corn Exchange Bank Trust Company, as executor and trustee as aforesaid, by its President aforesaid, has hereunto set its corporate name and affixed its seal this thirty-first day of August, A.D. 1943.

Signed, sealed and delivered.
BOOK 388 MISCELLANEOUS

In the presence of

W. Kenneth Wilson

Attorney

R.H. ... Assistant Secretary

STATE OF NEW YORK
COUNTY OF NEW YORK

Personally appeared the CORN EXCHANGE BANK TRUST COMPANY, as executor and trustee as aforesaid, by RALPH PETERS, Jr., its President, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed and the free act and deed of the said Corn Exchange Bank Trust Company, as executor and trustee as aforesaid, before me,

(Notary Seal)

G. Monroe Morley, Notary Public.

STATE OF NEW YORK
COUNTY OF NEW YORK

I, ARCHIBALD H. WATSON, County Clerk and Clerk of the Supreme Court, New York County, the

same being a Court of Record having by law a seal, DO HEREBY CERTIFY, that G. MONROE MORLEY,

whose name is subscribed to the annexed deposition, certificate of acknowledgment or proof,

was at the time of taking the same a NOTARY PUBLIC acting in and for said County, duly commissioned and sworn, and qualified to act as such; that he has filed in the Clerk's office of the County of New York a certified copy of his appointment and qualification as a Notary Public for the County of Kings with his autograph signature; that as such Notary Public, he was duly authorized by the laws of the State of New York to protest notes, to take and certify depositions, to administer oaths and affirmations, to take affidavits and certify the acknowledgment or proof of deeds and other written instruments for lands, tenements and hereditaments, to be read in evidence of record in this State. And further, that I am well acquainted with the handwriting of such Notary Public, or have compared the signature of such officer with his autograph signature filed in my office, and believe that the signature to the said annexed instrument is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal this 13 day of

AUG., 1945.

[Seal]

ARCHIBALD H. WATSON, County Clerk and Clerk of the Supreme Court, New York County.

STATE OF CONNECTICUT
TOWN COURT OF GREENWICH
TOWN OF GREENWICH
V.

LEONE DE ANGELIS

NOTICE OF PENDENCY OF ACTION

Notice is hereby given of the pendency of a civil action between the above parties brought by

will and complaint signed by R. Allen Burton, Commissioner of the Superior Court for Fairfield

County, dated July 6, 1945, returnable to the Town Court of Greenwich on the 4th Tuesday of

July 1945, to foreclose the following tax liens held by the Town of Greenwich against Leone

De Angelis:

First Count: Lien for tax of $9.12 together with interest, fees and charges on the list of

June 1, 1938, continued by certificate dated December 30, 1939, recorded in the Greenwich Land

...
KNOW ALL MEN BY THESE PRESENTS, THAT THE KEEPER COMPANY, a corporation organized under the laws of the State of Delaware, and located in the Town of Greenwich, County of Fairfield, and State of Connecticut, acting herein by Arthur H. Waterman, its President, hereby do, for the consideration of the sum of $1.00 and other valuable considerations, deliver to the full satisfaction of THE KEEPER HOLDING COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Connecticut, located in the Town of Greenwich, County of Fairfield, and State of Connecticut, do as by these Presents, remise, release, and forever quit Claim unto the said THE KEEPER HOLDING COMPANY

all right, title, interest, claim, and demand, whatsoever, which it the said Keeper Company, or any of its successors, assigns, have or shall have in or to all that certain tract of land, with the buildings thereon, situated in said Greenwich, in quantity twenty-seven and 23/1000 (27.036) acres, bounded and described as follows:

Beginning at a point in the westerly line of North Street where the same is intersected by the dividing line between the premises herein described and land of Helen G. Fling, thence running due westerly along North Street south 21° 19' east three hundred seventy-two and 7/10 (372.3) feet, south 90° 44' west one hundred ninety-five and 1/10 (195.1) feet and north 28° 52' east two hundred forty-five (245) feet to the easterly line of land of William T. Stewart and land of Harold D. Davenport, southerly along said easterly line and southeasterly along land of William T. Stewart and land of Harold D. Davenport, north 18° 32' west four hundred thirty-three and 9/10 (432.9) feet to land of William T. Stewart and land of Harold D. Davenport, northerly along said land of William T. Stewart and land of Harold D. Davenport, north 18° 32' east four hundred fifty-five and 3/10 (455.3) feet to land of William T. Stewart and land of Harold D. Davenport, southerly along said land of William T. Stewart and land of Harold D. Davenport, north 18° 32' west one hundred forty-six and 9/10 (146.9) feet to land of William T. Stewart and land of Harold D. Davenport, northerly along said land of William T. Stewart and land of Harold D. Davenport, north 18° 32' east one hundred fifty-five and 2/10 (155.2) feet, south 79° 51' east one hundred fifty-five (155) feet, south 77° 43' west two hundred eighty-four and 9/10 (284.9) feet and south 77° 43' east three hundred twenty-one and 5/10 (321.5) feet to the easterly line of North Street at the point or place of beginning; said tract being bounded northerly by land of William T. Stewart, and southerly by said easterly line of North Street; westerly by land of H. E. Stadler, southerly by land of H. E. Stadler, westerly by land of H. E. Stadler, and northerly by land of Helen G. Fling.

Said premises are conveyed subject to the existing and then existing commission law and regulations as established in and for the Town of Greenwich, any state or federal that an accurate survey of said premises would show and the tax of the Town of Greenwich on the date of June 30, 1946, which tax the grantee assumes and agrees to pay as part of the consideration hereof.

To have and to hold the premises with all the appurtenances, unto the said Keeper Company and its successors, assigns, forever, so that neither the said Keeper Company nor its successors, assigns, shall have any right, title, claim, or demand, whatsoever, in or to the premises, or any part thereof, but shall keep the same in its own right, and to use the same for the purposes for which it was granted.

In Witness Whereof the Keeper Company has hereunto caused to be set its name and affixed its corporate seal this 6th day of December, in the year of our Lord, one thousand nine hundred and forty-five.

[Signature]

H. R. D. Stadler
H. R. D. Stadler, President

[Signature]

H. R. D. Stadler
H. R. D. Stadler, President

STATE OF CONNECTICUT
COUNTY OF FAIRFIELD

The foregoing instrument was read and approved by the party or parties hereunto coming, and acknowledged the same to be his or her free and voluntary instrument and the free act and deed of said Corporation, before me.

[Signature]

Notary Public

[Seal]

December 6th A.D. 1945

[Notary Seal]

[Seal]

[Seal]
BOOK 45 MISCELLANEOUS

All that certain tract, piece or parcel of land, with the buildings and improvements thereon situated in the said Town of Greenwich and more particularly described in a certain mortgage deed from Peter Curto to Gus Odlemon for $15,000 dated December 29, 1943 and recorded in the Land Records of the Town of Greenwich in Book 429 at Page 394, reference thereon being bad for a more particular description of said premises.

Negotiating and intending hereby to fully sell, assign, transfer and set over unto the Releasor said mortgage deed and the note thereby secured and all sums due and to grow due thereon.

The Releasor represents that there is now due on the principal sum of the above mortgage indebtedness, the sum of $18,000.00, and that interest has been paid thereon to September 1, 1948.

To have and to hold the premises, with all the appurtenances, unto the said Releasor, its successors and assigns forever, so that neither I, the Releasor, nor my heirs nor any other person whatever or thing shall hereafter have any claim, right or title in or to the premises, or any part thereof, but therefrom I and they are by these presents forever barred and excluded.

The condition of this deed is such, that whereas the Releasor is justly indebted to the Releasor in the sum of Seventeen Thousand ($17,000) Dollars as evidenced by his promissory note in favor of the Releasor in monthly installments of Five Hundred ($500) Dollars commencing November 1, 1948, together with interest on unpaid balance at the rate of four (4%) per cent. per annum payable monthly with each installment of principal until the entire principal sum thereof has been fully paid.

Upon default for thirty days in the payment of any installment of interest or principal or in the payment of any tax or assessment against the premises described in the mortgage deed which secures this collateral assignment, the entire principal sum thereof then unpaid shall at the option of the holder become immediately due and payable.

The Releasor for himself, his heirs, representatives and assigns, covenants and agrees with the Releasor, its successors and assigns, to pay the holder of said collateral note its interest at their reasonable attorneys' fees in any action to enforce the payment of said note or to enforce this collateral assignment.

NOW, THEREFORE, if said note shall be paid according to its tenor then this assignment shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 27th day of September, A.D. 1948.

Signed, Sealed and Delivered
in presence of
S. Floyd Nagle

Everett H. Juan

STATE OF CONNECTICUT

COUNTY OF FAIRFIELD

PERSONALLY APPEARED GUS ODLEMON, signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed before me.

S. Floyd Nagle, Notary Public.

Received for record Sept. 30, 1948 at 11:30 A.M. and recorded by the Town Clerk

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

KNOW YE, that THE MILBOURG HOLDING COMPANY, a corporation organized under the laws of the State of Connecticut and located in the Town of Greenwich, County of Fairfield and State of Connecticut, acting herein by Arthur H. Waterman, its President hereunto duly authorized,
BOOK 45 MISCELLANEOUS

For the consideration of One Dollar ($1.00) and other valuable considerations received to its full satisfaction of MYRON A. WICK, JR. and ELEANOR D. WICK, husband and wife, both of said Town of Greenwich, they give, grant, bargain, sell and confirm unto the said MYRON A. WICK, JR. and ELEANOR D. WICK during their joint lives, with the remainder in fee to the survivor, all that certain tract, piece or parcel of land, with buildings thereon, located in the Town of Greenwich, County of Fairfield and State of Connecticut, and more particularly bounded and described as follows:

Beginning at the point formed by the intersection of the division line between land of the granter and land of Graffmeier with land of Berman, Inc. and running thence along land of Berman, Inc. North 79° 41' West 136.2 feet, North 79° 59' 29" East 304.7 feet, North 79° 18' West 126.9 feet and North 79° 18' East 346.4 feet, thence along land now or formerly of Bigelow North 19° 25' East 455.6 feet, thence along land now or formerly of Dewart North 89° 02' East 49.7 feet, thence along land of Dewart to and along land of Flynn North 89° 23' East 547.0 feet, and North 79° 49' East 68.8 feet, thence along land of Garrison North 54° 30' East 158.4 feet and South 78° 08' 20" East 470.4 feet, thence along the southerly end of a proposed private road South 51° 51' East 50.0 feet, thence along land of the granter South 19° 50' West 97.98 feet, thence along land of the granter to and along land of Graffmeier South 89° 54' 50" West 470.4 feet to the point of beginning and containing 18.298 acres.

The general boundaries of the above described tract of land are northerly by land of Dewart, land of Flynn, land of Garrison and by the southerly end of a proposed private road 50 feet in width leading to North Street, easterly by other land of the granter and land of Graffmeier, southerly by land of Berman, Inc. and westerly by land of Bigelow.

Said premises are conveyed subject to the coming and Town planning laws, rules and regulations as established in and for the Town of Greenwich; and subject to the Town of Greenwich tax on the list of June 1, 1946, due and payable in 1947.

Said premises are conveyed together with the right to use two certain strips of land hereinafter described as first right of way and second right of way in common with the granter and others to whom such right has been or may hereafter be granted for all purposes as if the same were a public highway, including the right to lay, construct, set, maintain, and connect water lines, sewage lines, gas lines, telephone lines, electric light and power lines and all appliances thereof, under, in, through, over, across, and upon such rights of way.

Said first right of way is bounded and described as follows:
Northerly by land now or formerly of Flynn, Easterly by North Street, Easterly by land of John D. Garrison et al, and Southerly by a line 75 feet distant from and parallel to the northerly line thereof.

Said second right of way is bounded Northeasterly by land of John D. Garrison et al, Northerly by the first right of way above described, Southeasterly by the herein described premises, and Southwesterly by a line 50 feet distant from and parallel to the northerly line thereof.

TO HAVE AND TO HOLD the above granted and bargained premises, with the appurtenances thereunto, unto the said Granter for and during their joint lives, and upon the death of either of them, unto the survivor of them and to his or her heirs and assigns forever, to their own proper use and benefit, to use the intention hereof to convey the said Granter the use and enjoyment of the premises during their joint lives and the remainder in fee to the survivor.

AND ALSO, to, the said Granter, does for itself, its successors and assigns, movement with the said Granter, their heirs and assigns, that at and until the surrendering of these premises, it is well insured of the premises, as a good indefeasible estate in fee simple and has good right to bargain and sell the same in manner and form as in above written, and that the same is free from all incumbrances whatsoever, except as above mentioned.
AND FURTHERMORE, it, the said Grantor, does by these presents bind itself and its successors and assigns forever to WARRANT AND DEFEND the above granted and bargained premises to them, the said Grantees, their heirs and assigns, against all claim and demand whatsoever, except as above mentioned.

This deed is given and accepted upon the following express covenants and agreements on the part of the Grantees, their heirs and assigns, which shall run with the land hereby conveyed and be binding upon the Grantees, their heirs and assigns for the benefit of the Grantor, its successors or assigns, and remaining land of the Grantor:

1. The premises hereby conveyed shall not be subdivided for the purpose of sale or other transfer of the same without the written consent of the Grantor, its successors and assigns, except into three separate tracts of equal acreage.

2. Said premises will not be used for any business purposes of any kind or nature whatsoever or for any other purpose than for a strictly private residence.

3. The plans, specifications, color scheme and location of any building to be erected or altered on said premises must be submitted to the Grantor and approved by it in writing before the same are used, and a copy of such plans and specifications shall be retained by the Grantor. No building shall have what is commonly known as a flat roof. It is understood and agreed that such approval will not be unreasonably withheld by the Grantor.

4. So long as the Grantor, its successors or assigns, are owners of any land within one thousand (1,000) feet of the premises, no fences shall be erected upon the premises nor shall any hedge be maintained at a height in excess of five (5) feet without the written consent of said Grantor.

5. It is understood and agreed that this deed does not and shall not create any restrictions, equitable or otherwise, in favor of the Grantor, their heirs and assigns, on any other premises of the Grantor.

IN WITNESS WHEREOF, THE MIDDLEBROOK HOLDING COMPANY has hereunto set its name and affixed its corporate seal this 27th day of September A.D. 1946.

Signed, sealed and delivered

in the presence of:

Nadir A. Fuller
Marvin E. Wagner

STATE OF CONNECTICUT
COUNTY OF FAIRFIELD

By Arthur H. Waterman
Its President

Personally appeared THE MIDDLEBROOK HOLDING COMPANY by Arthur H. Waterman, its President, an attorney, signer and sealer of the foregoing instrument, and he acknowledged the same to be his free act and deed, and the free act and deed of said Corporation, before me.

(NOTARY SEAL)

Received for Record Sept. 27, 1946 at 12:15 P.M. and recorded by:

\[Signature\]

TOWN CLERK

TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW YE, that MIDDLEBROOK, INCORPORATED, a corporation organized and existing under the laws of the State of Connecticut and located in the Town of Greenwich, County of Fairfield and State of Connecticut, acting herein by Douglas Wooton its President hereunto duly authorized for the sum of One Dollar and other valuable considerations received to its full satisfaction of Robert William Morris and Ruth E. Morris, of the Town of Greenwich, County of Fairfield and State of Connecticut, DOES DIVEST, GRANT, SELL AND CONVEY unto the said ROBERT WILLIAM MORRIS and RUTH M. MORRIS and to the survivor of them and unto such survivor's heirs and assigns...
To all People to Whom these Presents shall Come, Greeting:

Know Ye, That we, KTOS A. TICK, JR. and ELLISIGHT D. TICK, husband and wife, both of the Town of Greenwich, County of Fairfield and State of Connecticut

for the consideration of One ($1) Dollar and other valuable considerations

received by us our full satisfaction of ROBERT A. MURIEL of the City of New Rochelle, County of Westchester and State of New York

do give, grant, bargain, sell and convey unto the said

ROBERT W. MURIEL

All that certain tract, piece or parcel of land, with the buildings and improvements thereon, located in the Town of Greenwich, County of Fairfield and State of Connecticut and more particularly bounded and described as follows:

Beginning at the point formed by the intersection of the division line between land hereby conveyed and land of "Kosmulier", with land of James D. and Ruth B. N. Nugent, "Kennedy of Greenwich", as shown on said map, and running thence along said line of said map, North 76° 59' East 100.7 feet, North 76° 59' East 20.7 feet, South 76° 59' East 172.9 feet and North 76° 59' East 55.0 feet, thence along said land of said map, East 153.6 feet, thence along line of said map to and along line northerly of Union Road, South 25° 33' East 57.0 feet, and North 76° 59' East 85.0 feet, thence along line of said map to and along line northerly of Union Road, South 25° 33' East 105.2 feet and South 75° 30' East 270.8 feet to a point along the southerly end of a proposed private road 100 feet in width leading to North street, being a strip of land herein described as "First Right of Way", thence along said "Second Right of Way" South 25° 33' East 60.0 feet, thence along land of de Forliz Brothers, Inc. and formerly of The First Realty Corporation, South 13° 22' East 97.0 feet, thence along said land of de Forliz Brothers, Inc., and formerly of The First Realty Corporation, South 13° 22' East 47.0 feet to said point of beginning and containing 15,700 square feet.

The general boundaries of the above described tract of land are northwesterly by land of de Forliz, Land of Union, Land of North and by the southerly end of the proposed private road 100 feet in width leading to North street, being the "Second Right of Way" hereafter described, southerly by land of de Forliz Brothers, Inc. and land of Kosmulier, westerly by land of Kosmulier and easterly by land of de Forliz Brothers, Inc.

Being the same premises conveyed to the Grantee by W. T. Kosmulier and to the Kosmulier Holding Company, dated September 27, 1949 and recorded in the Greenwich Land Records in Book 415 at page 105.

Together with the right to use two certain strips of land hereafter described as "First Right of Way" and "Second Right of Way", in common with others to whom such right has been or may hereafter be granted for all purposes as if the same were a public highway, including the right to lay, construct, set, maintain and connect water lines, sewerage lines, gas lines, telephone lines, electric light and power

RECEIVED

NOV 1 2 1919

PLANNING & ZONING
COMMISSION

C
lines and all appurtenances thereof under, in, through, over, under and upon such rights of way.

said "First Right of Way" is bounded and described as follows: Northwesterly by land of vigor, westerly by North Street southerly by southerly by a line seventy-five feet distant from and parallel to said northerly line thereof.

said "Second Right of Way" is bounded Northwesterly by land of vigor, westerly by the "First Right of Way" above described, southeasterly by the premises hereby conveyed and southeasterly by a line 50 feet distant from and parallel to the northerly line thereof.

8-10 premises are conveyed subject to:

1. Zoning and Planning laws, rules and regulations as established in and for the Town of Greenwich.

2. Tax on the List of June 1, 1926 due and payable in January and July, 1926, which tax the Grantees assumes and agrees to pay as part of the consideration hereof.

3. Covenant and agreements set forth in the aforementioned warranty deed from The Wilbrook Holding Company to the Grantees, dated September 27, 1925 and recorded in the Greenwich Land Records in Book 415 at page 165.

To Have and to Hold the above granted and bargained premises, with the appurtenances thereof, unto the said grantee his heirs, executors, administrators, successors and assigns, forever, and they and their successors and assigns.

And also, to the said grantee and his heirs, executors, administrators, successors and assigns, covenant with the said grantee his heirs and assigns, that at and until the assigning of these presents, we are well seised of the premises, as a good indestructible estate in FREE SIMPLE, and have good right to bargain and sell the same in manner and form as is above written, and that the same is free from all incumbrances whatsoever, except as hereinbefore mentioned.

And Furthermore, to the said grantee and his heirs, executors, administrators, successors and assigns, to WARRANT AND DEFEND the above granted and bargained premises to the said grantee his heirs and assigns, against all claims and demands whatsoever, except as hereinbefore mentioned.
In Witness Whereof, we have hereunto set our hand s and seal d this 19th day of September, in the year of our Lord nineteen hundred and seventy-two.

[Signatures]

State of Connecticut,
County of [illegible]

Personally Appeared

[Signatures]

Signer s and Sealer s of the foregoing Instrument, and acknowledged the same to be their free act and deed

[Signatures]

Notary Public

[Signature]

Received for Record: OCT 1 1972

[Stamp]
To all People to Whom these Presents shall Come, Greeting:

KNOW YE, that we, A. PORTER WATERMAN, of the Town of Greenwich, Fairfield County, State of Connecticut, and RODNEY H. WATERMAN, of the City of St. Petersburg, Pinellas County, State of Florida, acting herein by said A. Porter Waterman as the duly constituted and duly empowered attorney-in-fact of said Rodney H. Waterman in accordance with the terms, provisions, and conditions of a certain written instrument executed by said Rodney H. Waterman as principal dated March 28, 1939, and recorded in the Greenwich Land Records in Book 503 at page 463,

for the consideration of ONE DOLLAR ($1.00) and other good and valuable considerations,

received at our full satisfaction of HUBERT W. B. WHEELER, of the City of New Rochelle, Westchester County, State of New York,

do, release, release, and forever QUIT-CLAIM unto the said HUBERT W. B. WHEELER,

the

hereby and assigns forever, all the right, title, interest, claim and demand whatsoever as we the said releasers have or ought to have in or to

FIRST TRACT:

ALL that certain tract, piece or parcel of land, with the buildings and improvements thereon, located in the Town of Greenwich, Fairfield County, and State of Connecticut and more particularly bounded and described as follows:

BEGINNING at a point on the northerly line of Dempsey Lane, as called, and which point is on the division line between land herein described and land now or formerly of one Prick, and running from said point of beginning along the northerly line of Dempsey Lane and to and along land now or formerly of one O'Connor North 79° 17' East 136.2 feet, North 79° 57' East 315.7 feet, North 79° 161.7 feet, and North 77° 05' East 555.9 feet to land now or formerly of one Bigelow; running thence along said Bigelow North 12° 25' East 451.6 feet to land now or formerly of one Clark; running thence along said Clark to and along land now or formerly of one Prick, and to and along land now or formerly of one Bigelow; running thence along said land now or formerly of one Bigelow to a point on the division line between the land herein described as First Tract and the land hereinafter described as Second Tract, the courses and distances following: North 89° 02' East 59.7 feet, North 83° 23' East 517.0 feet, North 79° 00' East 66.6 feet, South 59° 10' East 158.45 feet, and South 78° 06' East 270.4 feet to said last mentioned division line; thence along said division line South 59° 21' East 60.0 feet to land now or formerly of one Tusa; thence along land now or formerly of said Tusa to and along said Tusa to and along land now or formerly of said Prick South 13° 50' East 97.95 feet and South 3° 59' West 479.4 feet to said point of beginning on the northerly line of said Dempsey Lane.

SAID First Tract to be bounded, generally, as follows: Northerly by land now or formerly of one Clark; Easterly by the division line between said First Tract and Second Tract herein described, land now or formerly of said Tusa; and land now or formerly of said Prick; Southerly by the northerly line of said Dempsey Lane; and westerly by said Tusa and land now or formerly of said Prick.
SECOND TRACT:

ALL that certain tract of land located in said Town of Greenwich, County of Fairfield and State of Connecticut, and being a private road leading westerly and southeasterly from North Street to the First Tract above described, and more particularly bounded and described as follows:

BEGINNING at a point on the westerly line of North Street formed by the intersection therewith of the division line between this Second Tract and land now or formerly of one Tune, and from said point of beginning running along land now or formerly of said Tune North 78° 19' West 345.05 feet, and South 34° 22' West 226.89 feet thence along the First Tract hereinabove described North 38° 31' West 50.0 feet to land now or formerly of said Garrison; and running thence along land now or formerly of said Garrison and to and along land now or formerly of said First Tract North 51° 29' East 262.15 feet, South 77° 43' East 11.75 feet, and South 78° 09' East 326.30 feet to the westerly line of North Street; and running thence along the westerly line of North Street South 10° West 75.7 feet to the point or place of beginning.

SAID Second Tract or private road is bounded, generally, as follows: Northerly by land now or formerly of said Garrison and land now or formerly of said Tune; Southerly by land now or formerly of said Tune; and Westerly by said First Tract.

SAID FIRST TRACT and said SECOND TRACT are the same premises as those particularly shown and described on a certain map entitled "Property of Virginia R. Kirkwood, Greenwich, Conn." made and certified substantially correct by W. H. Dowdall for R. E. Minor & Co., Inc., Civil Engineers, Greenwich, Conn., Dec. 11, 1965.

SAID First Tract contains 15.206 acres.

The First Tract was conveyed by The Millbrook Holding Company to Hyron A. Wick, Jr., and Elizabeth D. Wick by Warranty Deed dated September 27, 1966, and recorded in the Greenwich Land Records in Book 415 at page 162, by said Warranty Deed certain restrictive covenants and agreements were imposed on the premises conveyed thereunder, paragraph (1) of such covenants and agreements reading as follows: "The premises hereby conveyed shall not be subdivided for the purpose of sale or rental for the transfer of the same without the written consent of the Grantor, its successors and assigns, except into three separate tracts of equal area."

APRIL 1969, The First Realty Corporation became the lawful successor of The Millbrook Holding Company, The First Realty Corporation was dissolved in accordance with the laws of the State of Connecticut, and, on dissolution completed, A. Porter Waterman and Rodney K. Waterman, as distributees of the assets of The First Realty Corporation, acquired the ownership as tenants in common of all rights, powers and privileges of The First Realty Corporation to enforce said restrictive covenants and agreements, inclusive of said paragraph (1). It being the intention and purpose of said distributees as aforesaid to convey said First Tract to a person or persons by Deed, it is, and the same is, intended, and the said restrictive covenants and agreements, and hereby to fully and forever enjoin the distributees, their heirs and assigns, to subdivided said First Tract into any number of lots or parcels of land, subject, only, to the applicable provisions of Planning and Zoning laws, rules and regulations of the Town of Greenwich as now established and as hereafter established, from time to time.
To Have and to Hold the premises, with all the appurtenances, unto the said乙方

his heirs and assigns forever, so that neither they nor their assignee shall have any claim, right or title in or to the premises, or any part thereof, but therefore we are and they are by these presents forever barred and excluded.

In Witness Whereof, we have hereunto set our hands and seals.

This 10th day of January A. D. 1929.

[Signatures]

Rodney H. Waterman
A. Porter Waterman

Lloyd J. Vail

State of Connecticut,

County of Fairfield

January 10 A. D. 1929

Before me, Lloyd J. Vail, Esq., the undersigned officer, personally appeared A. Porter Waterman, known to me to be the person whose name is subscribed to the within instrument, and he acknowledged that he executed the same individually for the purposes therein contained.

I thereupon accept the execution, as such, of the within instrument, and I, also, that he executed the same in behalf of Rodney H. Waterman for the purposes therein contained, and as the free act and deed of said Rodney H. Waterman.

Lloyd J. Vail

Received Jan. 16, 1929 by

Newtown

Commissioner of the Superior Court of Fairfield County, CT

Received JAN 16 1929 by

[Signatures]

Town Clerk
TO ALL PEOPLE TO WHOM THESE PRESENTS SHALL COME, GREETING:

Know ye, that I, ROBERT W. R. WHEELER, of the City of New Rochelle, Westchester County, State of New York, for the consideration of One Dollar ($1.00) and other good and valuable consideration received to my full satisfaction of VIRGINIA B. KIRKWOOD, of Dempsey Lane, in the Town of Greenwich, County of Fairfield and State of Connecticut, do GIVE, GRANT, BARGAIN, SELL and CONFIRM unto the said VIRGINIA B. KIRKWOOD,

FIRST TRACT:

ALL that certain tract, piece or parcel of land, with the buildings and improvements thereon, located in the Town of Greenwich, County of Fairfield and State of Connecticut, and more particularly bounded and described as follows:

BEGINNING at a point on the northerly line of Dempsey Lane, so-called, and which point is formed by the intersection of the division line between land herein described and land now or formerly of one O'Connor, and running along said point of beginning along the northerly line of Dempsey Lane and to and along land now or formerly of one O'Connor North 79° 57' West 300.7 feet, North 79° 57' West 300.7 feet, North 79° 57' West 300.7 feet, and North 79° 57' West 300.7 feet to land now or formerly of one Bigelow, running thence along land now or formerly of said Bigelow, North 12° 25' East 353.6 feet to land now or formerly of one O'Connor, and running thence along land now or formerly of said Clark to and along land now or formerly of one Plynt, and to and along land now or formerly of one subdivision to the division line between the land herein described as First Tract and the land hereinafter described as Second Tract, the course and distance following; North 88° 02' East 69.7 feet, North 63° 23' East 547.0 feet, North 79° 57' East 300.6 feet, South 52° 30' East 197.6 feet, and South 75° 06' 30' East 210.4 feet to said last mentioned division line; thence along said last mentioned division line South 30° 31' East 50.0 feet to land now or formerly of one Plynt; thence along land now or formerly of said Plynt to and along land now or formerly of said Frick South 13° 50' West 97.95 feet and South 3° 59' 30' West 679.4 feet to said point of beginning on the northerly line of said Dempsey Lane.

Said First Tract is bounded, generally, as follows: Northerly by land now or formerly of said Clark, said Plynt, and said Frick; westerly by the division line between this First Tract and Second Tract hereinafter described, land now or formerly of said Plynt, and land now or formerly of said Frick; southerly by the northerly line of said Dempsey Lane and land now or formerly of said O'Connor; and easterly by land now or formerly of said Bigelow.

SECOND TRACT:

ALL that certain tract of land located in said Town of Greenwich, County of Fairfield and State of Connecticut, and being a private road leading westerly and southeasterly from North Street to the First Tract above described, and more particularly bounded and described as follows:
BEGINNING at a point on the westerly line of North Street formed by the intersection thereof with the division line between this Second Tract and land now or formerly of one Russ, and from said point of beginning running along land now or formerly of said Russ North 78° 09' West 443.45 feet, and South 51° 29' West 226.0 feet; thence along the First Tract hereinabove described North 38° 31' West 50.0 feet to land now or formerly of said Garrison; and running thence along land now or formerly of said Flynt North 51° 29' East 248.15 feet, South 77° 43' East 11.75 feet, and South 76° 09' East 360.30 feet to the westerly line of North Street; and running thence along the westerly line of North Street South 10° 10' West 75.7 feet to the point or place of beginning.

SAID Second Tract or private road is bounded, generally, as follows: Northerly by land now or formerly of said Garrison and land now or formerly of said Flynt; Easterly by North Street; Southerly by land now or formerly of said Russ; and westerly by said First Tract.

SAID FIRST TRACT and said SECOND TRACT are the same premises as those particularly shown and described on a certain map entitled "Property of Virginia B. Kirkwood, Greenwich, Conn.", made and certified substantially correct by M. W. Daveul for S. H. Minor & Co., Inc., Civil Engineers, Greenwich, Conn., Dec. 11, 1903.

SAID First Tract contains in area 15.29 acres.

SAID First Tract is hereby conveyed subject to the following:

1. Zoning and Planning laws, rules and regulations as established in and for the Town of Greenwich.

2. Taxes of the Town of Greenwich first becoming due and payable after the date of this deed.

3. Except as the same have been modified or released under and in accordance with the terms and provisions of a certain Quit Claim Deed dated January 10, 1904, in which A. Porter Waterman and Rodney H. Waterman are the grantors and the grantee herein is the grantee (and which deed is to be recorded in the Greenwich Land Records immediately prior to or concurrently with the recording of this warranty deed), the covenants and agreements set forth in a warranty deed from The Millbrook Holding Company to Myron A. Wecker, Jr., as of September 27, 1904 and recorded in the Greenwich Land Records in Book 215 at Page 155.

SAID Second Tract is hereby conveyed subject to the following:

1. Zoning and Planning laws, rules and regulations as established in and for the Town of Greenwich.

2. Taxes of the Town of Greenwich first becoming due and payable after the date of this deed.

3. Rights of others to use said Second Tract in common with the owner or owners of said First Tract for all purposes as if the same were a public highway, including the right to lay, construct, set, maintain and connect water lines, sewerage lines, gas lines, telephone lines, electric light and power lines and all appliances thereof under, in, through, over and across said Second Tract thereby noting, however, the rights of John D. Garrison and Keith H. Garrison, and their heirs and assigns, to
use said Second Tract are limited in area and location of use by
the provisions contained in a warranty deed to said Harrisons
from The Millbrook Holding Company dated June 2, 1966, recorded
in the Greenwich Land Records in Book 698 at Page 379.

TO HAVE AND TO HOLD the above granted and bargained premises
with the appurtenances thereof, unto her, the said grantee, her
heirs and assigns forever, to her and their own proper use and
behalf.

AND ALSO, I, the said grantor, do for myself, my heirs,
executors and administrators, covenant with the said grantee, her
heirs and assigns, that at and until the assigning of those
premises, I am well seized of the premises, as a good indefeasible
estate in Fee Simple; and have good right to bargain and sell the
same in manner and form as is above written; and that the same is
Free from all incumbrances whatsoever, except as hereinbefore
mentioned.

AND FURTHERMORE, I, the said grantor, do by these presents
bind myself and my heirs, executors and administrators forever to
WARRANT AND DEFEND the above granted and bargained premises to
her, the said grantee, her heirs and assigns, against all claims
and demands whatsoever, except as hereinbefore mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and seal.
this 15th day of January, A.D. 1966.
On this 15th day of January, 1964, before me, LLOYD J. VAIL, the undersigned officer, personally appeared ROBERT W. R. WHEELER, known to me (or satisfactorily proven) to be the person whose name he subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

[Signature]

Lloyd J. Vail
Commissioner of the Superior Court

CERTIFICATE AS TO REAL ESTATE

STATE OF CONNECTICUT
COUNTY OF FAIRFIELD

SS. PROBATE DISTRICT OF GREENWICH

This is to certify that ROSARIA FEGO CARUSO, a/k/a ROSARIA CARUSO, of the town of Greenwich, in said District, died on the 10th day of December, 1963, in said Greenwich, that said decedent was the owner of the real estate located in the said Town of Greenwich, and that said decedent left a will.


Certified by

[Signature]

Josephine Caruso Borchetta, Executor

[Signature]

[Certificate Date and Number]
To all People to Whom these Presents shall Come Greeting:

Know Ye, That I, VIRGINIA R. RINGWOOD, of the Town of
Greenwich, County of Fairfield and State of Connecticut;

for the consideration of One Dollar ($1.00) and other valuable con-
sideration,

received to pay full satisfaction of ARNOLD SCHMARTZ of 465 Park Avenue,
New York, N.Y.,

do give, grant, bargain, sell and confirm unto the said ARNOLD SCHMARTZ,
his heirs and assigns forever.

FIRST TRACT:

All that certain tract, piece or parcel of land, with the buildings,
and improvements therein, located in the Town of Greenwich, County
of Fairfield and State of Connecticut and more particularly bounded
and described as follows:

BEGINNING at a point on the northerly line of Dempsey Lane, es-
caired, and which point is formed by the intersection of the
division line between the land herein described, and that now or formerly
of one Price, and running due south from said point of beginning along the
northerly line of Dempsey Lane and by and along land now or formerly
of one Nichols North 79° 52' West 30.0 feet, North 70° 57' West
396.7 feet to land now or formerly of one Bigelow, running thence
along land now or formerly of said Bigelow North 79° 52' West
248.0 feet to land now or formerly of one Clark; running thence
along land now or formerly of said Clark, to and along land now or formerly
of one Crowther and the division line between the land herein described
as
First Tract and the land hereinafter described as Second Tract, the
North 70° 29' East 97.0 feet, North 79° 57' East 83.6 feet, South
30° 50' East 138.5 feet, and South 70° 07' 30' East 270.4 feet to the
said last mentioned division line; thence along said last mentioned
division line South 31° 31' East 34.0 feet to land now or formerly
of one Tuse; thence along land now or formerly of said Tuse to and
along land now or formerly of said Price South 57° 50' West 97.25
feet and South 30° 59' 30' West 87.9 feet to said point of beginning
on the northwesterly line of said Dempsey Lane.

Said Tract of land is bounded, generally, as follows: Northerly by
land now or formerly of said Clark, said Price, and said Carrieng,
Easterly by the division line between this First Tract and Second
Tract hereinafter described, land now or formerly of said Tuse,
and land now or formerly of said Price; Southerly by the northerly
line of said Dempsey Lane and land now or formerly of said Nichols;
and Westerly by land now or formerly of said Bigelow.

SECOND TRACT:

All that certain tract of land located in said Town of Greenwich,
County of Fairfield and State of Connecticut, and being a private
road leading westerly and southwesterly from said Dempsey Street to
the First Tract above described, and more particularly bounded and
described as follows:

...
RECEIVED
NOV 12 2019
PLANNING & ZONING
COMMISSION

BEGINNING at a point on the westerly line of North Street formed
by the intersection therewith of the division line between the
Second Tract and land now or formerly of one Tusa, and from said
point southwesterly along said Tusa North 79° 12' West 209.45 feet, and South 11° 23' West 226.0
feet; thence along the First Tract heretofore described North 30°
31' West 29.0 feet to land now or formerly of said Garrison; and
thence along said land now or formerly of said Garrison, and to and
along line west of or front of said Flint North 57° 20' West 265.0
feet, South 77° 43' East 17.75 feet, and South 78° 05' East 300.30
feet to the westerly line of North Street; and running thence along
the westerly line of North Street South 8° 10' West 75.7 feet to the
point or place of beginning.

Said Second Tract or private road is bounded, generally, as follows:
Northerly by land now or formerly of said Garrison and land now or
formerly of said Flint; westerly by North Street; southerly by land
now or formerly of said Tusa; and easterly by said First Tract.

Said First Tract and Second Tract are the same premises as those
conveyed to Grantor, herein, by warranty deed from Robert W. R.
Wheeler, dated January 15, 1964 and recorded in the Greenwich Land

Said premises (First Tract and Second Tract) are conveyed subject
to the following:

1. Zoning restrictions or ordinances imposed by any governmental
   body, including Zoning and Town Planning Laws, Rules and Regulations
   as established in and for the Town of Greenwich.

2. Second half of Town of Greenwich Tax on the Grand List of
   October 1, 1970, due and payable in January, 1971, and Town of
   Greenwich Tax on the Grand List of October 1, 1971, which taxes
   Grantee agrees to assume and pay.

3. Restrictions contained in Deed recorded in Book 515 at Page
   165 of the Greenwich Land Records, as modified by Quit-Claim Deed from
   Land Records in Book 698 at Page 332.

4. Grant to the Connecticut Light and Power Company recorded in

5. Rights of others over so much of the premises described as
   Second Tract as provided in Deeds recorded in Book 511 at Page 570
   and in Book 436 at Page 190 of the Greenwich Land Records.

6. Agreement dated October 19, 1964 recorded in Book 732 at

The premises are conveyed together with the benefits accruing
from the Agreement next above mentioned.

To Have and to Hold the above granted and bargained premises, with the
appurtenances thereof, unto his

 THE SAID GRANTEE
his

heirs, successors and assigns forever, to them and their own proper use and behoof.

And also, I the said grantor do for myself, my

heirs, successors, heirs and assigns, that at and until the enrolling of these presents,

I am

well seized of the premises, as a good indefeasible estate in Fee Simple,

and have good right to convey and sell the same in manner and form as is above written;

and that the same is free from all incumbrances whatsoever, except as hereinbefore men-

tioned.
And Furthermore, I the said grantor do by these presents bind myself and my heirs, executors and administrators forever to WARRANT AND DEFEND the above granted and bargained premises to him the said grantee his successors, heirs and assigns, against all claims and demands whatsoever, except as hereinbefore mentioned.

In Witness Whereof I have hereunto set my hand and seal this 30th day of September in the year of our Lord nineteen hundred and seventy one.

Signed, Sealed and Delivered in presence of

Michael B. Veir

Virginia B. Kirkwood

Audrey K. Veir

State of Connecticut.
County of Fairfield

On this the 30th day of September, 1971 before me, Michael B. Veir, the undersigned officer, personally appeared Virginia B. Kirkwood known to me (or satisfactory proof) to be the person whose name is subscribed to the within instrument and acknowledged that he subscribed the same for the purposes therein contained.

I hereby certify that I have read the within Instrument, and that the same is a true and correct copy of the same.

Michael B. Veir
Title of Officer

Received for Record / OCT 1 1971 / F153 B 16, Attorn. / 3rd Clerk.
To all People to whom these Presents shall Come, Greeting:

Know all Men by these Presents that I, ARNOLD SCHWARTZ, of the Town of Greenwich, County of Fairfield and State of Connecticut,

for the consideration of One Dollar ($1.00) and other valuable Consideration

received to my wife, MARIE S. SCHWARTZ, his wife, of the Town of Greenwich, County of Fairfield and State of Connecticut

We Convey the same to

[Signature]

Town of Greenwich

[Signature]

Detailed information on the conveyance, including the boundaries and legal description of the property, is provided in the document.
BE IT KNOWN as a point on the westerly line of North Street formed
the intersection thereon of the division line between this
Tract and land now or formerly of one Ups, and from said
beginning running, running along land now or formerly of said
North 29° 09' West 435.80 Feet, and South 51° 29' West 226.0
feet, thence along the first Tract hereinbefore described North 29°
west 50.0 feet to land now or formerly of said Garrison; and
thence South 79° 45' West 11.75 feet, and South 58° 00' West 326.30
feet to the westerly line of North Street; and running thence along
the westerly line of North Street South 48° 10' West 79.7 Feet to the
point or place of beginning.

Said Second Tract or private road is bounded, generally, as follows:
Northerly by land now or formerly of said Garrison and land now or
formerly of said UPS; easterly by North Street; southerly by land
now or formerly of said Ups; and westerly by said First Tract.

Said First Tract and Second Tract are the same premises as those
conveyed to grantor herein, by warranty deed from Virginia A.
Kirk, dated September 15, 1972 and recorded in the Greenwich Land
Records in Book 822 at Page 646 on October 1, 1972.

Said premises (First Tract and Second Tract) are conveyed subject
to the following:

1. Zoning restrictions or ordinances imposed by any governmental
body, including Zoning and Town Planning Laws, Rules and Regulations
as established in and for the Town of Greenwich.

2. Second half of term of Greenwich Tax on the Grand List of
October 1, 1972, due and payable in January, 1973, and term of
Greenwich Tax on the Grand List of October 1, 1973, which said
guarantors agree to assume and pay.

3. Restrictions contained in deed recorded in Book 435 at Page
165 of the Greenwich Land Records, as modified by Quit-Claim Deed from
A. Porter Waterman and Robert R. Wheeler to Elinor M. B. Wheeler,
dated January 10, 1964 and recorded January 16, 1964 in the Greenwich
Land Records in Book 690 at Page 530.

4. Grant to the Connecticut Light and Power Company recorded in

5. Rights of others over so much of the premises described as
Second Tract as provided in deeds recorded in Book 513 at Page 570
and in Book 566 at Page 150 of the Greenwich Land Records.

6. Agreement dated October 10, 1964 recorded in Book 734 at
Page 50 of the Greenwich Land Records.

The premises are conveyed together with the benefits accruing from the
Agreement next above mentioned.

THE SELLER and to Said
the said grantee do hereby grant and assignable, with the appurtenances
thereof, unto the said grantee, their heirs and assigns forever, to them
and their heirs and assigns forever, subject to the
and their heirs, assigns, and subtenants, forever, with all the appurtenances
and the said grantee's, their
his heirs, successors, and assigns, forever, with all the appurtenances,
and her or assigns, this as and until the conveyance of these premises,
and the said grantee, as a good indefeasible estate in FREE and
and sell the same in manner and form to be above written and that the same is free from all incumbrances
however, except as above stated.

And furthermore, I, the said grantee do by these presents bind myself
and my heirs, successors and assigns, to WARRANT AND DEFEND the said grantee, their
the said grantee, their heirs, assigns, against all
heirs and assigns, against all
claim and demand whatsoever, except as above stated.

In Witness Whereof, I have hereunto set my hand and seal.

[Signature]

And I have hereunto set my hand and seal.

[Signature]

This 21st day of August, 1973.

[Signature]
NEW YORK
STATE OF NEW YORK
COUNTY OF NEW YORK

On the 27th day of August 1974, before me, the undersigned officer, personally appeared

ARNOLD SCHWARTZ

known to me (or satisfactorily proven to be the person whom name
is subscribed to the within instrument and acknowledged to be
herein contained)

I, in witness whereof I have affixed my hand.

COUNTY CLERK'S CERTIFICATE OF
AUTHORITY OF OFFICER TAKING
ACKNOWLEDGMENT Was ATTACHED
TO ORIGINAL INSTRUMENT

[Signature]

RECEIVED

NOV 12 1974

ATTORNEY

PLANING & ZONING COMMISSION

CIRCUIT COURT: FIRST JUDICIAL
FAIRFIELD COUNTY

VS.

A. JOSEPH HALKITE ET AL.

AT BRANFORD

SEPTEMBER 22, 1974

RELEASE OF ATTACHMENT

This is to certify that a certain attachment lien filed in the Town Clerk's Office in the town of Greenwich in the County of Fairfield and State of Connecticut on the 1st day of August, 1973, and recorded in Vol. 863, page 220, in favor of Greenwich Tailors and Furriers, Inc. and Jasper N. Madsen, the plaintiffs in said action against A. Joseph Halkite and Margaret M. Halkite defendants upon certain real estate situated in said town of Greenwich and more particularly described in said lien is hereby released and wholly discharged, the debt thereby secured having been fully satisfied.

Dated at Greenwich, Conn., this 23rd day of Sept., 1974.

Greenwich Tailors & Furriers, Inc., and Jasper N. Madsen

by Joseph A. Madsen, Attorney

and the authority subscribing the writ of attachment.
TO ALL MEN TO WHOM THESE PRESENTS SHALL COME, GREETING:

KNOW YE, that THOMAS P. FORD and MARIE B. SCHMIDT, as Executors of
the Last Will and Testament of ARNOLD SCHMIDT, late of Greenwich,
Connecticut, deceased, and in consideration of the sum of ONE ($1.00)
DOLLAR and other good and valuable consideration received to their full
satisfaction of MARIE B. SCHMIDT of 7 Dempsey Lane, Greenwich, Con-
necticut, do grant, bargain, sell and confirm unto the said grantees all the
right, title, interest, claim and demand which the said ARNOLD SCHMIDT
had at the time of his decease, or which we as such Executors have or
ought to have, in and to:

ALL that certain tract, piece or parcel of land, with the
buildings and improvements thereon, located in the Town of
Greenwich, County of Fairfield and State of Connecticut and more
particularly bounded and described as follows:

DESCENDING at a point on the northerly line of Dempsey Lane, so-
called, and which point is formed by the intersection of the
division line between land herein described and land now or
formerly of said Price, and running from said point of beginning
along the northerly line of Dempsey Lane and to and along land now
or formerly of one Nicholas North 79° 42' West 116.2 feet, North 79°
17' East 304.7 feet, North 79° 19' 16" West 121.9 feet, and South 79°
01' East 355.9 feet to land now or formerly of one Rigdon; thence
along land now or formerly of said Rigdon North 12° 25' East 251
feet to land now or formerly of one Clark; running
thence along land now or formerly of said Clark to and along land
now or formerly of one Flynt, and to and along land now or formerly
of one Garrett to the division line between the land herein des-
cribed as First Tract and the land hereinafter described as Second
Tract, the courses and distances following: North 88° 07' East 49.7
feet, North 83° 23' East 547.0 feet, North 79° 00' East 86.8 feet,
South 55° 20' East 190.45 feet, and South 79° 06' 30" East 270.4
feet to said land as mentioned division line; thence along said men-
tioned division line South 30° 31' East 20.0 feet to land now or
formerly of one Tous to and along land now or formerly of said
Tous to and along land now or formerly of said Price South 33° 50'
North 47.36 East 4.4 feet to said point of beginning on the northerly line of said Dempsey Lane.

SAID First Tract is bounded, generally, as follows: Northerly by
land now or formerly of said Clark, said Flynt, and said Garrett;
Westerly by the division line between this First Tract and Second
Tract hereinafter described, land now or formerly of said Tous; and
land now or formerly of said Price; Southerly by the northerly line
of said Dempsey Lane; and land now or formerly of said Rigdon; and
Easterly by land now or formerly of said Rigdon.

RECEIVED

NO CONVEYANCE TAX COLLECTED

TOWN OF GREENWICH

PLANNING & ZONING COMMISSION

NOV 12 2019
SECOND TRACT:

All that certain tract of land located in said Town of Greenwich, County of Fairfield and State of Connecticut, and being a private right leading westerly and southerly from North Street to the First Tract shown described, and more particularly bounded and described as follows:

BEGINNING at a point on the westerly line of North Street formed by the intersection thereof with the division line between this Second Tract and land now or formerly of the Town, and from said point of beginning running along land now or formerly of said Town north 78° 00' west 364.93 feet; and South 21° 24' west 226.00 feet; thence along the First Tract hereinbefore described north 38° 31' west 500.02 feet to land now or formerly of said Garrison; and running thence along said land now or formerly of said Garrison and to end along land now or formerly of said Flynn North 31° 29' east 282.15 feet, South 77° 43' East 21.71 feet, and South 78° 00' East 116.30 feet to the westerly line of North Street; and running thence along the westerly line of North Street south 4° 10' west 75.7 feet to the point of place of beginning.

SAID Second Tract or private road is bounded, generally as follows: Northerly by land now or formerly of said Garrison and land now or formerly of said Flynn; Easterly by North Street; Southerly by land now or formerly of said Town; and Westerly by said First Tract.

REQUIRING the same premises conveyed to Arnold Schwartz, then in full life, and Marie S. Schwartz by deed dated August 21, 1974 and recorded in the Greenwich Land Records in Book 955 at Page 18, together with all the rights, privileges and benefits but subject, nevertheless, to the encumbrances thereon set forth or referred to.

TO HAVE AND TO HOLD the above granted and bargained premises with the appurtenances thereof, unto said grantee, her heirs and assigns to their own proper use and benefit forever.

IN WITNESS WHEREOF, we, as such Executives have hereunto set our hands and seals this 1st day of September, 1984.

Signed, Sealed and Delivered
In the Presence of

[Signature]
[Signature]
[Signature]
[Signature]
[Signature]

Mary Catherine Bell

Thomas F. Ford, Executor as Appointed

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]
STATE OF NEW YORK  
COUNTY OF NEW YORK  

September 9, 1931

Personally appeared THOMAS P. FORD, Executor as aforesaid, 
signer and sealer of the foregoing instrument, and acknowledged the 
same to be his free act and deed as such Executor, before me.

[Signature]

Statement Public

DOUGLAS A. SMITH
County Public

STATE OF CONNECTICUT  
COUNTY OF FAIRFIELD
GREENWICH  

September 9, 1931

Personally appeared MARIE D. SCHMIDT, Executor as aforesaid, 
signer and sealer of the foregoing instrument, and acknowledged the 
same to be her free act and deed as such Executor, before me.

[Signature]

Statement Public

RECEIVED:
NOV 12, 2019

PLANNING & ZONING COMMISSION
To all People to Whom these Presents shall Come, Greeting,

Know Ye, That MARK O. ESSEX of 7 Deepsay Lane in the Town of
Greenwich, County of Fairfield and State of Connecticut,

for the consideration of SEVEN HUNDRED FIFTEEN THOUSAND AND 00/100 DOLLARS

($715,000.00)

received as here
full satisfaction of JOHN T. DEERING and ROSEMARY L. DEERING

resident of 11 Market Road, Riverside, Greenwich, Connecticut

Do as give, grant, bargain, sell and confirm unto the said
JOHN T. DEERING and ROSEMARY L. DEERING

and unto the survivors of them, and unto such survivor's heirs and assigns forever.

All that certain piece, parcel or tract of land situated in the
Town of Greenwich, County of Fairfield and State of Connecticut,
described as follows:

See Schedule "A" attached hereto and make a part thereof.

Town Clerk of Greenwich

RECEIVED
NOV 12 2019

PLANNING & ZONING
COMMISSION
BEGINNING at the point formed by the intersection of the division line between land of the grantor and land of Flynn with the westerly line of North Street and running thence southerly along the westerly line of North Street 8° 4° 10' W. 75.7 feet, thence along land of Tusa N. 78° 09' W. 345.45 feet and S. 51° 29' W. 226.0 feet, along other land of the grantor S. 10° 11' W. 10.0 feet, S. 51° 29' W. 6.82 feet, E. 18° 50' W. 31.63 feet, N. 84° 25' W. 89.96 feet, N. 87° 00' 30" W. 84.87 feet, S. 65° 24' W. 49.69 feet, W. 87° 00' 30" W. 31.62 feet, S. 0° 07' 00" W. 56.37 feet, S. 64° 04' 22" W. 304.66 feet and N. 6° 37' 31" W. 269.15 feet, thence along land of Flynn W. 03° 21' E. 120.0 feet and N. 79° 08' 20.6' feet, thence along land of Miller S. 55° 30' W. 198.65 feet and E. 78° 06' 30" E. 220.41 feet, thence along other land of the grantor S. 59° 36' E. 41.29 feet, thence along other land of the grantor and land of Miller S. 29° 55' E. 293.16 feet, thence along land of Flynn S. 77° 43' E. 11.75 feet and S. 78° 09' E. 328.3 feet to the point of beginning and containing 3.813 acres.

The general boundaries of the above described tract of land are northerly by land of Flynn, land of Miller and land of the grantor; easterly by North Street, by land of Tusa and by land of the grantor; southerly by land of Flynn and by land of the grantor; westerly by land of the grantor and by land of Miller.

Reserving to the grantor, her heirs and assigns, as appurtenant to her remaining land abutting the above described premises on the south, a right of way and easement, for all lawful purposes, including installation, use and maintenance of public utilities, in common with all others to whom such rights and easement have been or may hereafter be granted, in, over and upon that portion of said premises described above which is bounded and described as follows: beginning at a point in the westerly line of North Street where the same is intersected by the division line between said premises described above and new or formerly of Flynn, thence proceeding along said westerly line of North Street S. 6° 10' W. 73.70 feet; thence proceeding along land new or formerly of Tusa N. 78° 09' W. 345.45 feet and S. 51° 29' W. 226.0 feet and thence proceeding in a straight line along land of the Grantor and along land herein conveyed to the grantee N. 38° 31' W. to the southernmost point of Miller, thence proceeding along land new or formerly of Miller N. 51° 29' E. 282.16 feet; thence proceeding along land new or formerly of Flynn S. 77° 43' E. 11.75 feet and S. 78° 09' E. 328.3 feet to the point or place of beginning.
Said premises are conveyed subject to:

1. Taxes of the Town of Greenwich which become due and payable after the date of this deed, which the Grantee(s) assume(s) and agree(s) to pay as part of the consideration for this deed.

2. Public improvement assessments, and/or unpaid installments thereof, which become due and payable after the date of this deed, which the Grantee(s) assume(s) and agree(s) to pay as part of the consideration for this deed.

3. Any restrictions or limitations imposed or to be imposed by governmental authority, including the zoning and planning rules and regulations of the Town of Greenwich.

4. Any effect on said Premises of the fact that same are, or may be located in an area which qualifies them for government-subsidized insurance under the National Flood Insurance Act of 1968, as amended, and the maps promulgated or to be promulgated pursuant thereto.

5. Taxes of any Tax District in which the Premises are situated, and/or any dues, fees or charges of private associations or similar entities for which the owner or the Premises may be liable, which become due and payable after the date of this deed, which taxes and/or dues, fees or charges the Grantee(s) assume(s) and agree(s) to pay as part of the consideration for the deed.

6. The effect of the designation of the Premises (or a portion thereof) as Wetlands under the provisions of the Inland Wetlands and Watercourses Act of the State of Connecticut.

7. Rights of others in, over and upon the Second Tract, as set forth in two certain Warranty Deeds, one from the Millbrook Holding Company to John D. Garrison and Ruth S. Garrison, dated June 1, 1948, and recorded in the Greenwich Land Records in Book 411 at Page 570, and the other from The Millbrook Holding Company to The First Realty Corporation dated December 20, 1948, and recorded in said Land Records in Book 436 at Page 196.

8. Restrictive covenants and agreements as set forth in a Warranty Deed from The Millbrook Holding Company to Myron A. Nick, Jr. and Elizabeth F. Nick, dated September 27, 1948, and recorded in said Land Records in Book 413 at Page 145, as the same may have been modified by Quit-Claim Deed from A. Portman Myhrman and Rodney K. Waters to Robert H. Wheeler, dated January 20, 1964, and recorded in said Land Records in Book 698 at Page 333.


10. Any facts which might be disclosed by an inspection of the premises and an accurate, up-to-date survey thereof.
To have and to hold the above granted and bargained premises, with the privileges and appurtenances thereof, unto them, the said Grantees, for and during their joint lives, and, upon the death of either of them unto the survivor of them, and unto such survivor's heirs and assigns forever, to them and their own proper use and behoof.

And also, she, the said Grantee, doth, for herself and her heirs, executors and administrators, covenant with the said Grantees, and with the survivor of them, and with such survivor's heirs and assigns, that, as and until the ending of these presents, she is well seized of the premises, as a good indefeasible estate in fee simple, and also has good right to bargain and sell the same, in manner and form as is above written, and that the same is free from all encumbrances, except as aforesaid.
And furthermore, the said Grantee, do cun, by these presents, bind himself and her heirs forever to Warrant and Defend the above granted and bargained premises to them, the said Grantees, and to the survivors of them, and to such survivor's heirs and assigns, against all claims and demands, except as aforesaid.

In Witness Whereof, MARIE D. SCHWARTZ has hereunto set her hand and seal this 29th day of June, 1988.

Signed, Sealed and Delivered in the Presence of

[Signatures]

RECEIVED
NOV 12 2019
PLANNING & ZONING COMMISSION

State of CONNECTICUT
County of Fairfield

Personally appeared, MARIE D. SCHWARTZ

[Signature]

Before me,

[Signature]

Received for Record JUL 1 1988

[Stamp: M. Attorneys]

Town Clerk
Know all Men by these Presents, That MARIE D. SCHWARTZ of 7 Dempsey Lane, Greenwich, Connecticut

For the consideration of One ($1.00) Dollar

Received to her full satisfaction of DOROTHY P. WETZLER, of 91 Meadow Road, Riverside, Connecticut

Do and by these presents, release and forever QUIET-CCLAIM unto the said DOROTHY P. WETZLER all right, title, interest, estate and demand whatsoever which the said RELEASER has in or upon or in any manner whatsoever in or upon the tract of land situated in the Town of Greenwich, County of Fairfield and State of Connecticut, described as follows:

Beginning at the point formed by the intersection of the division line between land of the grantor and land of Miller with land of John T. and Rosemary L. Whitmer, said point being the easterly corner of the tract of land heretofore described and running thence along land of John T. and Rosemary L. Whitmer S. 51° 29' W. 96.92 feet and N. 59° 36' W. 41.92 feet, thence along land of Miller S. 79° 26' 32" W. 49.93 feet to the point of beginning and containing 0.008 acres.

The above described tract of land is triangular in shape and is bounded northerly by land of Miller; southeasterly and southwesterly by land of John T. and Rosemary L. Whitmer.

TO HAVE AND TO HOLD the premises, with all the appurtenances, unto the said RELEASER her heirs, successors and assigns forever, so that neither she nor any RELEASOR, her heirs, successors or assigns, nor any other person shall have or claim, right or title in, or to the premises, of any part thereof, but that thereof and all that is hereby granted, forever be held and retained.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 30th day of June, 1948.

Signed, sealed and delivered in the presence of:

[Signatures]

STATE OF CONNECTICUT
COUNTY OF FAIRFIELD

IN CO. ST. ANTHONY'S PRAIRIE

RECEIVED
Nov 12 2019

PLANNING & ZONING COMMISSION
RETURN TO:
Smith & Grant LLP
P.O. Box 4459
9 Greenwich Office Park
Greenwich, CT 06831

STATE OF CONNECTICUT
COURT OF PROBATE

NOTICE FOR LAND RECORDS/ APPOINTMENT OF FIDUCIARY
PC-251 REV. 4/18

COURT OF PROBATE, Greenwich Probate Court ; DISTRICT NO. PD24

ESTATE OF
Marcie D. Schwartz (18-00166) DATE OF NOTICE
April 26, 2018

DATE OF DEATH PLACE WHERE LAST DWELT DIED TESTATE
March 15, 2018 7 Dempsey Lane Greenwich, CT 06830

FIDUCIARY [Name, address, and telephone number]
Thomas Angell, 9 Partin Lane, Watchung, NJ 07069, (908)279-7626
Elizabeth M. Grant, Esq., 44 Burley Hill Rd, Greenwich, CT 06831, (203)679-0252

FIDUCIARY'S POSITION OF TRUST DATE OF APPOINTMENT
Co-Executor 4/26/2018

This notice is made and caused to be recorded in the land records of the town wherein the deceased was the owner of real property, or any interest therein, or a mortgage or a lien upon real property.

RECEIVED FOR RECORD
MAY 21, 2018 11:44:28 AM
CARNELLA C. BUCKING Town Clerk
GREENWICH, CT

Cheryl Schneeberger, Clerk

Certified True Copy

COURT SEAL

Greenwich Probate Court

RECEIVED NOV 12 2019
PLANNING & ZONING COMMISSION
Subdivision Application

Property Address: 7 DEMPSEY LANE  Tax ID: 11-1711
Property Owner: PABLO CALDERINI  Address: 5 BAYBERRY LANE GREEN.
Email: c/o PHOLO TRAIL LAW.COM  Cell Phone: —  Other Phone: 203-403-0996
Applicant: PABLO CALDERINI  Address: 5 BAYBERRY LANE GREEN.
Email: —  Cell Phone: —  Other Phone: —
Authorized Agent: ANTHONY D’ANDREA  Address: P.O. BOX 549, RIVERSIDE, CT
Email: ALD @ RVDI.COM  Cell Phone: N/A  Other Phone: 203-637-1779

Zone(s): RA-2  Total Area: 12.275 ACRES

Number of Lots:
Existing: ONE  Proposed: TWO

Zone:
Existing: RA-2  Proposed: RA-2

Land Reserved:
Area of Land Reservation: 2.2095 ACRE  Reserved Land Area as Percent of Total Land Area: 18%

History:
Previous SB #: 2019 483
GLR Map # of any previously filed subdivisions or surveys: 

Utilities:
X Septic  L Well  L Sewer  X Public Water

Health Permit needed and received? [ ] YES  IWWA Permit received? [ ] YES  IWWA Permit #: 2019-74

Property is within 500 feet of a Municipal Boundary of N/A (for notification)
10 lots or 10 or more acres requires Environmental Assessment § 6-256 (19)

To be completed by P&Z staff only:
Check #  Check Amount: $
Application #  

pzSubdivisionApp 2020
Project Narrative
Re-Subdivision
7 Dempsey Lane
Pablo Calderini
July 21, 2021

Pablo Calderini purchased property at 7 Dempsey Lane on June 16, 2020. The property contains an area of 12.2752 acres in the RA-2 zone.

Currently, the property contains a single-family dwelling along with a pool and patio, and is accessed by a driveway connected to Dempsey Lane. The property is served by a private well and a septic system.

The extent of wetlands, which was delineated by Jay Fain, Soil Scientist, covers approximately 8.2 acres of the 12.28 acre parcel.

In July of 2019, the IWWA issued Conceptual Approval 2019-02 for the two-lot subdivision and Permit No. 2019-74 for the development of the two lots.

Subsequent to the approval by IWWA, Re-Subdivision application PLPZ 2019 483 was filed with the Planning and Zoning Commission, and the application was approved pursuant to a resolution dated January 7, 2020.

The approval expired because the mylar copy of the record sheet for the subdivision was not signed by the Chair of the Commission and filed with the Town Clerk within the 90-day statutory time limit.

The current application filed on behalf of Pablo Calderini, owner, seeks to incorporate the complete record of PLPZ 2019 483 and re-approve the original re-subdivision.

There has been no change to the Conceptual Development Plans or the configuration of the lots or Open Space parcel.

The IWWA permit remains in effect and the Health Department approvals of two septic system designs that were issued in May of 2019 remain valid.

The conditions of the prior P&Z approval require that final designs for each lot should be prepared in accordance with the Drainage Manual in effect at the time that Site Plans are developed and submitted for review.

As proposed, the lots comply with all applicable zoning criteria related to area lot shape and frontage.

In conjunction with the review of the prior application, a Deed History of the property dating back to 1095 was submitted and accepted as complete. We request that the Deed History is considered an integral part of the current record.

[Signature]
Anthony L. D’Andrea, PE&LS
Rocco V. D’Andrea, Inc.
January 21, 2020

John P. Tesei, Esq. and Christopher D. Bristol, Esq.
Gillbride, Tus, Last & Spellane LLC
31 Brookside Drive
Greenwich, CT 06830

RE: The application of John P. Tesei, Esq., and Christopher D. Bristol, Esq., authorized agents, for Elizabeth M. Grant and Thomas Angell, Co-Executors of the Estate of Marie D. Schwartz, record owners, for a final re-subdivision, PLPZ 2019 00483, to re-subdivide the 12.2752-acres property located at 7 Dempsey Lane, in the RA-2 zone, per Section 6-261 of the Town of Greenwich Subdivision Regulations, into two (2) building lots where Lot 1 would be 4.8060-acres and Lot 2 would be 5.2597-acres (4.9684 acres for zoning purposes and less the accessway and excluded land) and an open space parcel of 2.2095-acres (equal to 18% of the total acreage to be subdivided) as shown on a subdivision map prepared by Rocco V. D’Andrea, Inc., last revised 10/28/2019 and a development plan prepared by Rocco V. D’Andrea, Inc., last revised 10/28/2019.

Dear Mr. Tesei and Mr. Bristol,

At a Public Hearing held on 1/7/2020 the Planning and Zoning Commission considered the above referenced applications and took the following action:

Upon a motion to approve the final re-subdivision application with a modification made by Mr. Macri and seconded by Mr. Fox, the following resolution was adopted 5-0. (Voting in favor of this item: Alban, Macri, Levy, Fox, and Yeskey (for Hardman).

WHEREAS the Commission held a Public Hearing on 1/7/2020 and took all testimony as required by law; and

WHEREAS the applicant requested a final re-subdivision, PLPZ 2019 00483, to re-subdivide the 12.2752-acres property located at 7 Dempsey Lane, in the RA-2 zone, per Section 6-261 of the Town of Greenwich Subdivision Regulations, into two (2) building lots where Lot 1 would be 4.8060-acres and Lot 2 would be 5.2597-acres (4.9684 acres for zoning purposes and less the
accessway and excluded land) and an open space parcel of 2.2095-acres (equal to 18% of the total acreage to be subdivided); and

WHEREAS the property is serviced by an existing well and a private septic system; and

WHEREAS the property is currently improved with a single-family dwelling, driveway, patio, pool and landscaping with many mature trees; and

WHEREAS the current dwelling is noted to be removed on the “Subdivision Map” and a proposed new single-family dwelling will be constructed on each of the proposed new residential lots; and

WHEREAS each proposed residential lot, Lot 1 and Lot 2, will conceptually consist of a single-family dwelling, driveway, pool and patio, septic system, stormwater management controls and landscaping as noted on the site development plan; and

WHEREAS the property is near the cul-de-sac western end of Dempsey Lane on the north side of the road; and

WHEREAS the two proposed lot shapes meet the standards set forth in Section 6-205 of the Building Zone Regulations (the “BZR”) for both lot shape and lot area; and

WHEREAS the two proposed residential lots are located on the eastern edge of the property; and

WHEREAS the applicant is proposing an open space parcel titled “Open Space Parcel D” as noted in the Declaration of Open Space Restrictions. It is 2.2095-acres in size, which is equal to 18% of the total acreage to be subdivided, and is located on the western edge of the property; and

WHEREAS the Declaration of Open Space Restrictions is subject to review by Conservation, Staff, and the Law Department prior to filing with the subdivision record sheet on the Town’s Land Records; and

WHEREAS Inland Wetlands & Watercourse Agency (IWWA) issued a permit, Permit #2019-074, on 7/2/2019 and the permit expires on 6/24/2024; and

WHEREAS the Zoning Enforcement Officer commented on 12/24/2019 with no comment; and

WHEREAS in compliance with Section 6-287 of the Subdivision Regulations, the Commission received comments from the Department of Public Works (DPW) Engineering Division, dated 12/31/2019, noting items to be completed prior to the signing of the subdivision map; and

WHEREAS the Conservation Department issued comments on 12/30/2019 and lists their recommendations for the project; and

WHEREAS the Health Department issued comments on 12/18/2019 and notes their office has approved two proposed septic system plans that will serve two (2) 7-bedroom houses. They also approved the abandonment of both the existing well and septic system on the lot; and
WHEREAS the Commission noted that the applicant shall prepare a record sheet, with the required notes, and in a form suitable for signature by the Chair of the Planning and Zoning Commission pursuant to Section 6-262 of the Subdivision Regulations; and

WHEREAS the Commission finds that the proposal meets the intents and purposes of the Town of Greenwich's Subdivision Regulations;

THEREFORE BE IT RESOLVED the application of John P. Tesi, Esq., and Christopher D. Bristol, Esq., authorized agents, for Elizabeth M. Grant and Thomas Angell, Co-Executors of the Estate of Marie D. Schwartz, record owners, for a final re-subdivision, PLPZ 2019 00483, to re-subdivide the 12.2752-acres property located at 7 Dempsey Lane, in the RA-2 zone, per Section 6-261 of the Town of Greenwich Subdivision Regulations, into two (2) building lots where Lot 1 would be 4.8060-acres and Lot 2 would be 5.2597-acres (4.9684 acres for zoning purposes and less the accessway and excluded land) and an open space parcel of 2.2095-acres (equal to 18% of the total acreage to be subdivided) as shown on a subdivision map prepared by Rocco V. D'Andrea, Inc., last revised 10/28/2019 and a development plan prepared by Rocco V. D'Andrea, Inc., last revised 10/28/2019 is hereby approved with modifications.

The requested modifications are as follows and shall be addressed prior to the Chair signing the final Mylar to be filed on the land records:

1. A record sheet, in a form suitable for signature of the Chair of the Planning and Zoning Commission shall be prepared, signed by the chairman, and filed on the Greenwich Land Records within 90 Days of the approval of this action;

2. The applicant shall prepare Open Space declaration and maintenance agreements for both the Fee Dedicated Open Space as well as the Open Space Easement, and they shall be reviewed and accepted by the Law Department, Conservation, and staff, prior to being filed with the subdivision map.

3. Notes, as follows, shall be placed on the subdivision map (the "Record Sheet") filed on the land records:
   a. Any proposed change in the status of the Open Space area such as change in size or ownership, and any change in the size of approved subdivision lots shall require submission of a revised plan and Declarations of Restrictions for review by the Conservation Department and approval by Planning and Zoning. The revised maps may require approval from the Commission as a re-subdivision and the Declaration may require amendments to reflect the changes.
   b. Pursuant to Section 6-287, all subdivision lots shall be reviewed for compliance with Town drainage standards and a detailed drainage plan for each lot should be submitted to Planning & Zoning and DPW for review, prior to the issuance of any building permits. Drainage Maintenance Agreements may be required.
   c. Any proposed blasting will require the preparation of a pre-blast survey.
   d. Prior to issuance of a building permit for any lot, plans showing proposed house location, setbacks, driveways, accessory structures and uses, grading and drainage, erosion control plans, and protection measures for protecting trees to remain shall be submitted and approved by Planning and Zoning and Conservation for review.
e. The endorsement block for Commission action required to appear on Record Sheet shall be shown as follows:
Approved by Resolution of the Planning and Zoning Commission, Town of Greenwich, Connecticut, dated ______________________
(Signature of Chair) (Date)
f. A note indicating the type of sewage disposal and water supply facilities to be provided.

The contents of this letter have been reviewed by members of the Commission and reflect the decision the Commission made at its meeting on January 7, 2020.

If you have any questions, please call.

Sincerely,

[Signature]

Jacalyn Pruitt, Planner II
July 21, 2021

Planning & Zoning Commission
Town of Greenwich
101 Field Point Road
Greenwich, CT 06830

Re: 7 Dempsey Lane
    Tax ID: 11-1711

To Whom It May Concern?

As owner of property at 7 Dempsey Lane, I hereby authorize Rocco V. D’Andrea, Inc. to represent my interests in the presentation of an application to the Planning & Zoning Commission for Re-Approval of a two-lot subdivision.

Pablo Calderini
DECLARATION OF OPEN SPACE RESTRICTIONS

WHEREAS, Pablo Calderini of 7 Dempsey Lane, Greenwich, Connecticut (the "Owner") is the owner of certain real property in the Town of Greenwich, County of Fairfield, and State of Connecticut, described and shown on a certain map entitled "SUBDIVISION MAP OF PROPERTY ON DEMPSEY LANE IN GREENWICH, CONNECTICUT PREPARED FOR PABLO CALDERINI" certified substantially correct by Anthony L. D'Andrea for Rocco V. D'Andrea, Inc. last dated _______________ , 2021, and filed in the Greenwich Land Records as Map ______ (the "Subdivision Map"), being composed in part of an area designated as "Open Space Parcel D" (the "Open Space Area") established in accordance with Section 6-297 and Section 6-298 of the Town of Greenwich Subdivision Regulations (the "Regulations"), as amended from time to time, reference to the Subdivision Map being had for a more particular description.

WHEREAS, the Owner, in order to induce the Town of Greenwich Planning and Zoning Commission (the "Commission") to afford final subdivision plan approval of the Owner's real property as shown on the Subdivision Map by way of Final Subdivision PLPZ 2021-______ set forth in a certain decision letter dated _______________, 2021 (the "Subdivision Approval"), desires to create such covenants and restrictions as are necessary to comply with Sections 6-297 and 6-298 of the Regulations, as amended from time to time.

WHEREAS, the Owner desires and intends to preserve the Open Space Area as a part of the scheme of development of the subdivision subject to the following restrictive covenants and agreements.
NOW, THEREFORE, in consideration of the premises and a part of the scheme of development thereof, the Owner does hereby declare the following covenants and restrictions, which covenants and restrictions shall run with the land in perpetuity and shall be binding on the owners of any and all lots within the subdivision:

1. The Open Space Area shall be forever reserved, preserved, used, and maintained by the Owner or the association or the non-profit conservation organization hereinafter provided for, solely for open space subject to the following:

   a) No building or other structure or improvement, either temporary or permanent, shall be erected or caused to be placed on any portion of the Open Space Area.

   b) The topography of the Open Space Area shall be maintained in its present condition and no topographic changes shall be made in any portion of the Open Space Area, including, filling, grading, excavation or the altering of natural or existing drainage, without the prior written approval of the Commission.

   c) No tree shall be removed from the Open Space Area by the Owner unless, as a result of disease or death, said tree poses a threat to the residential use of the lot and the removal of said tree is approved in writing by the Commission prior to removal.

   d) No refuse, trash, debris, garbage, waste matter, sewage, organic yard debris (grass clippings, leaves, branches, wood chips, etc.) or other like substance or offensive material shall be placed, caused to be placed or allowed to remain in or upon the Open Space Area.

   e) The Owner shall have the right to protect from erosion portions of the Open Space Area by planting trees, plants, shrubs where and to the extent necessary, or by other appropriate means after said planting(s) is approved in writing by the Commission.

2. The Owner shall take steps to assure the appropriate maintenance of the Open Space Area subject to these restrictive covenants, to the satisfaction of the Commission.
3. The Owner shall continue to be responsible for the appropriate maintenance of the Open Space Area until such time as any other portion of the subdivision shall be sold. Prior to such sale, the Owner shall convey legal title to the Open Space Area either to a non-profit conservation organization as provided under Section 6-298 of the Regulations, as amended from time to time, or to a neighborhood owners' association established in accordance with the provisions of Section 6-298 of the Regulations, as amended from time to time, free and clear of all liens and encumbrances except those created by or pursuant to this Declaration. The recipient of the Open Space Area shall provide for appropriate maintenance and preservation of the Open Space Area to the satisfaction of the Commission in accordance with the purposes intended. Such association shall be either a Connecticut non-profit corporation, or an unincorporated association of property owners, of which the only members will be the owner or owners from time to time of any lot in the subdivision. The association shall have no purpose and shall conduct no business which is or may be repugnant to the covenants and restrictions contained in this Declaration. The association shall have the power to assess its members for all costs necessary to perform the association's obligations hereunder. All property owners of any lot in the subdivision shall, by acceptance of the instrument of conveyance, be deemed to have agreed to pay such share of such costs as shall be assessed against such property owners for the purposes and obligations of the association and shall be more specifically defined in the Certificate of Incorporation, or Articles of Association, as the case may be, and By-Laws of the association. Each property owner of any lot in the subdivision shall have an undivided interest in the Open Space Area. The association shall, with the prior review and approval of the Commission or its authorized representative, adopt, maintain and enforce reasonable regulations for the preservation, maintenance and use of the Open Space Area.
4. The restrictive covenants and agreements herein declared may not be modified, altered, amended, changed, or released without the written approval of the Town of Greenwich (the "Town") acting by the Commission.

5. The restrictive covenants herein declared will be for the benefit of landowners adjoining the subdivision and for the Town, and will run with the land in perpetuity and be binding on all future owners of any and all lots within the subdivision.

6. The restrictive covenants may be enforced by adjoining property owners or by the Town by appropriate action in court for damages or equitable relief.

7. If at any time the reservation, preservation, maintenance or use of the Open Space Area does not comply with the purposes of such Open Space Area or the covenants and agreements pursuant hereto, the Town may take any and all necessary action to assure proper compliance and may assess against the association all costs incurred by the Town, including reasonable attorney's fees, for such purpose. Any such assessment not paid within thirty (30) days after demand therefor shall bear interest from the date of demand at the rate established by law for interest upon money judgments, and the Town may bring an action at law to collect such assessment and there shall be added to the amount of such assessment, in such event, all costs incurred by the Town for such collection, including reasonable attorney's fees.

8. In the event the association mentioned herein fails, neglects or refuses to pay assessments made by the Town which shall include but are not limited to real estate taxes or other assessments on the Open Space Area, the individual lot owners in the subdivision that is subject to these restrictions shall each be jointly and individually liable for any and all taxes and assessments made by the Town.

In the event that any tax or assessment is not paid within thirty (30) days after demand therefore, such tax or assessment shall bear interest from the date of demand at the rate established by law and any penalties thereon, and the Town may bring an action at law to collect
such assessment and there shall be added to the amount of such assessment, in such event, all costs incurred by the Town for such collection, including reasonable attorney's fees.

9. These restrictive covenants shall not be affected by any change in zoning or land use.

10. The Owner shall subject conveyance of any of the lots within the subdivision to the burden of these covenants and restrictions. Such covenants and restrictions shall be incorporated by reference in all contracts, leases, and other conveyances by the Owner herein by book and page references in the Greenwich Land Records.

11. If any provision of this document is subsequently found to be in contravention of the law, such provision shall be deemed null and void, and the remainder of the document shall remain in full force and effect.

12. NOTWITHSTANDING ANY OTHER REQUIREMENT CONCERNING MODIFICATION OF THIS INSTRUMENT, OR ANY DOCUMENT FILED PREVIOUSLY IN THE GREENWICH LAND RECORDS, NO MODIFICATION OR INSTRUMENT PURPORTING TO MODIFY ANY CONDITION, TERM OR PROVISION OF THIS DECLARATION OF RESTRICTIONS SHALL BE VALID UNLESS IT IS FILED ON THE GREENWICH LAND RECORDS AND APPROVED BY THE COMMISSION AND THE SIGNATURE OF THE CHAIRMAN OF SUCH COMMISSION APPEARS THEREON.

IN WITNESS WHEREOF, the Grantor has caused this Declaration to be executed this ___ day of ___________ 2021.

Witnesses:

_________________________________________  
Pablo Calderini
STATE OF CONNECTICUT  )
COUNTY OF FAIRFIELD  ) ss: Greenwich

The foregoing instrument was signed and sealed before me, the undersigned officer, by Pablo Calderini, who acknowledged the same to be his free act and deed.

Notary Public/
Commissioner of the Superior Court
ADDENDUM No. 1
DRAINAGE SUMMARY REPORT

For

“PROPOSED SUBDIVISION”

7 DEMPESEY LANE
GREENWICH, CONNECTICUT

Prepared For

GRAND DEVELOPMENT LLC

January 3, 2020

Anthony L. D’Andrea, PE
CT License No. 9673
# Table of Contents

Watershed Map - Existing Conditions  
Exhibit A

Watershed Map - Proposed Conditions  
Exhibit B

Runoff Volume & Retention System Design Calculations  
Appendix C

HydroCAD Comparison Table  
Appendix D

HydroCAD Analysis – Existing Conditions  
Appendix E

HydroCAD Analysis – Proposed Conditions  
Appendix F
Exhibits "A" & "B"

Watershed Maps
Existing and Proposed Conditions
Appendix “C”

Runoff Volume & Retention System Design Calculations
Water Quality Volume (5S)

Watershed Data (5S)
- Watershed Area = 16,015 ft²
- Impervious Cover = 11,756 ft² (73%)
- Pervious Cover = 4,259 ft² (27%)

\[ WQV = \frac{1\text{in}}{12\text{in}} \cdot \frac{\text{RA}}{\text{ft}} \]

Where:
- WQV = Water quality volume
- R = Site cover runoff coefficient
- A = Watershed area

\[ (0.95)(0.73)+(0.22)(0.27) = 0.75 \]
\[ A = 16,015 \text{ ft}^2 \]

\[ WQV = \frac{1}{12} (0.75)(16,015) = 1,001 \text{ ft}^3 \]
\[ WQV = 1,001 \text{ ft}^3 \]

Water Quality Volume (6S)

Watershed Data (6S)
- Watershed Area = 2,235 ft²
- Impervious Cover = 2,235 ft² (100%)
- Pervious Cover = 0 ft² (0%)

\[ WQV = \frac{1\text{in}}{12\text{in}} \cdot \frac{\text{RA}}{\text{ft}} \]

Where:
- WQV = Water quality volume
- R = Site cover runoff coefficient
- A = Watershed area

\[ (0.95)(1.00)+(0.22)(0.00) = 0.95 \]
\[ A = 2,235 \text{ ft}^2 \]

\[ WQV = \frac{1}{12} (0.95)(2,235) = 177 \text{ ft}^3 \]
\[ WQV = 177 \text{ ft}^3 \]
Water Quality Volume (7S)

Watershed Data (7S)
- Watershed Area = 118,299 ft²
- Impervious Cover = 56 ft² (0%)
- Pervious Cover = 118,243 ft² (100%)

\[ WQV = \frac{1}{12} \frac{\text{in}}{\text{ft}} \cdot RA \]

Where:
- WQV = Water quality volume
- R = Site cover runoff coefficient
  \[ (0.95)(0.00)+(0.22)(1.00) = 0.22 \]
- A = Watershed area
  \[ = 118,299 \text{ ft}^2 \]

\[ WQV = \frac{1}{12} (0.22)(118,299) = 2,169 \text{ ft}^3 \]

WQV = 2,169 ft³

Water Quality Volume (9S) (Revised 1/3/20)

Watershed Data (9S)
- Watershed Area = 32,891 ft²
- Impervious Cover = 17,122 ft² (52%)
- Pervious Cover = 15,769 ft² (48%)

\[ WQV = \frac{1}{12} \frac{\text{in}}{\text{ft}} \cdot RA \]

Where:
- WQV = Water quality volume
- R = Site cover runoff coefficient
  \[ (0.95)(0.52)+(0.22)(0.48) = 0.6 \]
- A = Watershed area
  \[ = 32,891 \text{ ft}^2 \]

\[ WQV = \frac{1}{12} (0.6)(32,891) = 1,645 \text{ ft}^3 \]

WQV = 1,645 ft³
**Water Quality Volume (10S)**

Watershed Data (10S)

- Watershed Area = 1,650 ft²
- Impervious Cover = 1,650 ft² (100%)
- Pervious Cover = 0 ft² (0%)

\[
WQV = \frac{ln(\frac{RA}{12 \text{ in}})}{ft}
\]

Where:
- \( WQV \) = Water quality volume
- \( R \) = Site cover runoff coefficient
  
  \[
  (0.95)(1.00)+(0.22)(0.00) = 0.95
  \]
- \( A \) = Watershed area
  
  \[
  = 1,650 \text{ ft}^2
  \]

\[
WQV = \frac{1}{12} (0.95)(1,650) = 131 \text{ ft}^3
\]

**Water Quality Volume (11S) (added 1/3/20)**

Watershed Data (11S)

- Watershed Area = 4,603 ft²
- Impervious Cover = 0 ft² (0%)
- Pervious Cover = 4,603 ft² (100%)

\[
WQV = \frac{ln(\frac{RA}{12 \text{ in}})}{ft}
\]

Where:
- \( WQV \) = Water quality volume
- \( R \) = Site cover runoff coefficient
  
  \[
  (0.95)(0)+(0.22)(1.00) = 0.22
  \]
- \( A \) = Watershed area
  
  \[
  = 4,603 \text{ ft}^2
  \]

\[
WQV = \frac{1}{12} (0.22)(4,603) = 85 \text{ ft}^3
\]

**Groundwater Recharge Volume**

Site Information

- Existing Impervious Cover = 18,687 ft²
- Proposed Impervious Cover = 32,819 ft²
- Net Increase = 14,132 ft²

\[
GRV = F \times I
\]

Where:
- \( GRV \) = Required groundwater recharge volume
- \( F \) = Target depth factor
  
  \[
  = 0.25 \text{ in} \quad \text{(HSG C)}
  \]
- \( I \) = Net increase in impervious area
  
  \[
  = 14,132 \text{ ft}^2
  \]

\[
GRV = \frac{0.25}{12} (14,132) = 295 \text{ ft}^3
\]

GRV = 295 ft³
Runoff Reduction Volume at POC 1

1-Year Storm Runoff Data at POC 1
Pre-development runoff volume = 9,940 ft³
Post-development runoff volume (No BMPs) = 11,474 ft³

$$RRV = V_{post} - V_{pre}$$

Where:
$$RRV$$ = Runoff reduction volume
$$V_{pre}$$ = 1-year pre-development runoff volume
$$V_{post}$$ = 1-year post-development runoff volume (No BMPs)

$$RRV = 11,474 - 9,940 = 1,534 \text{ ft}^3$$

RRV @ POC 1 = 1,534 ft³

Runoff Reduction Volume at POC 2 (revised 1/3/20)

1-Year Storm Runoff Data at POC 2
Pre-development runoff volume = 3,944 ft³
Post-development runoff volume (No BMPs) = 4,647 ft³

$$RRV = V_{post} - V_{pre}$$

Where:
$$RRV$$ = Runoff reduction volume
$$V_{pre}$$ = 1-year pre-development runoff volume
$$V_{post}$$ = 1-year post-development runoff volume (No BMPs)

$$RRV = 4,647 - 3,944 = 703 \text{ ft}^3$$

RRV @ POC 2 = 703 ft³

Proposed BMPs

To meet the requirements of Stormwater Management Standards 4 (Runoff Volume Reduction and Groundwater Recharge), 5 (Peak Flow Control), and 6 (Pollutant Reduction) of Section 3 of the Town of Greenwich Drainage Manual, we are proposing two (2) structural LID BMPs (rain garden and permeable pavement system).

12P – PP
12P will consist of a permeable pavement system driveway courtyard on Lot 1 and was designed to filter runoff from 5S and provide water quality treatment and 100% RRV to POC 1. Infiltration is provided. 12P will treat runoff from 36% of the total proposed impervious coverage using LID design techniques.

Total Storage Volume = 3,614 ft³
Water Quality Volume (5S) = 1,001 ft³ (100% compliance)
Groundwater Recharge Volume = 295 ft³ (100% compliance)
Runoff Reduction Volume (POC 1) = 1,534 ft³ (100% compliance)

13P – RS2
13P will consist of 6 Cultec Contactor 100HD in a 2x3 layout and was designed to retain runoff from 6S and aid in reduction of peak flow rates for the proposed conditions, 2-year to 25-year storm events. 13P is not a LID facility.

Total Storage Volume = 185 ft³
Water Quality Volume (6S) = 177 ft³ (100% compliance)

13P provides adequate storage volume for the Water Quality Volume for 6S.
**14P - RSI**
14P will consist of 5 Cultec Contactor 100HD in series layout and was designed to retain runoff from 10S and aid in reduction of peak flow rates for the proposed conditions, 2-year to 25-year storm events. 14P is not a LID facility.

\[
\begin{align*}
\text{Total Storage Volume} &= 132 \text{ ft}^3 \\
\text{Water Quality Volume (10S)} &= 131 \text{ ft}^3 (100\% \text{ compliance})
\end{align*}
\]

14P provides adequate storage volume for the Water Quality Volume for 10S.

**15P - RGI**
15P will consist of a rain garden and was designed to filter and infiltrate runoff from 9S and provide water quality treatment and 100% RRV to POC 2. 15P will treat runoff from 52% of the total proposed impervious coverage using LID design techniques.

\[
\begin{align*}
\text{Total Storage Volume} &= 1,491 \text{ ft}^3 \\
\text{Water Quality Volume (9S)} &= 1,480 \text{ ft}^3 (100\% \text{ compliance}) \\
\text{Runoff Reduction Volume (POC 2)} &= 1,025 \text{ ft}^3 (100\% \text{ compliance})
\end{align*}
\]

**15P - Rain Garden Design Calculations (added 1/3/20)**

Where:

\[
\begin{align*}
\text{SA} &= \text{Surface area of bioretention system (s.f.)} \\
\text{WQV} &= \text{Calculated water quality volume (c.f.)} = 1,645 \text{ ft}^3 \text{ (App. C)} \\
\text{PD} &= \text{Ponding depth above sod surface (ft.)} = 0.5 \text{ ft.} \\
\text{SD} &= \text{Soil depth, depth of bioretention soil layer (ft.)} = 1.5 \text{ ft.} \\
\text{GD} &= \text{Gravel Depth, depth of gravel (ft.)} = 1.2 \text{ ft.}
\end{align*}
\]

**Minimum Surface Area of Bioretention System = 1,151 ft}^2**
**Proposed Surface Area of Bioretention System = 1,200 ft}^2**

**TSS Removal Rates**

**12P - PP**
12P at a minimum is sized to meet the Town of Greenwich standards for Water Quality Volume from 5S and 100% of the GRV and RRV for POC 1.

\[
R = A + B - [(AxB)/100]
\]

\[
\begin{align*}
R &= \text{Total TSS Removal Rate} \\
A &= \text{TSS Removal Rate for Deep Sump Junction Box} = 25\% \\
B &= \text{TSS Removal Rate for Permeable Pavement} = 90\%
\end{align*}
\]

\[
R = 25 + 90 - [(25x90)/100] = 92.5\%
\]

**Total Removal Rate (R) = 92.5%**
13P – RS2
13P at a minimum is sized to meet the Town of Greenwich standards for Water Quality Volume from 6S.

\[ R = A + B - \left(\frac{AB}{100}\right) \]

- \( R \) = Total TSS Removal Rate
- \( A \) = TSS Removal Rate for Deep Sump Junction Box = 25%
- \( B \) = TSS Removal Rate for Drywells = 80%

\[ R = 25 + 80 - \left(\frac{25 \times 80}{100}\right) = 85\% \]

**Total Removal Rate (R) = 85%**

14P – RS1
14P at a minimum is sized to meet the Town of Greenwich standards for Water Quality Volume from 10S.

\[ R = A + B - \left(\frac{AB}{100}\right) \]

- \( R \) = Total TSS Removal Rate
- \( A \) = TSS Removal Rate for Deep Sump Junction Box = 25%
- \( B \) = TSS Removal Rate for Drywells = 80%

\[ R = 25 + 80 - \left(\frac{25 \times 80}{100}\right) = 85\% \]

**Total Removal Rate (R) = 85%**

15P – RG1
15P at a minimum is sized to meet the Town of Greenwich standards for Water Quality Volume from 9S and 100% RRV for POC 2.

\[ R = A + B - \left(\frac{AB}{100}\right) \]

- \( R \) = Total TSS Removal Rate
- \( A \) = TSS Removal Rate for Deep Sump Junction Box = 25%
- \( B \) = TSS Removal Rate for Rain Gardens = 90%

\[ R = 25 + 90 - \left(\frac{25 \times 90}{100}\right) = 92.5\% \]

**Total Removal Rate (R) = 92.5%**
BMP Draw Down Calculations

A field verified hydraulic conductivity test is used. Hydraulic conductivity test C in the area of the proposed permeable pavement system is used at a rate of 1.88"/hour.

**I2P - PP**

\[ t_{\text{drawdown}} = \frac{DV}{kA} \]

Where:
- \( DV = \text{Design Volume} \) = 3,614 ft³
- \( k = \text{Infiltration Rate} \) = 1.88 in/hr (field rate)
- \( A = \text{Bottom Area} \) = 3,600 ft² (60' x 60')

\[ t_{\text{drawdown}} = \frac{3,614}{(1.88)(\frac{1}{12})(3,600)} = 6.4\text{hr} \]

**12P will draw down in 6.4 hrs.**

A field verified hydraulic conductivity test is used. Hydraulic conductivity test B in the area of the proposed drywell systems is used at a rate of 1.56"/hour.

**I3P - RS2**

\[ t_{\text{drawdown}} = \frac{DV}{kA} \]

Where:
- \( DV = \text{Design Volume} \) = 185 ft³
- \( k = \text{Infiltration Rate} \) = 1.56 in/hr (field rate)
- \( A = \text{Bottom Area} \) = 208 ft² (8.33' x 25')

\[ t_{\text{drawdown}} = \frac{185}{(1.56)(\frac{1}{12})(208)} = 6.8\text{hr} \]

**13P will draw down in 6.8 hrs.**

A field verified hydraulic conductivity test is used. Hydraulic conductivity test B in the area of the proposed drywell systems is used at a rate of 1.56"/hour.

**I4P - RS1**

\[ t_{\text{drawdown}} = \frac{DV}{kA} \]

Where:
- \( DV = \text{Design Volume} \) = 132 ft³
- \( k = \text{Infiltration Rate} \) = 1.56 in/hr (field rate)
- \( A = \text{Bottom Area} \) = 200 ft² (5' x 40')

\[ t_{\text{drawdown}} = \frac{132}{(1.56)(\frac{1}{12})(200)} = 5.1\text{hr} \]

**14P will draw down in 5.1 hrs.**
A field verified hydraulic conductivity test is used. Hydraulic conductivity test A in the area of the proposed rain garden is used at a rate of 1.44"/hour.

**15P – RG1 (revised 1/3/20)**

\[
t_{\text{drawdown}} = \frac{DV}{kA}
\]

Where:

- DV = Design Volume = 1,788 ft³
- k = Infiltration Rate = 1.44 in/hr (field rate)
- A = Bottom Area = 1,200 ft² (25' x 40')

\[
t_{\text{drawdown}} = \frac{1,788}{(1.44\sqrt{12})(1,200)} = 12.5 \text{hr}
\]

14P will draw down in 12.5 hrs.
### Stage.Area.Storage for Pond 12P: PP

<table>
<thead>
<tr>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.05</td>
<td>3,602</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.10</td>
<td>3,604</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.15</td>
<td>3,605</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.20</td>
<td>3,607</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.25</td>
<td>3,609</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.30</td>
<td>3,611</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.35</td>
<td>3,613</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.40</td>
<td>3,614</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.45</td>
<td>3,616</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.50</td>
<td>3,618</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.55</td>
<td>3,798</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.60</td>
<td>3,978</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.65</td>
<td>4,158</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.70</td>
<td>4,338</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.75</td>
<td>4,518</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.80</td>
<td>4,698</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.85</td>
<td>4,878</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.90</td>
<td>5,058</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>315.95</td>
<td>5,238</td>
</tr>
<tr>
<td>312.50</td>
<td>0</td>
<td>316.00</td>
<td>5,418</td>
</tr>
</tbody>
</table>
Summary for Pond 12P: PP

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 16,015 sf, 73.41% Impervious, Inflow Depth = 8.13" for 100-Year event
Inflow = 3.32 cfs @ 12.07 hrs, Volume= 10,855 cf
Outflow = 2.33 cfs @ 12.14 hrs, Volume= 7,241 cf, Atten= 30%, Lag= 4.4 min
Primary = 2.33 cfs @ 12.14 hrs, Volume= 7,241 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 315.66' @ 12.14 hrs Surf.Area= 10,800 sf Storage= 4,180 cf

Plug-Flow detention time= 178.0 min calculated for 7,239 cf (67% of inflow)
Center-of-Mass det. time= 81.0 min (845.8 - 764.8 )

<table>
<thead>
<tr>
<th>Volume</th>
<th>Invert</th>
<th>Avail Storage</th>
<th>Storage Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>312.50'</td>
<td>3,600 cf</td>
<td>60.00'W x 60.00'L x 2.50'H gravel layer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9,000 cf Overall x 40.0% Voids</td>
</tr>
<tr>
<td>#2</td>
<td>315.00'</td>
<td>18 cf</td>
<td>60.00'W x 60.00'L x 0.50'H pavers setting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,800 cf Overall x 1.0% Voids</td>
</tr>
<tr>
<td>#3</td>
<td>315.50'</td>
<td>1,800 cf</td>
<td>60.00'W x 60.00'L x 0.50'H ponding to top of curb el. 316.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5,418 cf Total Available Storage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Device</th>
<th>Routing</th>
<th>Invert</th>
<th>Outlet Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Primary</td>
<td>313.40'</td>
<td>8.0&quot; Round Culvert  L= 100.0' Ke= 0.500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inlet / Outlet Invert= 313.40' / 307.50' S= 0.0590 ''/ Cc= 0.900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>n= 0.011 PVC, smooth interior, Flow Area= 0.35 sf</td>
</tr>
<tr>
<td>#2</td>
<td>Device 1</td>
<td>315.40'</td>
<td>24.0&quot; x 24.0&quot; Horiz. Orifice/Grate C= 0.600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Limited to weir flow at low heads</td>
</tr>
<tr>
<td>#3</td>
<td>Secondary</td>
<td>315.70'</td>
<td>14.0' long x 5.0' breadth Broad-Crested Rectangular Weir</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.50 3.00 3.50 4.00 4.50 5.00 5.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65 2.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.65 2.67 2.66 2.66 2.70 2.74 2.79 2.88</td>
</tr>
</tbody>
</table>

Primary OutFlow Max=2.33 cfs @ 12.14 hrs HW=315.66' TW=0.00' (Dynamic Tailwater)
↑1=Culvert (Inlet Controls 2.33 cfs @ 6.68 fps)
↓2=Orifice/Grate (Passes 2.33 cfs of 3.39 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=312.50' TW=0.00' (Dynamic Tailwater)
↑3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
<table>
<thead>
<tr>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>297.50</td>
<td>0</td>
<td>298.52</td>
<td>119</td>
<td>299.54</td>
<td>221</td>
</tr>
<tr>
<td>297.52</td>
<td>2</td>
<td>298.54</td>
<td>122</td>
<td>299.56</td>
<td>222</td>
</tr>
<tr>
<td>297.54</td>
<td>3</td>
<td>298.56</td>
<td>125</td>
<td>299.58</td>
<td>222</td>
</tr>
<tr>
<td>297.56</td>
<td>5</td>
<td>298.58</td>
<td>128</td>
<td>299.60</td>
<td>222</td>
</tr>
<tr>
<td>297.58</td>
<td>7</td>
<td>298.60</td>
<td>131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.60</td>
<td>8</td>
<td>298.62</td>
<td>133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.62</td>
<td>10</td>
<td>298.64</td>
<td>136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.64</td>
<td>12</td>
<td>298.66</td>
<td>139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.66</td>
<td>13</td>
<td>298.68</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.68</td>
<td>15</td>
<td>298.70</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.70</td>
<td>17</td>
<td>298.72</td>
<td>147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.72</td>
<td>18</td>
<td>298.74</td>
<td>149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.74</td>
<td>20</td>
<td>298.76</td>
<td>152</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.76</td>
<td>22</td>
<td>298.78</td>
<td>154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.78</td>
<td>23</td>
<td>298.80</td>
<td>156</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.80</td>
<td>25</td>
<td>298.82</td>
<td>159</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.82</td>
<td>27</td>
<td>298.84</td>
<td>161</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.84</td>
<td>28</td>
<td>298.86</td>
<td>163</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.86</td>
<td>30</td>
<td>298.88</td>
<td>165</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.88</td>
<td>32</td>
<td>298.90</td>
<td>167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.90</td>
<td>33</td>
<td>298.92</td>
<td>169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.92</td>
<td>35</td>
<td>298.94</td>
<td>171</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.94</td>
<td>37</td>
<td>298.96</td>
<td>173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.96</td>
<td>38</td>
<td>298.98</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>297.98</td>
<td>40</td>
<td>299.00</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.00</td>
<td>42</td>
<td>299.02</td>
<td>178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.02</td>
<td>45</td>
<td>299.04</td>
<td>180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.04</td>
<td>48</td>
<td>299.06</td>
<td>181</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.06</td>
<td>51</td>
<td>299.08</td>
<td>183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.08</td>
<td>54</td>
<td>299.10</td>
<td>185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.10</td>
<td>57</td>
<td>299.12</td>
<td>186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.12</td>
<td>60</td>
<td>299.14</td>
<td>188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.14</td>
<td>63</td>
<td>299.16</td>
<td>190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.16</td>
<td>66</td>
<td>299.18</td>
<td>191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.18</td>
<td>69</td>
<td>299.20</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.20</td>
<td>72</td>
<td>299.22</td>
<td>195</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.22</td>
<td>75</td>
<td>299.24</td>
<td>196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.24</td>
<td>78</td>
<td>299.26</td>
<td>198</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.26</td>
<td>81</td>
<td>299.28</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.28</td>
<td>84</td>
<td>299.30</td>
<td>201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.30</td>
<td>87</td>
<td>299.32</td>
<td>203</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.32</td>
<td>90</td>
<td>299.34</td>
<td>205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.34</td>
<td>93</td>
<td>299.36</td>
<td>206</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.36</td>
<td>96</td>
<td>299.38</td>
<td>208</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.38</td>
<td>99</td>
<td>299.40</td>
<td>210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.40</td>
<td>102</td>
<td>299.42</td>
<td>211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.42</td>
<td>105</td>
<td>299.44</td>
<td>213</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.44</td>
<td>108</td>
<td>299.46</td>
<td>215</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.46</td>
<td>111</td>
<td>299.48</td>
<td>216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.48</td>
<td>114</td>
<td>299.50</td>
<td>218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>298.50</td>
<td>117</td>
<td>299.52</td>
<td>220</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)
Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf
Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50" Overlap
Row Length Adjustment= +0.50' x 1.86 sf x 2 rows

36.0" Wide + 4.0" Spacing = 40.0" C-C Row Spacing

3 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 23.00' Row Length +12.0" End Stone x 2 = 25.00' Base Length
2 Rows x 36.0" Wide + 4.0" Spacing x 1 + 12.0" Side Stone x 2 = 8.33' Base Width
6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

6 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 2 Rows = 85.6 cf Chamber Storage

425.3 cf Field - 85.6 cf Chambers = 339.7 cf Stone x 40.0% Voids = 135.9 cf Stone Storage

Chamber Storage + Stone Storage = 221.5 cf = 0.005 af
Overall Storage Efficiency = 52.1%
Overall System Size = 25.00' x 8.33' x 2.04'

6 Chambers
15.8 cy Field
12.6 cy Stone
<table>
<thead>
<tr>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>293.40</td>
<td>0</td>
<td>294.42</td>
<td>110</td>
<td>295.44</td>
<td>206</td>
</tr>
<tr>
<td>293.42</td>
<td>2</td>
<td>294.44</td>
<td>113</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.44</td>
<td>3</td>
<td>294.46</td>
<td>115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.46</td>
<td>5</td>
<td>294.48</td>
<td>118</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.48</td>
<td>6</td>
<td>294.50</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.50</td>
<td>8</td>
<td>294.52</td>
<td>123</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.52</td>
<td>10</td>
<td>294.54</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.54</td>
<td>11</td>
<td>294.56</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.56</td>
<td>13</td>
<td>294.58</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.58</td>
<td>14</td>
<td><strong>294.60</strong></td>
<td><strong>132</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.60</td>
<td>16</td>
<td>294.62</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.62</td>
<td>18</td>
<td>294.64</td>
<td>137</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.64</td>
<td>19</td>
<td>294.66</td>
<td>139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.66</td>
<td>21</td>
<td>294.68</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.68</td>
<td>22</td>
<td>294.70</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.70</td>
<td>24</td>
<td>294.72</td>
<td>146</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.72</td>
<td>26</td>
<td>294.74</td>
<td>148</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.74</td>
<td>27</td>
<td>294.76</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.76</td>
<td>29</td>
<td>294.78</td>
<td>152</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.78</td>
<td>30</td>
<td>294.80</td>
<td>154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.80</td>
<td>32</td>
<td>294.82</td>
<td>156</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.82</td>
<td>34</td>
<td>294.84</td>
<td>157</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.84</td>
<td>35</td>
<td>294.86</td>
<td>159</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.86</td>
<td>37</td>
<td>294.88</td>
<td>161</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.88</td>
<td>38</td>
<td>294.90</td>
<td>162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.90</td>
<td>40</td>
<td>294.92</td>
<td>164</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.92</td>
<td>43</td>
<td>294.94</td>
<td>166</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.94</td>
<td>46</td>
<td>294.96</td>
<td>167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.96</td>
<td>48</td>
<td>294.98</td>
<td>169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.98</td>
<td>51</td>
<td>295.00</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.00</td>
<td>54</td>
<td>295.02</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.02</td>
<td>57</td>
<td>295.04</td>
<td>174</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.04</td>
<td>59</td>
<td>295.06</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.06</td>
<td>62</td>
<td>295.08</td>
<td>177</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.08</td>
<td>65</td>
<td>295.10</td>
<td>178</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.10</td>
<td>68</td>
<td>295.12</td>
<td>180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.12</td>
<td>70</td>
<td>295.14</td>
<td>182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.14</td>
<td>73</td>
<td>295.16</td>
<td>183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.16</td>
<td>76</td>
<td>295.18</td>
<td>185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.18</td>
<td>78</td>
<td>295.20</td>
<td>186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.20</td>
<td>81</td>
<td>295.22</td>
<td>188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.22</td>
<td>84</td>
<td>295.24</td>
<td>190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.24</td>
<td>86</td>
<td>295.26</td>
<td>191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.26</td>
<td>89</td>
<td>295.28</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.28</td>
<td>92</td>
<td>295.30</td>
<td>194</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.30</td>
<td>94</td>
<td>295.32</td>
<td>196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.32</td>
<td>97</td>
<td>295.34</td>
<td>198</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.34</td>
<td>100</td>
<td>295.36</td>
<td>199</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.36</td>
<td>102</td>
<td>295.38</td>
<td>201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.38</td>
<td>105</td>
<td>295.40</td>
<td>202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.40</td>
<td>107</td>
<td>295.42</td>
<td>204</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pond 14P: RS1 - Chamber Wizard Field A

**Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)**

Effective Size = 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size = 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment = +0.50' x 1.86 sf x 1 rows

5 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 38.00' Row Length +12.0" End Stone x 2 = 40.00' Base Length

1 Rows x 36.0" Wide + 12.0" Side Stone x 2 = 5.00' Base Width

6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

5 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 70.7 cf Chamber Storage

408.3 cf Field - 70.7 cf Chambers = 337.6 cf Stone x 40.0% Voids = 135.0 cf Stone Storage

Chamber Storage + Stone Storage = 205.8 cf = 0.005 af

Overall Storage Efficiency = 50.4%

Overall System Size = 40.00' x 5.00' x 2.04'

5 Chambers

15.1 cy Field

12.5 cy Stone
### Stage-Area-Storage for Pond 15P: **RG1**

<table>
<thead>
<tr>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
<th>Elevation (feet)</th>
<th>Storage (cubic-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>304.00</td>
<td>0</td>
<td>306.55</td>
<td>1,062</td>
</tr>
<tr>
<td>304.05</td>
<td>24</td>
<td>306.60</td>
<td>1,080</td>
</tr>
<tr>
<td>304.10</td>
<td>48</td>
<td>306.65</td>
<td>1,098</td>
</tr>
<tr>
<td>304.15</td>
<td>72</td>
<td>306.70</td>
<td>1,116</td>
</tr>
<tr>
<td>304.20</td>
<td>96</td>
<td>306.75</td>
<td>1,125</td>
</tr>
<tr>
<td>304.25</td>
<td>120</td>
<td>306.80</td>
<td>1,134</td>
</tr>
<tr>
<td>304.30</td>
<td>144</td>
<td>306.85</td>
<td>1,143</td>
</tr>
<tr>
<td>304.35</td>
<td>168</td>
<td>306.90</td>
<td>1,152</td>
</tr>
<tr>
<td>304.40</td>
<td>192</td>
<td>306.95</td>
<td>1,161</td>
</tr>
<tr>
<td>304.45</td>
<td>216</td>
<td>307.00</td>
<td>1,170</td>
</tr>
<tr>
<td>304.50</td>
<td>240</td>
<td>307.05</td>
<td>1,230</td>
</tr>
<tr>
<td>304.55</td>
<td>264</td>
<td>307.10</td>
<td>1,291</td>
</tr>
<tr>
<td>304.60</td>
<td>288</td>
<td>307.15</td>
<td>1,352</td>
</tr>
<tr>
<td>304.65</td>
<td>312</td>
<td>307.20</td>
<td>1,413</td>
</tr>
<tr>
<td>304.70</td>
<td>336</td>
<td>307.25</td>
<td>1,474</td>
</tr>
<tr>
<td>304.75</td>
<td>360</td>
<td>307.30</td>
<td>1,536</td>
</tr>
<tr>
<td>304.80</td>
<td>384</td>
<td>307.35</td>
<td>1,599</td>
</tr>
<tr>
<td>304.85</td>
<td>408</td>
<td>307.40</td>
<td>1,661</td>
</tr>
<tr>
<td>304.90</td>
<td>432</td>
<td>307.45</td>
<td>1,724</td>
</tr>
<tr>
<td>304.95</td>
<td>456</td>
<td><strong>307.50</strong></td>
<td><strong>1,788</strong></td>
</tr>
<tr>
<td>305.00</td>
<td>480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.05</td>
<td>504</td>
<td>307.55</td>
<td>1,851</td>
</tr>
<tr>
<td>305.10</td>
<td>528</td>
<td>307.60</td>
<td>1,915</td>
</tr>
<tr>
<td>305.15</td>
<td>552</td>
<td>307.65</td>
<td>1,980</td>
</tr>
<tr>
<td>305.20</td>
<td>576</td>
<td>307.70</td>
<td>2,045</td>
</tr>
<tr>
<td>305.25</td>
<td>594</td>
<td>307.75</td>
<td>2,110</td>
</tr>
<tr>
<td>305.30</td>
<td>612</td>
<td>307.80</td>
<td>2,175</td>
</tr>
<tr>
<td>305.35</td>
<td>630</td>
<td>307.85</td>
<td>2,241</td>
</tr>
<tr>
<td>305.40</td>
<td>648</td>
<td>307.90</td>
<td>2,308</td>
</tr>
<tr>
<td>305.45</td>
<td>666</td>
<td>307.95</td>
<td>2,374</td>
</tr>
<tr>
<td>305.50</td>
<td>684</td>
<td>308.00</td>
<td><strong>2,441</strong></td>
</tr>
<tr>
<td>305.55</td>
<td>702</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.60</td>
<td>720</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.65</td>
<td>738</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.70</td>
<td>756</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.75</td>
<td>774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.80</td>
<td>792</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.85</td>
<td>810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.90</td>
<td>828</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.95</td>
<td>846</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.00</td>
<td>864</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.05</td>
<td>882</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.10</td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.15</td>
<td>918</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.20</td>
<td>936</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.25</td>
<td>954</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.30</td>
<td>972</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.35</td>
<td>990</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.40</td>
<td>1,008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.45</td>
<td>1,026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306.50</td>
<td>1,044</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Dual Grass Lined Swale Overflow*
Summary for Pond 15P: **RG1**

Inflow Area = 32,891 sf, 52.06% Impervious, Inflow Depth = 4.79' for 25-Year event
Inflow = 4.28 cfs @ 12.07 hrs, Volume= 13,131 cf
Outflow = 4.23 cfs @ 12.08 hrs, Volume= 11,343 cf, Atten= 1%, Lag= 0.7 min
Primary = 2.12 cfs @ 12.08 hrs, Volume= 5,671 cf
Secondary = 2.12 cfs @ 12.08 hrs, Volume= 5,671 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 307.69' @ 12.08 hrs Surf.Area= 4,899 sf Storage= 2,033 cf

Plug-Flow detention time= 94.6 min calculated for 11,340 cf (86% of inflow)
Center-of-Mass det. time= 34.7 min (829.2 - 794.5)

<table>
<thead>
<tr>
<th>Volume</th>
<th>Invert</th>
<th>Avail.Storage</th>
<th>Storage Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>304.00'</td>
<td>576 cf</td>
<td>30.00'W x 40.00'W x 1.20'H gravel layer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,440 cf Overall x 40.00% Voids</td>
</tr>
<tr>
<td>#2</td>
<td>305.20'</td>
<td>540 cf</td>
<td>30.00'W x 40.00'W x 1.50'H bio-sand layer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,800 cf Overall x 30.00% Voids</td>
</tr>
<tr>
<td>#3</td>
<td>306.70'</td>
<td>54 cf</td>
<td>30.00'W x 40.00'W x 0.30'H sod layer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>360 cf Overall x 15.00% Voids</td>
</tr>
<tr>
<td>#4</td>
<td>307.00'</td>
<td>1,271 cf</td>
<td>30.00'W x 40.00'W x 1.00'H ponding layer Z=1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,441 cf Total Available Storage</td>
</tr>
</tbody>
</table>

Device Routing Invert Outlet Devices

| #1 Primary | 307.50' | 10.0' long x 2.0' breadth Broad-Crested Rectangular Weir |
|           |         | Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 |
|           |         | 2.50 3.00 3.50 |
|           |         | Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 |
|           |         | 2.85 3.07 3.20 3.32 |
| #2 Secondary | 307.50' | 10.0' long x 2.0' breadth Broad-Crested Rectangular Weir |
|            |         | Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 |
|            |         | 2.50 3.00 3.50 |
|            |         | Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 |
|            |         | 2.85 3.07 3.20 3.32 |

Primary OutFlow Max=2.11 cfs @ 12.08 hrs HW=307.69' TW=0.00' (Dynamic Tailwater)

Secondary OutFlow Max=2.11 cfs @ 12.08 hrs HW=307.69' TW=0.00' (Dynamic Tailwater)
Appendix "D"

HydroCAD Comparison Table
### Table 1: Summary of Drainage Areas and Peak Flow Rates and Runoff Volumes for Assuring Conditions

<table>
<thead>
<tr>
<th>Area ID</th>
<th>POC</th>
<th>Area (ft²)</th>
<th>CN</th>
<th>Tc (min)</th>
<th>1 Year Storm</th>
<th>2 Year Storm</th>
<th>5 Year Storm</th>
<th>10 Year Storm</th>
<th>25 Year Storm</th>
<th>50 Year Storm</th>
<th>100 Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. <strong>ex W WS</strong> 1</td>
<td>1</td>
<td>125,786</td>
<td>76</td>
<td>9.8</td>
<td>2.66</td>
<td>0.044</td>
<td>3.74</td>
<td>13,380</td>
<td>15.82</td>
<td>20.605</td>
<td>7.28</td>
</tr>
<tr>
<td>15. <strong>ex W WS</strong> 2</td>
<td>2</td>
<td>6,905</td>
<td>79</td>
<td>17.9</td>
<td>0.85</td>
<td>3.446</td>
<td>1.29</td>
<td>5,378</td>
<td>1.85</td>
<td>8,199</td>
<td>2.47</td>
</tr>
<tr>
<td>5C. <strong>ex POC 1</strong></td>
<td>1</td>
<td>118,299</td>
<td>72</td>
<td>20.2</td>
<td>1.54</td>
<td>3,652</td>
<td>2.24</td>
<td>10,972</td>
<td>3.65</td>
<td>17,113</td>
<td>5.01</td>
</tr>
<tr>
<td>5C. <strong>ex POC 2</strong></td>
<td>2</td>
<td>33,851</td>
<td>84</td>
<td>5.0</td>
<td>1.45</td>
<td>4,323</td>
<td>1.84</td>
<td>5,309</td>
<td>2.37</td>
<td>7,181</td>
<td>2.22</td>
</tr>
<tr>
<td>10C. <strong>POC 1</strong></td>
<td>1</td>
<td>5,605</td>
<td>98</td>
<td>5.0</td>
<td>0.11</td>
<td>367</td>
<td>0.15</td>
<td>435</td>
<td>0.16</td>
<td>579</td>
<td>0.21</td>
</tr>
<tr>
<td>11C. <strong>POC 2</strong></td>
<td>2</td>
<td>4,601</td>
<td>74</td>
<td>5.0</td>
<td>0.10</td>
<td>334</td>
<td>0.11</td>
<td>408</td>
<td>0.10</td>
<td>490</td>
<td>0.31</td>
</tr>
</tbody>
</table>

### Table 2: Summary of Drainage Areas and Peak Flow Rates and Runoff Volumes for Preapproved Conditions

<table>
<thead>
<tr>
<th>Area ID</th>
<th>POC</th>
<th>Area (ft²)</th>
<th>CN</th>
<th>Tc (min)</th>
<th>1 Year Storm</th>
<th>2 Year Storm</th>
<th>5 Year Storm</th>
<th>10 Year Storm</th>
<th>25 Year Storm</th>
<th>50 Year Storm</th>
<th>100 Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5B. <strong>pp</strong> 1</td>
<td>1</td>
<td>16,015</td>
<td>92</td>
<td>5.0</td>
<td>0.91</td>
<td>3,758</td>
<td>1.10</td>
<td>3,391</td>
<td>1.46</td>
<td>4,348</td>
<td>1.77</td>
</tr>
<tr>
<td>6B. <strong>RSP</strong> 1</td>
<td>1</td>
<td>2,235</td>
<td>98</td>
<td>5.0</td>
<td>0.15</td>
<td>497</td>
<td>0.18</td>
<td>390</td>
<td>0.22</td>
<td>757</td>
<td>0.27</td>
</tr>
<tr>
<td>7B. <strong>RSP 1</strong></td>
<td>1</td>
<td>118,299</td>
<td>72</td>
<td>20.2</td>
<td>1.54</td>
<td>3,652</td>
<td>2.24</td>
<td>10,972</td>
<td>3.65</td>
<td>17,113</td>
<td>5.01</td>
</tr>
<tr>
<td>9B. <strong>RSP 1</strong></td>
<td>1</td>
<td>33,851</td>
<td>84</td>
<td>5.0</td>
<td>1.45</td>
<td>4,323</td>
<td>1.84</td>
<td>5,309</td>
<td>2.37</td>
<td>7,181</td>
<td>2.22</td>
</tr>
<tr>
<td>10B. <strong>RSP 1</strong></td>
<td>1</td>
<td>5,605</td>
<td>98</td>
<td>5.0</td>
<td>0.11</td>
<td>367</td>
<td>0.15</td>
<td>435</td>
<td>0.16</td>
<td>579</td>
<td>0.21</td>
</tr>
<tr>
<td>11B. <strong>POC 2</strong></td>
<td>2</td>
<td>4,601</td>
<td>74</td>
<td>5.0</td>
<td>0.10</td>
<td>334</td>
<td>0.11</td>
<td>408</td>
<td>0.10</td>
<td>490</td>
<td>0.31</td>
</tr>
</tbody>
</table>

### Table 3: Comparison of Existing and Proposed Peak Flow Rates for All Points of Concern

<table>
<thead>
<tr>
<th>POC</th>
<th>1 Year Storm</th>
<th>2 Year Storm</th>
<th>10 Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Table 4: Comparison of Existing and Proposed Runoff Volumes for All Points of Concern

<table>
<thead>
<tr>
<th>POC</th>
<th>1 Year Storm</th>
<th>2 Year Storm</th>
<th>10 Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

---

Rocco V. D'Andrea Inc.
Appendix “E”

HydroCAD Analysis - Existing Conditions
Area Listing (all nodes)

<table>
<thead>
<tr>
<th>Area (sq ft)</th>
<th>CN</th>
<th>Description</th>
<th>Subcatchment-numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>47,576</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
<td>(1S, 2S)</td>
</tr>
<tr>
<td>10,937</td>
<td>98</td>
<td>Paved parking, HSG C</td>
<td>(1S, 2S)</td>
</tr>
<tr>
<td>7,750</td>
<td>98</td>
<td>Roofs, HSG C</td>
<td>(1S, 2S)</td>
</tr>
<tr>
<td>109,430</td>
<td>73</td>
<td>Woods, Fair, HSG C</td>
<td>(1S, 2S)</td>
</tr>
<tr>
<td>175,693</td>
<td>76</td>
<td>TOTAL AREA</td>
<td></td>
</tr>
</tbody>
</table>

Routing Diagram for 18UR Ex 2

Prepared by Rocco V. D'Andrea, Inc. Printed 1/2/2020
HydroCAD 10.00.24 s/n 07255 © 2019 HydroCAD Software Solutions LLC
### Summary for Subcatchment 1S: "ex W WS"

Runoff = 11.10 cfs @ 12.14 hrs, Volume= 39,075 cf, Depth= 3.73"

Runoff by SCS TR-20 method, UI=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Type III 24-hr 25-Year Rainfall=6.40"

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,940</td>
<td>98</td>
<td>Roofs, HSG C</td>
</tr>
<tr>
<td>10,045</td>
<td>98</td>
<td>Paved parking, HSG C</td>
</tr>
<tr>
<td>71</td>
<td>98</td>
<td>Paved parking, HSG C</td>
</tr>
<tr>
<td>26,661</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
</tr>
<tr>
<td>85,071</td>
<td>73</td>
<td>Woods, Fair, HSG C</td>
</tr>
<tr>
<td>125,788</td>
<td>76</td>
<td>Weighted Average</td>
</tr>
<tr>
<td>111,732</td>
<td>88.83% Pervious Area</td>
<td></td>
</tr>
<tr>
<td>14,056</td>
<td>11.17% Impervious Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tc (min)</th>
<th>Length (feet)</th>
<th>Slope (ft/ft)</th>
<th>Velocity (ft/sec)</th>
<th>Capacity (cfs)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>100</td>
<td>0.0590</td>
<td>0.19</td>
<td>Sheet Flow, Grass: Dense n= 0.240, P2= 3.40</td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td>259</td>
<td>0.1120</td>
<td>5.39</td>
<td>Shallow Concentrated Flow, Unpaved K= 16.1 fps</td>
<td></td>
</tr>
<tr>
<td>9.8</td>
<td>359</td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

**Subcatchment 1S: "ex W WS"**

**Hydrograph**

- Type III 24-hr 25-Year Rainfall=6.40"
- Runoff Area=125,788 sf
- Runoff Volume=39,075 cf
- Runoff Depth=3.73"
- Flow Length=359'
- Tc=9.8 min
- CN=76
Summary for Subcatchment 2S: **ex E WS

Runoff = 3.53 cfs @ 12.24 hrs, Volume= 15,503 cf, Depth= 3.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.40"

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>821</td>
<td>98</td>
<td>Roofs, HSG C</td>
</tr>
<tr>
<td>20,915</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
</tr>
<tr>
<td>24,359</td>
<td>73</td>
<td>Woods, Fair, HSG C</td>
</tr>
</tbody>
</table>

49,905 76 Weighted Average
45,274 90.72% Pervious Area
4,631 9.28% Impervious Area

<table>
<thead>
<tr>
<th>Tc</th>
<th>Length</th>
<th>Slope</th>
<th>Velocity</th>
<th>Capacity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.8</td>
<td>100</td>
<td>0.0170</td>
<td>0.11</td>
<td>Sheet Flow, Grass: Dense n= 0.240 P2= 3.40&quot;</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>410</td>
<td>0.0183</td>
<td>2.18</td>
<td>Shallow Concentrated Flow, Unpaved Kv= 16.1 fps</td>
<td></td>
</tr>
</tbody>
</table>

17.9 510 Total

Subcatchment 2S: **ex E WS

Type III 24-hr
25-Year Rainfall=6.40"
Runoff Area= 49,905 sf
Runoff Volume= 15,503 cf
Runoff Depth= 3.73"
Flow Length= 510'
Tc= 17.9 min
CN= 76
Summary for Link 4L: "ex POC 2"

Inflow Area = 49,905 sf, 9.28% Impervious, Inflow Depth = 3.73" for 25-Year event
Inflow = 3.53 cfs @ 12.24 hrs, Volume = 15,503 cf
Primary = 3.53 cfs @ 12.24 hrs, Volume = 15,503 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 4L: "ex POC 2"
Hydrograph
### Runoff Calculations

**Subcatchment 1S: "**ex W WS**
- Runoff Area: 125,786 sf
- 11.17% Impervious
- Runoff Depth: 1.29"
- Flow Length: 359’
- Tc: 9.8 min
- CN: 78
- Runoff: 3.74 cfs
- 13,556 cf

**Subcatchment 2S: "**ex E WS**
- Runoff Area: 49,905 sf
- 9.28% Impervious
- Runoff Depth: 1.29"
- Flow Length: 359’
- Tc: 9.8 min
- CN: 78
- Runoff: 1.19 cfs
- 5,378 cf

**Link 3L: "**ex POC 1**
- Inflow: 3.74 cfs
- 13,556 cf

**Link 4L: "**ex POC 2**
- Inflow: 1.19 cfs
- 5,378 cf

**Link 4L: "**ex POC 2**
- Inflow: 1.19 cfs
- 5,378 cf
Time span=0.00-36.00 hrs, dt=0.01 hrs, 3801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: **ex W WS
Runoff Area=125,788 sf  11.17% Impervious  Runoff Depth=4.80" 
Flow Length=359'  Tc=9.8 min  CN=76  Runoff=4.23 cfs  5,026 cf

Subcatchment 2S: **ex E WS
Runoff Area=49,905 sf  9.28% Impervious  Runoff Depth=4.60" 
Flow Length=510'  Tc=17.9 min  CN=76  Runoff=4.53 cfs  19,943 cf

Link 3L: **ex POC 1
Inflow=4.23 cfs  50,266 cf
Primary=4.23 cfs  50,266 cf

Link 4L: **ex POC 2
Inflow=4.53 cfs  19,943 cf
Primary=4.53 cfs  19,943 cf

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: **ex W WS
Runoff Area=125,788 sf  11.17% Impervious  Runoff Depth=4.80" 
Flow Length=359'  Tc=9.8 min  CN=76  Runoff=18.19 cfs  64,658 cf

Subcatchment 2S: **ex E WS
Runoff Area=49,905 sf  9.28% Impervious  Runoff Depth=4.60" 
Flow Length=510'  Tc=17.9 min  CN=76  Runoff=5.80 cfs  25,652 cf

Link 3L: **ex POC 1
Inflow=18.19 cfs  64,658 cf
Primary=18.19 cfs  64,658 cf

Link 4L: **ex POC 2
Inflow=5.80 cfs  25,652 cf
Primary=5.80 cfs  25,652 cf
Appendix “F”

HydroCAD Analysis - Proposed Conditions
Summary for Subcatchment 5S: to PP

Runoff = 2.28 cfs @ 12.07 hrs, Volume= 7.291 cf, Depth= 5.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.40"

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.404</td>
<td>98</td>
<td>Roofs, HSG C</td>
</tr>
<tr>
<td>6.352</td>
<td>98</td>
<td>Paved parking, HSG C</td>
</tr>
<tr>
<td>4.259</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
</tr>
<tr>
<td>16,015</td>
<td>92</td>
<td>Weighted Average</td>
</tr>
<tr>
<td>4,259</td>
<td></td>
<td>26.59% Pervious Area</td>
</tr>
<tr>
<td>11,756</td>
<td>73.41%</td>
<td>Impervious Area</td>
</tr>
</tbody>
</table>

Tc | Length | Slope | Velocity | Capacity | Description |
---|--------|-------|----------|----------|-------------|
1.2 | 90 | 0.0167 | 1.29 | Sheet Flow, Smooth surfaces, n= 0.011, P2= 3.40" |
1.2 | 90 | Total, Increased to minimum Tc = 5.0 min |

Subcatchment 5S: to PP

Hydrograph

---

Summary for Subcatchment 6S: to RS2

Runoff = 0.33 cfs @ 12.07 hrs, Volume= 1,148 cf, Depth= 6.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.40"

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>565</td>
<td>98</td>
<td>Roofs, HSG C</td>
</tr>
<tr>
<td>800</td>
<td>98</td>
<td>Water Surface, HSG C</td>
</tr>
<tr>
<td>850</td>
<td>98</td>
<td>Paved parking, HSG C</td>
</tr>
<tr>
<td>2,235</td>
<td>98</td>
<td>Weighted Average</td>
</tr>
<tr>
<td>2,235</td>
<td>100.00%</td>
<td>Impervious Area</td>
</tr>
</tbody>
</table>

Tc | Length | Slope | Velocity | Capacity | Description |
---|--------|-------|----------|----------|-------------|
0.1 | 35 | 0.0260 | 5.65 | Pipe Channel, 5.0" Round Area= 0.2 sf Perim= 1.6', r= 0.13' n= 0.011, PVC, smooth interior |
0.1 | 120 | 0.1160 | 13.93 | Pipe Channel, 8.0" Round Area= 0.3 sf Perim= 2.1', r= 0.17' n= 0.011, PVC, smooth interior |
0.2 | 155 | Total, Increased to minimum Tc = 5.0 min |

Subcatchment 6S: to RS2

Hydrograph
Summary for Subcatchment 75: "to POC 1"

Runoff = 7.32 cfs @ 12.28 hrs., Volume = 33,748 cf, Depth = 3.92".

Runoff by SCS TR-20 method, UH-SCS, Weighted-CN, Time Span = 0.00-36.00 hrs, dt = 0.01 hrs.
Type III 24-hr 25-Year Rainfall 6.40".

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>98</td>
<td>Paved parking, HSG C</td>
</tr>
<tr>
<td>72,266</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
</tr>
<tr>
<td>118,299</td>
<td>73</td>
<td>Weighted Average</td>
</tr>
<tr>
<td>118,243</td>
<td>96,95% Pervious Area</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>0.05% Impervious Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tc (min)</th>
<th>Length (feet)</th>
<th>Slope (ft/ft)</th>
<th>Capacity (cfs)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.3</td>
<td>100</td>
<td>0.0100</td>
<td>0.09</td>
<td>Sheet Flow,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Grass: Dense, n = 0.240, P2 = 3.40&quot;</td>
</tr>
<tr>
<td>1.9</td>
<td>490</td>
<td>0.0735</td>
<td>4.36</td>
<td>Shallow Concentrated Flow,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unpaved, Kc = 16.1 fps</td>
</tr>
<tr>
<td>20.2</td>
<td>590</td>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

Subcatchment 75: "to POC 1"

Hydrograph

Type III 24-hr 25-Year Rainfall 6.40"
Runoff Area = 118,299 sf
Runoff Volume = 33,748 cf
Runoff Depth = 3.42"
Flow Length = 590'
Tc = 20.2 min
CN = 73

Summary for Subcatchment 95: "to RG1"

Runoff = 4.26 cfs @ 12.07 hrs., Volume = 13,131 cf, Depth = 4.79".

Runoff by SCS TR-20 method, UH-SCS, Weighted-CN, Time Span = 0.00-36.00 hrs, dt = 0.01 hrs.
Type III 24-hr 25-Year Rainfall 6.40".

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,820</td>
<td>98</td>
<td>Paved parking, HSG C</td>
</tr>
<tr>
<td>5,302</td>
<td>96</td>
<td>Roofs, HSG C</td>
</tr>
<tr>
<td>15,769</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
</tr>
<tr>
<td>32,891</td>
<td>96</td>
<td>Weighted Average</td>
</tr>
<tr>
<td>15,769</td>
<td>47,94% Pervious Area</td>
<td></td>
</tr>
<tr>
<td>17,122</td>
<td>52.06% Impervious Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tc (min)</th>
<th>Length (feet)</th>
<th>Slope (ft/ft)</th>
<th>Velocity (ft/sec)</th>
<th>Capacity (cfs)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>75</td>
<td>0.0139</td>
<td>1.14</td>
<td></td>
<td>Sheet Flow,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Smooth surfaces, n = 0.011, P2 = 3.40&quot;</td>
</tr>
<tr>
<td>0.4</td>
<td>90</td>
<td>0.0160</td>
<td>4.27</td>
<td>0.84</td>
<td>Pipe Channel,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.0&quot; Round Area = 0.2 ft, Perim = 1.6&quot;, r = 0.13&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n = 0.011 PVC, smooth interior</td>
</tr>
<tr>
<td>0.3</td>
<td>90</td>
<td>0.0170</td>
<td>5.33</td>
<td>1.86</td>
<td>Pipe Channel,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.0&quot; Round Area = 0.3 ft, Perim = 2.1&quot;, r = 0.17&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n = 0.011 PVC, smooth interior</td>
</tr>
<tr>
<td>0.0</td>
<td>10</td>
<td>0.0200</td>
<td>5.79</td>
<td>2.02</td>
<td>Pipe Channel,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.0&quot; Round Area = 0.3 ft, Perim = 2.1&quot;, r = 0.17&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n = 0.011 PVC, smooth interior</td>
</tr>
<tr>
<td>0.2</td>
<td>55</td>
<td>0.0160</td>
<td>5.18</td>
<td>1.81</td>
<td>Pipe Channel,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.0&quot; Round Area = 0.3 ft, Perim = 2.1&quot;, r = 0.17&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n = 0.011 PVC, smooth interior</td>
</tr>
<tr>
<td>0.2</td>
<td>56</td>
<td>0.0160</td>
<td>6.01</td>
<td>3.28</td>
<td>Pipe Channel,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.0&quot; Round Area = 0.5 ft, Perim = 2.6&quot;, r = 0.21&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n = 0.011 PVC, smooth interior</td>
</tr>
<tr>
<td>0.2</td>
<td>75</td>
<td>0.0160</td>
<td>6.01</td>
<td>3.28</td>
<td>Pipe Channel,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.0&quot; Round Area = 0.5 ft, Perim = 2.6&quot;, r = 0.21&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n = 0.011 PVC, smooth interior</td>
</tr>
<tr>
<td>2.4</td>
<td>451</td>
<td></td>
<td></td>
<td></td>
<td>Total, increased to minimum Tc = 5.0 min</td>
</tr>
</tbody>
</table>

C:\Documents and Settings\bryan\My Documents\_projects\18UR 7 Dempsey Ln GRN18UR h 18UR Pt 2
Type III 24-hr 25-Year Rainfall 6.40"
Prepared by Rocco V. D'Andrea, Inc.
Printed 1/2/2020
HydroCAD 10.00-24 s/n 07585 ©2018 HydroCAD Software Solutions LLC
**Summary for Subcatchment 10S: to RS1**

- **Runoff** = 0.26 cfs @ 12.04 hrs, Volume = 847 cft, Depth = 5.16".
- *Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 0.00-36.00 hrs, dt = 0.01 hrs.
  - **Type III 24-hr 25-Year Rainfall = 6.40"**
  - **Runoff Area = 32,891 sf**
  - **Runoff Volume = 13,131 cft**
  - **Runoff Depth = 4.79"**
  - **Flow Length = 451'**
  - **Tc = 5.0 min**
  - **CN = 86**

---

**Subcatchment 10S: to RS1**

- **Type III 24-hr**
  - **25-Year Rainfall = 6.40"**
  - **Runoff Area = 1,650 sf**
  - **Runoff Volume = 847 cft**
  - **Runoff Depth = 6.16"**
  - **Flow Length = 85'**
  - **Tc = 5.0 min**
  - **CN = 98**
Summary for Subcatchment 11S: **to POC 2

Runoff = 0.45 cfs @ 12.07 hrs, Volume= 1.352 cf, Depth= 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=6.40"

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,603</td>
<td>74</td>
<td>&gt;75% Grass cover, Good, HSG C</td>
</tr>
<tr>
<td>4,603</td>
<td></td>
<td>100.00% Pervious Area</td>
</tr>
</tbody>
</table>

Tc Length Slope Velocity Capacity Description
(min) (feet) (ft/ft) (ft/sec) (cfs)
5.0 40 0.0400 0.13 Sheet Flow, Grass: Dense n= 0.240 P2= 3.40"

Subcatchment 11S: **to POC 2

Hydrograph

Type III 24-hr 25-Year Rainfall=6.40"
Runoff Area=4,683 sf
Runoff Volume=1,352 cf
Runoff Depth=3.52"
Flow Length=40'
Slope=0.0400 '/'
Tc=5.0 min

Summary for Pond 12P: PP

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 16,015 sf, 73.41% Impervious, Inflow Depth = 5.46" for 25-Year event
Inflow = 2.28 cfs @ 12.07 hrs, Volume= 7,291 cf
Outflow = 1.09 cfs @ 12.21 hrs, Volume= 3,677 cf, Attenuation= 52%, Lag= 8.2 min
Primary = 1.09 cfs @ 12.21 hrs, Volume= 3,677 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 315.52' @ 12.21 hrs
Surf.Area= 10,800 sf
Storage= 3,691 cf

Plug-Flow detention time= 232.0 min calculated for 3,676 cf (50% of inflow)
Center-of-Mass det. time= 115.9 min

Volume Invert Avail.Storage Storage Description
#1 312.50' 3,600 cf 60.00'W x 60.00'L x 2.50'H gravel layer
#2 315.00' 18 cf 60.00'W x 60.00'L x 0.50'H pavers setting
#3 315.50' 1,800 cf 60.00'W x 60.00'L x 0.50'H ponding to top of curb el 316.0

5.418 cf Total Available Storage

Device Routing Invert Outlet Devices
#1 Primary 313.40' 8.0" Round Culvert L=100.0' K=0.500
Inlet / Outlet Invert= 313.40' / 307.50' Sw= 0.0900 / Cc= 0.900
n= 0.011 PVC, smooth interior, Flow Area= 0.35 sf
#2 Device 315.40' 24.0" x 24.0" Horiz. Orifice/Grate C= 0.600
Limited to weir flow at low heads
#3 Secondary 315.70' 14.0' long x 5.0' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef, (English) 2.34 2.50 2.70 2.86 2.68 2.65 2.65 2.65 2.65
2.65 2.67 2.68 2.68 2.70 2.74 2.79 2.88
Primary OutFlow Max=1.09 cfs @ 12.21 hrs HV=315.62' TW=0.00' (Dynamic Tailwater)
Secondly OutFlow Max=0.00 cfs @ 0.00 hrs HW=312.50' TW=0.00' (Dynamic Tailwater)
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=315.00' TW=0.00' (Dynamic Tailwater)

---End---
Summary for Pond 13P: RS2

Inflow Area = 2,235 sf\text{,} 100.00% Impervious, Inflow Depth = 6.16\text{"} for 25-Year event
Inflow = 0.33 cfs \text{@} 12.07 hrs, Volume = 1,148 cf
Outflow = 0.33 cfs \text{@} 12.09 hrs, Volume = 963 cf, Atten = 2\text{\%}, Lag = 1.0 min
Primary = 0.33 cfs \text{@} 12.09 hrs, Volume = 963 cf

Routing by Dyn-Stor-Ind method, Time Span = 0.00\text{ to } 36.00 hrs, dt = 0.01 hrs
Peak Elev = 299.47 \text{ @ } 12.09 hrs, Surf Area = 208 sf, Storage = 216 cf
Plug Flow detention time = 132.5 min calculated for 963 cf (84\% of inflow)
Center-of-Mass det. time = 64.1 min (807.4 - 743.3)

Volume Invert Avail Storage Storage Description
#1A 297.50' 136 cf 3.33\text{\"W} x 25.00\text{"} L x 2.04\text{\"}H Field A
425 cf Overall - 86 cf Embedded = 340 cf \times 40.0\% Voids
#2A 296.00' 86 cf Culvert C-100HD \times 6, inside #1
Effective Size = 32.1\text{\"W} \times 12.0\text{\"}H \Rightarrow 1.86 sf \times 7.50\text{"L} = 14.0 cf
Overall Size = 36.0\text{\"W} \times 12.5\text{\"H} \times 8.00\text{\"}L with 0.50\% Overlap
Flow Length Adjustment = 0.50 \times 1.86 sf \times 2 rows
222 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device Routing Invert Outlet Devices
#1 Primary 299.10' 6.00' Round Culvert L = 25.0', Ke = 0.500
Inlet / Outlet Invert = 299.10' / 295.00' S = 0.1640' CC = 0.900
n = 0.011 PVC, smooth interior, Flow Area = 0.20 sf

Primary Outlet Max = 0.32 cfs \text{@} 12.09 hrs HW = 299.47' TW = 0.00' (Dynamic Tailwater)

\*Inlet Controls 0.32 cfs @ 2.08 fps
Pond 13P: RS2 - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)
Effective Size= 32.1"W x 12.0"H -> 1.66 sf x 7.50'L = 14.0 cf
Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap
Row Length Adjustments= +0.50' x 1.66 sf x 2 rows
36.0' Wide + 4.0' Spacing = 40.0' C-C Row Spacing
3 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 23.00' Row Length x 12.0' End Stone x 2 = 25.00' Base Length
2 Rows x 36.0' Wide + 4.0' Spacing x 1 + 12.0' Side Stone x 2 = 83.3' Base Width
6.0' Base + 12.5' Chamber Height + 6.0' Cover = 2.04' Field Height
6 Chambers x 14.0 cf + 0.50' Row Adjustment x 1.66 sf x 2 Rows = 85.6 cf Chamber Storage
425.3 cf Field - 85.6 cf Chambers = 339.7 cf Stone x 40.0% Voids = 135.9 cf Stone Storage
Chamber Storage + Stone Storage = 221.5 cf = 0.005 ac
Overall Storage Efficiency = 52.1%
Overall System Size = 25.00' x 8.33' x 2.04'

0 Chambers
15.8 cf Field
12.6 cy Stone
Summary for Pond 14P: RS1

Inflow Area = 1,650 sf, 100.00% Impervious, Inflow Depth = 6.16" for 25-Year event
Inflow = 0.25 cfs @ 12.07 hrs, Volume = 847 cf
Outflow = 0.24 cfs @ 12.09 hrs, Volume = 715 cf, Atten= 2%, Lag= 1.0 min
Primary = 0.24 cfs @ 12.09 hrs, Volume = 715 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dw= 0.01 hrs
Peak Elev= 294.91' @ 12.09 hrs Surf.Area= 200 sf Storage= 163 cf
Plug Flow detention time= 132.7 min calculated for 715 cf (84% of inflow)
Center-of-Mass det. time= 65.6 min (809.1 - 743.3)

<table>
<thead>
<tr>
<th>Volume</th>
<th>Invert</th>
<th>Available Storage</th>
<th>Storage Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1A</td>
<td>293.40</td>
<td>135 cf</td>
<td>5.00'W x 40.00'L x 2.04'H Field A</td>
</tr>
<tr>
<td>#2A</td>
<td>293.90</td>
<td>71 cf</td>
<td>Cul Tec C-100HD x 5 Inside #1 Effective Size= 32.1'W x 12.0'H =&gt; 1.86 sf x 7.50'L = 14.0 cf Overall Size = 36.0'W x 12.5'H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 1 rows</td>
</tr>
</tbody>
</table>

206 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device Routing Invert Outlet Devices
#1 Primary 294.60' 6.0' Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 294.60' / 292.50' S= 0.2100' / Co= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary Outflow Max= 0.24 cfs @ 12.09 hrs HW= 294.91' TW= 0.00' (Dynamic Tailwater)

---T= Culvert (inlet Controls 0.24 cfs @ 1.89 fps)

Pond 14P: RS1 - Chamber Wizard Field A

Chamber Model = Cul Tec C-100HD (Cul Tec Contactors® 100HD)
Effective Size= 32.1'W x 12.0'H => 1.86 sf x 7.50'L = 14.0 cf
Overall Size = 36.0'W x 12.5'H x 8.00'L with 0.50' Overlap
Row Length Adjustment= +0.50' x 1.86 sf x 1 rows

5 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 38.00' Row Length +12.0' End Stone x 2 = 40.00' Base Length
1 Rows x 36.0' Wide + 12.0' Side Stone x 2 = 50.0' Base Width
6.0' Base + 12.5' Chamber Height + 6.0' Cover = 24.0' Field Height

5 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 1 Rows = 70.7 cf Chamber Storage

<08.3 cf Field - 70.7 cf Chambers = 337.6 cf Stone x 40.0% Void = 135.0 cf Stone Storage
Chamber Storage + Stone Storage = 205.8 cf = 0.005 af
Overall Storage Efficiency = 50.4%
Overall System Size = 40.00' x 5.00' x 2.04'

5 Chambers
15.1 cy Field
12.5 cy Stone
Pond 14P: RS1

Hydrograph

**Summary for Pond 15P: **RG1

<table>
<thead>
<tr>
<th>Volume</th>
<th>Invert</th>
<th>Available Storage</th>
<th>Storage Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>304.00'</td>
<td>576 cf</td>
<td>30.00'W x 40.00'L x 1.20'H gravel layer</td>
</tr>
<tr>
<td>#2</td>
<td>305.20'</td>
<td>540 cf</td>
<td>30.00'W x 40.00'L x 1.50'H bio-sand layer</td>
</tr>
<tr>
<td>#3</td>
<td>306.70'</td>
<td>54 cf</td>
<td>30.00'W x 40.00'L x 0.30'H sed layer</td>
</tr>
<tr>
<td>#4</td>
<td>307.00'</td>
<td>1,271 cf</td>
<td>30.00'W x 40.00'L x 1.00'H ponding layer Z=1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Device</th>
<th>Routing</th>
<th>Invert</th>
<th>Outlet Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Primary</td>
<td>307.50'</td>
<td>10.0' long x 2.0' breadth Broad-Crested Rectangular Weir</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32</td>
</tr>
<tr>
<td>#2</td>
<td>Secondary</td>
<td>307.50'</td>
<td>10.0' long x 2.0' breadth Broad-Crested Rectangular Weir</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32</td>
</tr>
</tbody>
</table>

*Primary Outflow Max=2.11 cfs @ 12.08 hrs HW=307.69' TW=0.00' (Dynamic Tailwater)
*Secondary Outflow Max=2.11 cfs @ 12.08 hrs HW=307.69' TW=0.00' (Dynamic Tailwater)
**Pond 1SP: "RG1"**

- Inflow Area: 32,891 sf
- Peak Elev: 307.69'
- Storage: 2,033 cf

**Summary for Link 16L: "pr POC 1"**

- Inflow Area: 138,199 sf, 11.36% impervious, Inflow Depth = 3.89" for 25-Year event
- Inflow = 5.49 cfs @ 12.26 hrs, Volume = 44,774 cf
- Primary = 5.49 cfs @ 12.36 hrs, Volume = 44,774 cf, Atten = 0%, Lag = 0.0 min

Primary outflow = Inflow, Time Span = 0.00-36.00 hrs, dt = 0.01 hrs

**Inflow Area: 138,199 sf**
Summary for Link 17L: "pr POC 2"

- **Inflow Area**: 37,494 sf, 45.67% Impervious, Inflow Depth = 2.25" for 25-Year event
- **Inflow** = 2.57 cfs @ 12.08 hrs, Volume = 7,023 cf
- **Primary** = 2.57 cfs @ 12.08 hrs, Volume = 7,023 cf, Atten= 0%, Lag= 0.0 mn

Primary outflow = Inflow, Time Span = 0.00-36.00 hrs, dt= 0.01 hrs

---

**Link 17L: "pr POC 2"**

Inflow Area = 37,494 sf

---

**Subcatchment 5S: to PP**
- Runoff Area = 16,015 sf, 73.41% Impervious, Runoff Depth = 2.67"
- Flow Length = 90', Slope = 0.0167', Tc = 5.0 min, CN = 92, Runoff = 0.91 cfs, 2.758 cf

---

**Subcatchment 6S: to RS2**
- Runoff Area = 2,235 sf, 100.00% Impervious, Runoff Depth = 2.67"
- Flow Length = 155', Tc = 8.0 min, CN = 98, Runoff = 0.16 cfs, 497 cf

---

**Subcatchment 7S: *to POC 1**
- Runoff Area = 1,259 sf, 0.05% Impervious, Runoff Depth = 0.30"
- Flow Length = 590', Tc = 20.2 min, CN = 99, Runoff = 0.14 cfs, 7,852 cf

---

**Subcatchment 9S: "to RG1**
- Runoff Area = 32,691 sf, 52.06% Impervious, Runoff Depth = 1.58"
- Flow Length = 451', Tc = 5.0 min, CN = 86, Runoff = 1.45 cfs, 4,323 cf

---

**Subcatchment 10S: to RS1**
- Runoff Area = 1,650 sf, 100.00% Impervious, Runoff Depth = 2.67"
- Flow Length = 85', Tc = 5.0 min, CN = 98, Runoff = 0.11 cfs, 367 cf

---

**Subcatchment 11S: **to POC 2**
- Runoff Area = 4,603 sf, 0.00% Impervious, Runoff Depth = 0.85"
- Flow Length = 40', Slope = 0.040', Tc = 5.0 min, CN = 74, Runoff = 0.10 cfs, 324 cf

---

**Pond 12P: PP**
- Peak Elev = 314.42', Storage = 2,758 cf, Inflow = 0.91 cfs, 2,758 cf
- Primary = 0.00 cfs, Secondary = 0.00 cfs, Outflow = 0.00 cfs

---

**Pond 13P: RS2**
- Peak Elev = 329.33', Storage = 204 cf, Inflow = 0.15 cfs, 497 cf
- 6.0" Round Culvert, n = 0.011, L = 25.0', S = 0.1640', Outflow = 0.14 cfs, 312 cf

---

**Pond 14P: RS1**
- Peak Elev = 329.79', Storage = 153 cf, Inflow = 0.11 cfs, 367 cf
- 6.0" Round Culvert, n = 0.011, L = 10.0', S = 0.2100', Outflow = 0.10 cfs, 235 cf

---

**Pond 15P: **RG1**
- Peak Elev = 307.55', Storage = 1,854 cf, Inflow = 1.45 cfs, 4,323 cf
- Primary = 0.30 cfs, Secondary = 0.30 cfs, Outflow = 0.61 cfs, 2,535 cf

---

**Link 16L: **pr POC 1**
- Inflow = 1.94 cfs, 9,667 cf
- Primary = 1.94 cfs, 9,667 cf

---

**Link 17L: **pr POC 2**
- Inflow = 0.35 cfs, 1,592 cf
- Primary = 0.35 cfs, 1,592 cf
Subcatchment 5S: to PP
Runoff Area=16,015 sf  73.41% Impervious Runoff Depth=2.54"  Flow Length=90'  Slope=0.0167' Tc=5.0 min CN=82  Runoff=1.10 cfs 3.391 cf

Subcatchment 6S: to RS2
Runoff Area=2,235 sf  100.00% Impervious Runoff Depth=3.17"  Flow Length=155' Tc=5.0 min CN=98  Runoff=0.18 cfs 590 cf

Subcatchment 7S: *to POC 1
Runoff Area=118,299 sf  0.05% Impervious Runoff Depth=1.11"  Flow Length=590' Tc=20.2 min CN=73  Runoff=2.24 cfs 10,372 cf

Subcatchment 9S: **to RG1
Runoff Area=32,891 sf  52.06% Impervious Runoff Depth=2.01"  Flow Length=451' Tc=5.0 min CN=86  Runoff=1.84 cfs 5.509 cf

Subcatchment 10S: to RS1
Runoff Area=1,650 sf  100.00% Impervious Runoff Depth=3.17"  Flow Length=85' Tc=5.0 min CN=98  Runoff=0.13 cfs 435 cf

Subcatchment 11S: **to POC 2
Runoff Area=4,603 sf  0.00% Impervious Runoff Depth=1.17"  Flow Length=40' Slope=0.0400' Tc=5.0 min CN=74  Runoff=0.14 cfs 449 cf

Pond 12P: PP
Peak Elev=314.86' Storage=3,391 cf Inflow=1.10 cfs 3.391 cf Primary=0.00 cfs 0 cfs Secondary=0.00 cfs 0 cfs Outflow=0.00 cfs 0 cfs

Pond 13P: RS2
Peak Elev=299.35' Storage=206 cf Inflow=0.18 cfs 590 cf 6.0' Round Culvert n=0.011 L=25.0' S=-0.1640' Outflow=0.17 cfs 405 cf

Pond 14P: RS1
Peak Elev=284.81' Storage=155 cf Inflow=0.13 cfs 435 cf 6.0' Round Culvert n=0.011 L=10.0' S=-0.2100' Outflow=0.12 cfs 303 cf

Pond 15P: **RG1
Peak Elev=307.59' Storage=1,908 cf Inflow=1.84 cfs 5,509 cf Primary=0.73 cfs 1,861 cf Secondary=0.73 cfs 1,861 cf Outflow=1.46 cfs 3,722 cf

Link 16L: **pr POC 1
Inflow=2.76 cfs 13.541 cf Primary=2.76 cfs 13.541 cf

Link 17L: **pr POC 2
Inflow=0.85 cfs 2.310 cf Primary=0.85 cfs 2.310 cf

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method
Subcatchment 5S: to PP
Runoff Area=16.015 sf 73.41% Impervious Runoff Depth=4.18"
Flow Length=90' Slope=0.0167'° Tc=5.0 min CN=82 Runoff=1.77 cfs 5.988 cf

Subcatchment 6S: to RS2
Runoff Area=2.235 sf 100.00% Impervious Runoff Depth=4.86"
Flow Length=155' Tc=5.0 min CN=98 Runoff=0.27 cfs 906 cf

Subcatchment 7S: "to POC 1
Runoff Area=118.299 sf 0.05% Impervious Runoff Depth=2.36"
Flow Length=590' Tc=20.2 min CN=73 Runoff=5.00 cfs 23.257 cf

Subcatchment 9S: "to RG1
Runoff Area=32.891 sf 52.06% Impervious Runoff Depth=3.56"
Flow Length=451' Tc=5.0 min CN=86 Runoff=3.22 cfs 9.759 cf

Subcatchment 10S: to RS1
Runoff Area=1.650 sf 100.00% Impervious Runoff Depth=4.86"
Flow Length=85' Tc=5.0 min CN=98 Runoff=0.20 cfs 669 cf

Subcatchment 11S: "to POC 2
Runoff Area=4.603 sf 0.00% Impervious Runoff Depth=2.44"
Flow Length=40' Slope=0.0400'° Tc=5.0 min CN=74 Runoff=0.31 cfs 938 cf

Pond 12P: PP
Peak Elev=315.45 ft Storage=3.816 cfs Inflow=1.77 cfs 5.588 cf
Primary=0.29 cfs 1.973 cf Secondary=0.00 cfs 0 cf Outflow=0.29 cfs 1.973 cf

Pond 13P: RS2
Peak Elev=299.47 ft Storage=212 cfs Inflow=0.27 cfs 806 cf
6.0' Round Culvert n=0.011 L=25.0' S=0.1640'° Outflow=0.26 cfs 721 cf

Pond 14P: RS1
Peak Elev=294.87 ft Storage=180 cfs Inflow=0.20 cfs 669 cf
6.0' Round Culvert n=0.011 L=10.0' S=0.2100'° Outflow=0.19 cfs 536 cf

Pond 15P: "RG1
Peak Elev=307.66 ft Storage=1.990 cfs Inflow=3.22 cfs 9.759 cf
Primary=1.59 cfs 3.986 cf Secondary=1.59 cfs 3.986 cf Outflow=1.18 cfs 7.971 cf

Link 16L: "pr POC 1
Inflow=5.87 cfs 36.473 cf Primary=0.87 cfs 30.473 cf

Link 17L: "pr POC 2
Inflow=1.90 cfs 4.923 cf Primary=1.90 cfs 4.923 cf
Runoff by SCS TR-20 method, Uh=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 5S: to PP
Runoff Area=16,015 sf  73.41% Impervious  Runoff Depth=6.65"  Flow Length=90'  Slope=0.0167'  Tc=5.0 min  CN=92  Runoff=2,74 cfs  8,872 cf

Subcatchment 6S: to RS2
Runoff Area=2,255 sf  100.00% Impervious  Runoff Depth=7.36"  Flow Length=155'  Tc=5.0 min  CN=98  Runoff=0.40 cfs  1,371 cf

Subcatchment 7S: "to POC 1"
Runoff Area=118,299 sf  0.05% Impervious  Runoff Depth=4.46"  Flow Length=590'  Tc=20.2 min  CN=73  Runoff=9.54 cfs  43,940 cf

Subcatchment 9S: "to RG1"
Runoff Area=32,891 sf  52.06% Impervious  Runoff Depth=5.94"  Flow Length=451'  Tc=5.0 min  CN=86  Runoff=5.23 cfs  16,293 cf

Subcatchment 10S: to RS1
Runoff Area=1,650 sf  100.00% Impervious  Runoff Depth=7.36"  Flow Length=85'  Tc=5.0 min  CN=98  Runoff=0.29 cfs  1,012 cf

Subcatchment 11S: "to POC 2"
Runoff Area=4,603 sf  0.00% Impervious  Runoff Depth=4.57"  Flow Length=40'  Slope=0.0400'  Tc=5.0 min  CN=74  Runoff=0.59 cfs  1,753 cf

Pond 12P: PP
Peak Elev=315.58'  Storage=3,912 cfs  Inflow=2.74 cfs  8,872 cf
Primary=2.03 cfs  Secondary=0.00 cfs  0 cfs  Outflow=2.03 cfs  5,257 cf

Pond 13P: RS2
Peak Elev=299.52'  Storage=220 cfs  Inflow=0.40 cfs  1,371 cf
6.0' Round Culvert n=0.011  L=25.0'  S=0.1640'  Outflow=0.39 cfs  1,186 cf

Pond 14P: RS1
Peak Elev=294.94'  Storage=168 cfs  Inflow=0.29 cfs  1,012 cf
6.0' Round Culvert n=0.011  L=10.0'  S=0.2100'  Outflow=0.29 cfs  880 cf

Pond 15P: "RG1"
Peak Elev=307.72'  Storage=2,068 cfs  Inflow=5.25 cfs  16,293 cf
Primary=2,60 cfs  Secondary=2.60 cfs  7,252 cf  Outflow=5.20 cfs  14,505 cf

Link 16L: **pr POC 1
Inflow=12.36 cfs  58,516 cf

Link 17L: **pr POC 2
Inflow=3.18 cfs  9,005 cf
May 22, 2019

Rich Regan
Rocco V. D’Andrea, Inc.
6 Neil Lane
Riverside, CT 06878

Re: Design Date: April 30, 2019
Design Number:

Dear Rich Regan:

This Department has received, reviewed, and approved the submitted design proposal for an on-site sewage disposal system for 750 GPD at 7 DEMPSEY LANE, Lot #1, GREENWICH, CT 06830.


**Please be advised that this is NOT a Permit to Construct.** A Permit to Construct will be issued to a septic system installer licensed in the State of Connecticut. The Application for a Permit to Construct a Sewage Disposal System must be signed by this installer, and the fee of $465 for a sewage disposal permit must be paid prior to issuance of the Permit to Construct.

Should changes to the State of Connecticut Public Health Code and/or Town of Greenwich Municipal Code be implemented prior to installation of the system, the design must be revised to meet current code requirements.

Sincerely,

Claire Durkota

Division of Environmental Services
May 22, 2019

Rocco D'Andrea, Inc.
6 Neil Lane
P.O. Box 549
Riverside, CT 06878

Re:  Design Date: May 07, 2019  
Design Number:

Dear Rocco D'Andrea, Inc.:

This Department has received, reviewed, and approved the submitted design proposal for an on-site sewage disposal system for 750 GPD Main House at 7 DEMPSEY LANE, Lot #2, GREENWICH, CT 06830.


Please be advised that this is NOT a Permit to Construct. A Permit to Construct will be issued to a septic system installer licensed in the State of Connecticut. The Application for a Permit to Construct a Sewage Disposal System must be signed by this installer, and the fee of $465 for a sewage disposal permit must be paid prior to issuance of the Permit to Construct.

Should changes to the State of Connecticut Public Health Code and/or Town of Greenwich Municipal Code be implemented prior to installation of the system, the design must be revised to meet current code requirements.

Sincerely,

[Signature]

Claire Durkota
Division of Environmental Services
Estate of Marie Schwartz
7 Dempsey Lane
Greenwich, CT 06830

RE: Application #2019-064 to conduct regulated activities at 7 Dempsey Lane
Conceptual Approval #2019-02 & Permit #2019-074

Dear Sir or Madam,

The Inland Wetlands and Watercourses Agency has reviewed the application record and found the proposed activities in the above mentioned application are consistent with the purposes and policies of the Inland Wetland and Watercourses Regulations. Accordingly, the Agency GRANTED the enclosed permit with conditions.

Your attention is directed to the special and standard conditions because those in BOLD require action either prior to the start of clearing or construction activities or within a specific time period after the receipt of the permit.

The statement and permit are on file in the office of this Agency.

The effective date of the permit is the date of issue. The permit expires 5 years from the effective date, but when deemed necessary, the Agency may extend the period according to the provisions in Section 11.11 of the Regulations.

If you have any questions concerning this permit or the functions and values of wetlands in Greenwich, please let me know.

Sincerely,

[Signature]

Brian Harris, Chairman
Elliot Benton, Vice Chairman
Stephan Skoufalos, Secretary

c: Rocco V. D'Andrea, Inc.
←Grand Development, LLC

An Equal Opportunity Employer, M E H
Following a duly noticed public meeting, the Inland Wetlands & Watercourses Agency APPROVED regulated activities on the property of Estate of Marie Schwartz at 7 Dempsey Lane, Tax ID #11-1711. The permitted activity consists of for a two-lot subdivision with activities 60 feet from wetlands, as further described in the following documents.


7. DPW Site Development Review comments prepared by Juan Paredes, Greenwich DPW Civil Engineer II, and Scott Marucci, DPW Senior Civil Engineer, dated May 11, 2019.

8. Approval memos for the design of Lot #1 and Lot #2 septic systems prepared by Claire Durkota of the Greenwich Department of Health Division of Environmental Services, dated May 22, 2019.

After a full review of the considerations set forth in Section 10 of the Regulations and other pertinent factors, this conceptual approval and permit are issued with the following special and standard conditions:

**SPECIAL CONDITIONS applicable to Conceptual Approval of two-lot subdivision**

*Conditions in bold require action within a specified time period after the receipt of the approval.*

1. A plan to establish a natural buffer with permanent demarcation feature to the east of the wetland and coincident with the existing deer fence shall be submitted to reflect testimony and discussion of this application. This plan shall include a detailed protocol for how the invasive species on the slope will be controlled and how the meadow will be established and maintained. **This plan shall be submitted by the permittee within three months of receipt of this Conceptual Approval.** The approved plan shall be implemented as part of the redevelopment of each lot.

2. A Declaration noting the presence of inland wetland and watercourse areas on the property is required. **This Declaration shall also mention Inland Wetlands and Watercourses Conceptual Approval #2019-02 and Application #2019-064 and require the preservation of inland wetlands and watercourses in an undisturbed and natural state.** The Declaration must be submitted to the Agency Staff for review and approval prior to being filed in the Land Records of the Town.

3. **The Inland Wetland and Watercourses boundary shall be delineated on a record plan with a note indicating that all activities within or adjacent to regulated areas are subject to the review and approval of the Inland Wetlands and Watercourses Agency.** A translucent map with this note and wetland and watercourse boundaries shall be filed with the Town Clerk’s office in accordance with Section 7-31 of the Connecticut General Statutes. Copies of this record plan shall be submitted to the Agency Staff for review and approval prior to and after filing with the Town Clerk.

4. **This Conceptual Approval does not obviate the permittee’s obligation to obey all other applicable federal, state and local laws or to obtain any applicable federal, state and local permits.**
SPECIAL CONDITIONS applicable to the development of each of the residential lots

Conditions in bold require action either prior to the start of clearing or construction activities or within a specified time period after the receipt of the permit.

1. Prior to the commencement of any on-site permit related activity, the permittee shall provide the Agency with written approval from the DPW Engineering Division of the stormwater management system.

2. Prior to the commencement of any on-site permit related activity, final construction designs and locations showing the house, driveway, pool, drainage system, and buffer demarcation feature approved per the Conceptual Approval shall be submitted for review and approval by Wetlands Agency staff. Per the discussion in the May 8, 2019 IWWA staff report, this plan shall be brought into compliance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control by adding supplemental erosion and sedimentation control measures. Once approved, plans shall be submitted in both paper and digital formats.

3. Prior to the commencement of any on-site permit related activity, an estimate for the retail, installed cost of the any woody planting stock which is part of the approved buffer establishment plan shall be submitted for the purpose of determining a bond amount. The estimate is subject to approval by this Agency or its staff.

4. Prior to the commencement of any on-site permit related activity, a cash performance bond of $4,000.00, plus 30% of the approved value of any woody plants in the buffer establishment plan shall be submitted to the Agency to ensure compliance with the conditions of this permit. The bond shall be submitted in the form of a check payable to the Town of Greenwich. No portion of the bond shall be eligible for release until all Conditions of this permit are satisfied and staff has deemed the project to be in compliance with the approved plans.

5. In accordance with Section 19.3 of the Greenwich Inland Wetlands and Watercourses Regulations, an additional filing fee for extensive disturbance of $5,000.00 for Lot 1 and $7,000.00 for Lot 2 shall be submitted to Agency staff within two weeks after the receipt of this permit.

6. Prior to the commencement of any on-site permit related activity, the permittee shall cause to be prepared a packet for the homeowner describing the components of the stormwater management system, their purpose, and practical means to maintain them. The packet shall be submitted for review and approval by this Agency or its staff. If the
permittee is not the project end user, verification the end user received the information packet shall be submitted to the office of the Agency.

7. Any old field drains encountered within the proposed development envelope during construction shall be cut off and blocked so sediment-laden runoff is not conveyed beneath the perimeter erosion controls and into the wetland.

8. The substantial pile of fallen trees and landscaping debris located approximately 150 feet west of the existing pool shall be carefully removed to avoid compacting the soil where the Lot 1 infiltration system is going to be installed.

9. The buffer restoration plan approved per Special Condition #1 of the Conceptual Approval shall be implemented as part of this permit.

10. The portion of the bond associated with any woody plantings in the buffer shall be eligible for release two full years after the planting plan is fully implemented as verified by staff and at least 80% of the planted material is thriving. High-visibility tags shall be maintained on all of the planting stock for the duration of the two-year establishment period.

11. Buffer areas to be maintained as meadow may be mowed no more than once a year in late winter.

12. Areas within the disturbance envelope where the soil is compacted during construction shall be restored to their original properties and porosity by incorporation of compost per recognized guidelines, such as the Virginia DEQ Stormwater Design Specification No. 4 "Soil Compost Amendment". The certification of compliance required in Special Condition #12 below shall include certification this soil de-compaction was carried out as specified.

13. The stormwater drainage system shall be certified to have been constructed according to the approved plans and to be in compliance with the permit and conditions by a registered professional engineer. Certification shall include verification of the soil de-compaction required in Special Condition #11 above. Certification shall be based upon regular on-site supervision of construction activities. A written certification report shall be submitted to Agency staff upon the completion of construction.
14. The permittee shall file a note on the Town Land Records requiring a licensed professional to inspect and certify the stormwater management structures every five years to ensure the system has been properly maintained, as required to sustain the designed goal. A copy of the filed note and copies of the periodic certifications shall be submitted to the Agency for its records.

15. A copy of the Health Department’s "Permit to Discharge" and "as-built" septic plan depicting subsurface stormwater management features shall be submitted to Agency staff upon completion of the septic installation. Plans shall be submitted in both paper and digital formats.

16. Upon completion of construction activities, an "as-built" survey drawing locating foundations, other authorized structures, surface stormwater management features, and permanent demarcation features with distances to inland wetland and watercourse areas shall be submitted. The survey shall be in a form suitable for filing on the Greenwich Land Records. A copy of this record plan shall be submitted to Agency staff for review and approval prior to filing with the Town Clerk. A copy of the filed plan shall be submitted in both paper and digital formats.

17. No pool backwash water may be discharged into or adjacent to inland wetland and watercourse areas, as per the attached Board of Health regulation.

-END-
LONG TERM MAINTENANCE PLAN

For

7 Dempsey Lane – Lot 1
Greenwich, Connecticut

Prepared For

Grand Development LLC

January 3, 2020
Stormwater Management Practices Maintenance Declaration
Stormwater Management Practices Maintenance Declaration

THIS DECLARATION is made this date, ____________, 20____, by and between the Town of Greenwich, a municipal corporation with principal offices located at 101 Field Point Road, Greenwich, CT 06830 and

Grand Development LLC

[Owner(s) Name]

7 Dempsey Lane - Lot 1, Greenwich, CT

[Address]

hereinafter referred to as “Owner(s)” of the “Property” as more fully described in a deed recorded in Book 7385 at Page 269 of the Greenwich Land Records. In accordance with the Town of Greenwich Drainage Manual as Amended, the “Owner(s)” agree to install and maintain stormwater management practice(s) on the subject Property in accordance with approved plans and conditions. The Owner further agrees to the terms stated in this document to ensure that the stormwater management practice(s) continues serving the intended function in perpetuity. This Declaration includes the following exhibits located in the project files of one or all of the following Town of Greenwich Departments:

□ Building Division – Permit # _____________________________
□ Inland Wetlands and Watercourses Agency – Application # _____________________________
□ Planning and Zoning – Application # _____________________________

Exhibit A: Long-term Maintenance Plan that prescribes those activities that must be carried out to maintain compliance with this Declaration. Approved Maintenance Plan dated ____________________________.

Exhibit B: Improvement Location Survey depicting “As-Built” conditions and showing an accurate location of each stormwater management practice affected by this Declaration. Approved Improvement Location Survey dated ____________________________.

Note: After construction has been verified and accepted by the Town of Greenwich for the stormwater management practices, this declaration shall be recorded by the Owner on the Greenwich Land Records and copies of the recorded document shall be submitted to all of the following Town of Greenwich Departments involved in the approval:

□ Building Division
□ Inland Wetlands and Watercourses Agency
□ Planning and Zoning

Through this Declaration, the Owner(s) hereby subjects the Property to the following covenants, conditions, and restrictions:

1. The Owner(s), at its expense, shall secure from any affected owners of land all easements and releases of rights-of-way necessary for utilization of the stormwater practices identified in Exhibit B and shall record them with the Town Clerk. These easements and releases of rights-of-way shall
not be altered, amended, vacated, released or abandoned without prior written approval of the Town of Greenwich.

2. The Owner(s) shall be solely responsible for the installation, maintenance and repair of the stormwater management practices, drainage easements and associated landscaping identified in Exhibit B in accordance with the Operation and Maintenance Plan (Exhibit A).

3. No alterations or changes to the stormwater management practice(s) identified in Exhibit B shall be permitted unless they are deemed to comply with this Declaration and are approved in writing by the Town of Greenwich.

4. The Owner(s) shall retain the services of a qualified inspector (as described in Exhibit A) to operate and ensure the maintenance of the stormwater management practice(s) identified in Exhibit B in accordance with the Operation and Maintenance Plan (Exhibit A).

5. The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times. Inspection Documentation must be maintained as frequently as required in Exhibit A.

6. The Town of Greenwich or its designee is authorized to access the property as necessary to conduct inspections of the stormwater management practices or drainage easements to ascertain compliance with the intent of this Declaration and the activities prescribed in Exhibit A. Upon written notification by the Town of Greenwich or their designee of required maintenance or repairs, the Owner(s) shall complete the specified maintenance or repairs within a reasonable time frame determined by the Town of Greenwich. The Owner(s) shall be liable for the failure to undertake any maintenance or repairs so that the public health, safety, general welfare or the environment shall not be endangered.

7. If the Owner(s) does not keep the stormwater management practice(s) in reasonable order and condition, or complete maintenance activities in accordance with the Operation and Maintenance Plan contained in Exhibit A, or the required maintenance or repairs under 6 above within the specified time frames, the Town of Greenwich is authorized, but not required, to perform the specified inspections, maintenance or repairs in order to preserve the intended functions of the practice(s) and prevent the practice(s) from becoming a threat to public health, safety, general welfare or the environment. In the case of an emergency, as determined by the Town of Greenwich, no notice shall be required prior to the Town of Greenwich performing emergency maintenance or repairs. The Town of Greenwich may levy the costs and expenses of such inspections, maintenance, repairs and appropriate fees against the Owner(s). The Town of Greenwich at the time of entering upon said stormwater management practice for the purpose of maintenance or repair may file a notice of lien upon the property affected by the lien. If said costs and expenses are not paid by the Owner(s), the Town of Greenwich may pursue the collection of same through appropriate court actions.

8. The Owner(s) hereby conveys to the Town of Greenwich an easement over, on and in the Property for the purpose of access to the stormwater management practice(s) for the inspection, maintenance and repair thereof, should the Owner(s) fail to properly inspect, maintain and repair the practice(s). The Town of Greenwich's execution of any repair or maintenance does not alter the Owner(s) responsibility to maintain in future.
9. The Owner(s) agrees that this Declaration shall be recorded and that the land described in a deed recorded in Book __7385__ at Page __269__ of the Greenwich Land Records shall be subject to the covenants and obligations contained herein, and this Declaration shall bind all current and future owners of the property.

10. The Owner(s) agrees in the event that the Property is sold, transferred, or leased to provide information to the new owner, operator, or lessee regarding proper inspection, maintenance and repair of the stormwater management practice(s). The information shall accompany the first deed transfer and include Exhibits A and B and this Declaration. The transfer of this information shall also be required with any subsequent sale, transfer or lease of the Property.

11. The Owner(s) agree that the rights, obligations and responsibilities hereunder shall commence upon execution of the Declaration.

12. The parties whose signatures appear below hereby represent and warrant that they have the authority and capacity to sign this declaration and bind the respective parties hereto.

13. The Proprietor, its agents, representatives, successors and assigns shall defend, indemnify and hold the Town of Greenwich harmless from and against any claims, demands, actions, damages, injuries, costs or expenses of any nature whatsoever, hereinafter "Claims", fixed or contingent, known or unknown, arising out of or in any way connected with the design, construction, use, maintenance, repair or operation (or omissions in such regard) of the storm drainage system referred to in the permit as Exhibit "A" hereto, appurtenances, connections and attachments thereto which are the subject of this Declaration. The Proprietor, its agents, representatives, successors and assigns shall not be required to indemnify the Town, its officers, agents, servants, or employees, against any such damages occasioned solely by acts or omissions of the Town, its officers, agents, servants or employees, other than supervisory acts or omissions of the Town, its officers, agents, servants or employees, in connection with such Claims or the enforcement of this Declaration.
IN WITNESS WHEREOF, the "Owner(s)" have executed this Declaration on this _____ day of ______________________, 20__.

By: ____________________________  
   [Owner(s)]

By: ____________________________  
   [Owner(s)]

STATE OF CONNECTICUT  )
COUNTY OF FAIRFIELD  ) ss: Greenwich

The foregoing instrument was acknowledged before me on this _____ day of  
___________________________, 20____, by ________________________________, the  
   [Owner(s)]

"Owner(s)" of ________________________________  
   [Address]

___________________________  
Notary Public

My Commission Expires On:

WHEN RECORDED RETURN COPY TO:
[All of the following departments involved in approval:  
Building Division, Inland Wetlands & Watercourses Agency, and Planning & Zoning]
Exhibit "A"

Long Term Maintenance Plan
Exhibit A
Operations and Maintenance Plan
7 Dempsey Lane – Lot 1
January 3, 2020

Scope:
The purpose of the Operations and Maintenance Plan is to ensure that the existing and proposed
stormwater components installed at 7 Dempsey Lane – Lot 1 are maintained in operational condition
throughout the life of the project. The service procedures associated with this plan shall be performed
as required by the parties legally responsible for their maintenance.

Recommended Frequency of Service:
As further defined below, all stormwater components should be checked on a periodic basis and kept
in full working order. Ultimately, the required frequency of inspection and service will depend on
runoff quantities, pollutant loading, and clogging due to debris. At a minimum, we recommend that all
stormwater components be inspected and serviced twice per year, once before winter begins and
once during spring cleanup.

Qualified Inspector:
The inspections must be completed by an individual experienced in the construction and maintenance
of stormwater drainage systems. Once every five years the inspections must be completed by a
professional engineer.

Service Procedures:

1. Catch Basins & Drainage Inlets:
   a. Catch basins and drainage inlets shall be completely cleaned of accumulated debris
      and sediments at the completion of construction.
   b. For the first year, catch basins and drainage inlets shall be inspected on a quarterly
      basis.
   c. Any accumulated debris within the catch basins/inlets shall be removed and any
      repairs as required.
   d. From the second year onward, visual inspections shall occur twice per year, once in
      the spring and once in the fall, after fall cleanup of leaves has occurred.
   e. Accumulated debris within the catch basins/inlets shall be removed and repairs made
      as required.
   f. Accumulated sediments shall be removed at which time they are within 12 inches of
      the invert of the outlet pipe.
   g. Any additional maintenance required per the manufacturer’s specifications shall also
      be completed.

2. Storm Drainage Piping and Manholes/Junction Boxes:
   a. All storm drainage piping shall be completely flushed of debris and accumulated
      sediment at the completion of construction.
   b. Manholes/Junction Boxes shall be inspected and repaired on an annual basis.
c. Unless system performance indicates degradation of piping, comprehensive video inspection of storm drainage piping shall occur once every ten years.

   d. Any additional maintenance required per the manufacturer's specifications shall also be completed.

3. Stormwater Control Structures:

   a. All control structures (orifice, weir, etc.) shall be completely cleaned of accumulated debris and sediments at the completion of construction. Any repairs shall be performed.

   b. For the first year, control structures (orifice, weir, etc.) shall be inspected on a quarterly basis.

   c. Any accumulated debris shall be removed and any repairs made to the control structures (orifice, weir, etc.) as required.

   d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.

   e. Accumulated debris shall be removed and repairs made as required.

   f. Any additional maintenance required per the manufacturer's specifications shall also be completed.

4. Drainage Outfalls/Splash Pads/Scour Holes/Level Spreaders:

   a. All outfalls shall be completely cleaned of accumulated debris and sediments at the completion of construction. Any repairs to outlet protection material (rip rap) shall be performed.

   b. For the first year, outfalls shall be inspected on a quarterly basis.

   c. Any accumulated debris shall be removed and any repairs made to the outfalls as required.

   d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.

   e. Accumulated debris shall be removed and repairs made as required.

   f. Any erosion shall be promptly repaired and the cause of the erosion shall be identified and corrected.

   g. Any additional maintenance required per the manufacturer's specifications shall also be completed.

5. Drywells and Infiltration Systems:

   a. All drywells/infiltrators shall be completely cleaned of accumulated debris and sediments upon the completion of construction.

   b. For the first year, the drywells/infiltrators shall be inspected on a quarterly basis.

   c. Any accumulated debris within the drywells/infiltrators shall be removed and any repairs made to the units as required.

   d. From the second year onward, visual inspection shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.

   e. Accumulated debris within the units shall be removed and repairs made as required.

   f. Any additional maintenance required per the manufacturer's specifications shall also be completed.
6. Porous Pavement (Pervious Concrete, Porous Asphalt, Permeable Interlocking Concrete Pavers, Flexi pave, Etc.):

   a. Changing the porous pavement surface to an impervious surface requires the review and approval of the Town of Greenwich DPW Engineering Division.
   b. Clean and vacuum (Regenerative Air Vacuum for Permeable Interlocking Concrete Pavers) the porous pavement upon the completion of construction.
   c. Check for standing water on the surface of the pavement after a precipitation event. If standing water remains within 30 minutes after rainfall had ended, cleaning of porous pavement is recommended.
   d. Vacuum sweeper shall be used regularly to remove sediment and organic debris on the pavement surface. The sweeper may be fitted with water jets.
   e. Pavement vacuuming should occur during spring cleanup following the last snow event to remove accumulated debris, at a minimum.
   f. Pavement vacuuming should occur during fall cleanup to remove dead leaves, at a minimum.
   g. Power washing can be an effective tool for cleaning clogged areas. See manufacturer's specifications.
   h. Check for debris accumulating on pavement, especially debris buildup in winter. For loose debris, a power/leaf blower or gutter broom can be used to remove leaves and trash.
   i. In the event that the porous surface becomes clogged an engineer must be retained to determine how to restore the porous surface to its original condition.
   j. Any additional maintenance required per the manufacturer's specifications shall also be completed.

7. Roof Gutters:

   a. Remove accumulated debris and inspect for damage. Any damage should be repaired as required.

Disposal of Debris and Sediment:

All debris and sediment removed from the stormwater structures and bioretention/biofiltration basins shall be disposed of legally. There shall be no dumping of silt or debris into or in proximity to any inland or tidal wetlands.

Maintenance Records:

The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times.
Operations and Maintenance Log (Page 1 of 3)
7 Dempsey Lane – Lot 1
January 3, 2020

Type of Inspection: □ Spring  □ Fall  □ Other

Inspector’s Name: ____________________________ Date of Inspection: ____________________________
Affiliation: ____________________________ Phone #: ____________________________

Catch Basins & Drainage Inlets:
- Has accumulated debris been removed from grates? □ Yes □ No □ N/A
- Do any basins require additional repair? (identify below): □ Yes □ No □ N/A
- Have sumps been cleaned of sediment? □ Yes □ No □ N/A

Notes:

Storm Drainage Piping and Manholes/Junction Boxes:
- Has accumulated debris been removed? □ Yes □ No □ N/A
- Do any manholes require additional repair? (identify below): □ Yes □ No □ N/A
- Is there any evidence of stormwater piping failure? □ Yes □ No □ N/A
- Has a comprehensive video inspection been completed? □ Yes □ No □ N/A

Notes:

Stormwater Control Structures:
- Has accumulated debris been removed? □ Yes □ No □ N/A
- Are any repairs required? (identify below): □ Yes □ No □ N/A
- Have orifices and weirs been cleaned of debris? □ Yes □ No □ N/A

Notes:
Operations and Maintenance Log (Page 2 of 3)
7 Dempsey Lane – Lot 1
January 3, 2020

Drainage Outfalls/Splash Pads/Scour Holes/Level Spreaders:

- Have all drainage outlets been cleared of debris? □ Yes □ No □ N/A
- Have all outlet protections been inspected/repai red? □ Yes □ No □ N/A
- Have all erosion issues been repaired? □ Yes □ No □ N/A

Notes:

Bioretention/Biofiltration Basins/Rain Gardens:

- Have basins been cleared of debris/sediments? □ Yes □ No □ N/A
- Have draining times of basins been verified? □ Yes □ No □ N/A
- Has vegetation been moved (twice/year max.)? □ Yes □ No □ N/A
- Has plantings and mulch been replaced (twice/year)? □ Yes □ No □ N/A

Notes:

Drywells and Infiltration Systems:

- Have units been cleared of debris/sediments? □ Yes □ No □ N/A
- Do units require additional repair? (identify below): □ Yes □ No □ N/A
- Has draining times of system been verified? □ Yes □ No □ N/A

Notes:
Operations and Maintenance Log (Page 3 of 3)
7 Dempsey Lane – Lot 1
January 3, 2020

Porous Pavement:
- Has pavement been vacuumed? □ Yes □ No □ N/A
- Has draining times been verified? □ Yes □ No □ N/A

Notes:

Roof Gutters:
- Has accumulated debris been removed from gutters? □ Yes □ No □ N/A
- Do any gutters require additional repair? (identify below): □ Yes □ No □ N/A

Notes:

Please make additional notes/observations and particular concerns below. Also record any additional maintenance that has been performed:

Signature of Inspector: ____________________________ Date: _________________

18UR LTMP Lot 1 2
LONG TERM MAINTENANCE PLAN

For

7 Dempsey Lane – Lot 2
Greenwich, Connecticut

Prepared For

Grand Development LLC

January 3, 2020
Stormwater Management Practices Maintenance Declaration
Stormwater Management Practices Maintenance Declaration

THIS DECLARATION is made this date, ____________, 20____, by and between the Town of Greenwich, a municipal corporation with principal offices located at 101 Field Point Road, Greenwich, CT 06830 and

Grand Development LLC

[Owner(s) Name]

7 Dempsey Lane - Lot 2, Greenwich, CT

[Address]

hereinafter referred to as "Owner(s)" of the "Property" as more fully described in a deed recorded in Book 7385 at Page 269 of the Greenwich Land Records. In accordance with the Town of Greenwich Drainage Manual as Amended, the "Owner(s)" agree to install and maintain stormwater management practice(s) on the subject Property in accordance with approved plans and conditions. The Owner further agrees to the terms stated in this document to ensure that the stormwater management practice(s) continues serving the intended function in perpetuity. This Declaration includes the following exhibits located in the project files of one or all of the following Town of Greenwich Departments:

- Building Division – Permit # ____________________________
- Inland Wetlands and Watercourses Agency – Application # ____________________________
- Planning and Zoning – Application # ____________________________

Exhibit A: Long-term Maintenance Plan that prescribes those activities that must be carried out to maintain compliance with this Declaration. Approved Maintenance Plan dated ____________________________.

Exhibit B: Improvement Location Survey depicting "As-Built" conditions and showing an accurate location of each stormwater management practice affected by this Declaration. Approved Improvement Location Survey dated ____________________________.

Note: After construction has been verified and accepted by the Town of Greenwich for the stormwater management practices, this declaration shall be recorded by the Owner on the Greenwich Land Records and copies of the recorded document shall be submitted to all of the following Town of Greenwich Departments involved in the approval:

- Building Division
- Inland Wetlands and Watercourses Agency
- Planning and Zoning

Through this Declaration, the Owner(s) hereby subjects the Property to the following covenants, conditions, and restrictions:

1. The Owner(s), at its expense, shall secure from any affected owners of land all easements and releases of rights-of-way necessary for utilization of the stormwater practices identified in Exhibit B and shall record them with the Town Clerk. These easements and releases of rights-of-way shall
not be altered, amended, vacated, released or abandoned without prior written approval of the Town of Greenwich.

2. The Owner(s) shall be solely responsible for the installation, maintenance and repair of the stormwater management practices, drainage easements and associated landscaping identified in Exhibit B in accordance with the Operation and Maintenance Plan (Exhibit A).

3. No alterations or changes to the stormwater management practice(s) identified in Exhibit B shall be permitted unless they are deemed to comply with this Declaration and are approved in writing by the Town of Greenwich.

4. The Owner(s) shall retain the services of a qualified inspector (as described in Exhibit A) to operate and ensure the maintenance of the stormwater management practice(s) identified in Exhibit B in accordance with the Operation and Maintenance Plan (Exhibit A).

5. The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times. Inspection Documentation must be maintained as frequently as required in Exhibit A.

6. The Town of Greenwich or its designee is authorized to access the property as necessary to conduct inspections of the stormwater management practices or drainage easements to ascertain compliance with the intent of this Declaration and the activities prescribed in Exhibit A. Upon written notification by the Town of Greenwich or their designee of required maintenance or repairs, the Owner(s) shall complete the specified maintenance or repairs within a reasonable time frame determined by the Town of Greenwich. The Owner(s) shall be liable for the failure to undertake any maintenance or repairs so that the public health, safety, general welfare or the environment shall not be endangered.

7. If the Owner(s) does not keep the stormwater management practice(s) in reasonable order and condition, or complete maintenance activities in accordance with the Operation and Maintenance Plan contained in Exhibit A, or the required maintenance or repairs under 6 above within the specified timeframes, the Town of Greenwich is authorized, but not required, to perform the specified inspections, maintenance or repairs in order to preserve the intended functions of the practice(s) and prevent the practice(s) from becoming a threat to public health, safety, general welfare or the environment. In the case of an emergency, as determined by the Town of Greenwich, no notice shall be required prior to the Town of Greenwich performing emergency maintenance or repairs. The Town of Greenwich may levy the costs and expenses of such inspections, maintenance, repairs and appropriate fees against the Owner(s). The Town of Greenwich at the time of entering upon said stormwater management practice for the purpose of maintenance or repair may file a notice of lien upon the property affected by the lien. If said costs and expenses are not paid by the Owner(s), the Town of Greenwich may pursue the collection of same through appropriate court actions.

8. The Owner(s) hereby conveys to the Town of Greenwich an easement over, on and in the Property for the purpose of access to the stormwater management practice(s) for the inspection, maintenance and repair thereof, should the Owner(s) fail to properly inspect, maintain and repair the practice(s). The Town of Greenwich's execution of any repair or maintenance does not alter the Owner(s) responsibility to maintain in future.
9. The Owner(s) agrees that this Declaration shall be recorded and that the land described in a deed recorded in Book 7385 at Page 269 of the Greenwich Land Records shall be subject to the covenants and obligations contained herein, and this Declaration shall bind all current and future owners of the property.

10. The Owner(s) agrees in the event that the Property is sold, transferred, or leased to provide information to the new owner, operator, or lessee regarding proper inspection, maintenance and repair of the stormwater management practice(s). The information shall accompany the first deed transfer and include Exhibits A and B and this Declaration. The transfer of this information shall also be required with any subsequent sale, transfer or lease of the Property.

11. The Owner(s) agree that the rights, obligations and responsibilities hereunder shall commence upon execution of the Declaration.

12. The parties whose signatures appear below hereby represent and warrant that they have the authority and capacity to sign this declaration and bind the respective parties hereto.

13. The Proprietor, its agents, representatives, successors and assigns shall defend, indemnify and hold the Town of Greenwich harmless from and against any claims, demands, actions, damages, injuries, costs or expenses of any nature whatsoever, hereinafter "Claims", fixed or contingent, known or unknown, arising out of or in any way connected with the design, construction, use, maintenance, repair or operation (or omissions in such regard) of the storm drainage system referred to in the permit as Exhibit "A" hereto, appurtenances, connections and attachments thereto which are the subject of this Declaration. The Proprietor, its agents, representatives, successors and assigns shall not be required to indemnify the Town, its officers, agents, servants, or employees, against any such damages occasioned solely by acts or omissions of the Town, its officers, agents, servants or employees, other than supervisory acts or omissions of the Town, its officers, agents, servants, or employees, in connection with such Claims or the enforcement of this Declaration.
IN WITNESS WHEREOF, the "Owner(s)" have executed this Declaration on this ______ day of __________________, 20____.

By: ____________________________
[Owner(s)]

By: ____________________________
[Owner(s)]

STATE OF CONNECTICUT    
) ) ss: Greenwich
COUNTY OF FAIRFIELD       
)

The foregoing instrument was acknowledged before me on this__________ day of  
______________________, 20____, by ________________________________, the  
[Owner(s)]

"Owner(s)" of ________________________________
[Address]

__________________________________________
Notary Public

My Commission Expires On:

WHEN RECORDED RETURN COPY TO:  
[All of the following departments involved in approval:  
Building Division, Inland Wetlands & Watercourses Agency, and Planning & Zoning]
Exhibit "A"

Long Term Maintenance Plan
Exhibit A
Operations and Maintenance Plan
7 Dempsey Lane – Lot 2
January 3, 2020

Scope:

The purpose of the Operations and Maintenance Plan is to ensure that the existing and proposed stormwater components installed at 7 Dempsey Lane – Lot 2 are maintained in operational condition throughout the life of the project. The service procedures associated with this plan shall be performed as required by the parties legally responsible for their maintenance.

Recommended Frequency of Service:

As further defined below, all stormwater components should be checked on a periodic basis and kept in full working order. Ultimately, the required frequency of inspection and service will depend on runoff quantities, pollutant loading, and clogging due to debris. At a minimum, we recommend that all stormwater components be inspected and serviced twice per year, once before winter begins and once during spring cleanup.

Qualified Inspector:

The inspections must be completed by an individual experienced in the construction and maintenance of stormwater drainage systems. Once every five years the inspections must be completed by a professional engineer.

Service Procedures:

1. Catch Basins & Drainage Inlets:
   a. Catch basins and drainage inlets shall be completely cleaned of accumulated debris and sediments at the completion of construction.
   b. For the first year, catch basins and drainage inlets shall be inspected on a quarterly basis.
   c. Any accumulated debris within the catch basins/inlets shall be removed and any repairs as required.
   d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
   e. Accumulated debris within the catch basins/inlets shall be removed and repairs made as required.
   f. Accumulated sediments shall be removed at which time they are within 12 inches of the invert of the outlet pipe.
   g. Any additional maintenance required per the manufacturer's specifications shall also be completed.

2. Storm Drainage Piping and Manholes/Junction Boxes:
   a. All storm drainage piping shall be completely flushed of debris and accumulated sediment at the completion of construction.
   b. Manholes/Junction Boxes shall be inspected and repaired on an annual basis.
c. Unless system performance indicates degradation of piping, comprehensive video inspection of storm drainage piping shall occur once every ten years.
d. Any additional maintenance required per the manufacturer’s specifications shall also be completed.

3. **Stormwater Control Structures:**

   a. All control structures (orifice, weir, etc.) shall be completely cleaned of accumulated debris and sediments at the completion of construction. Any repairs shall be performed.
   b. For the first year, control structures (orifice, weir, etc.) shall be inspected on a quarterly basis.
   c. Any accumulated debris shall be removed and any repairs made to the control structures (orifice, weir, etc.) as required.
   d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
   e. Accumulated debris shall be removed and repairs made as required.
   f. Any additional maintenance required per the manufacturer’s specifications shall also be completed.

4. **Drainage Outfalls/Splash Pads/Scour Holes/Level Spreaders:**

   a. All outfalls shall be completely cleaned of accumulated debris and sediments at the completion of construction. Any repairs to outlet protection material (rip rap) shall be performed.
   b. For the first year, outfalls shall be inspected on a quarterly basis.
   c. Any accumulated debris shall be removed and any repairs made to the outfalls as required.
   d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
   e. Accumulated debris shall be removed and repairs made as required.
   f. Any erosion shall be promptly repaired and the cause of the erosion shall be identified and corrected.
   g. Any additional maintenance required per the manufacturer’s specifications shall also be completed.

5. **Drywells and Infiltration Systems:**

   a. All drywells/infiltrators shall be completely cleaned of accumulated debris and sediments upon the completion of construction.
   b. For the first year, the drywells/infiltrators shall be inspected on a quarterly basis.
   c. Any accumulated debris within the drywells/infiltrators shall be removed and any repairs made to the units as required.
   d. From the second year onward, visual inspection shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
   e. Accumulated debris within the units shall be removed and repairs made as required.
   f. Any additional maintenance required per the manufacturer’s specifications shall also be completed.
6. **Bioretention/Biofiltration Basins and Rain Gardens:**

   a. Bioretention/Biofiltration basins and rain gardens shall be cleaned of debris and sediments upon the completion of construction. Any filter media (bioretention soil) impacted by the construction activities shall be removed and replaced at this time.
   
   b. The filter media (bioretention soil) shall be visually inspected on a monthly basis for the first 6 months. Any erosion or displacement of the filter media (bioretention soil) shall be promptly repaired and the cause of the problem shall be identified and corrected. Monthly inspections shall continue until successful operation of the system is confirmed.
   
   c. Bioretention/Biofiltration areas and rain gardens with grass shall not be mowed more than twice during the growing season, preferably only in late October. More frequent mowing will eliminate native forbs and sedges from the meadow cover.
   
   d. Bioretention/Biofiltration areas and rain gardens with mulch and plantings shall be inspected during spring cleanup and one just prior to the winter season.
   
   e. All dead plants and missing mulch shall be replaced and any necessary pruning of vegetation shall be completed.
   
   f. The surface of these structures shall be inspected on a quarterly basis after the first six months of successful operation and after heavy runoff events (e.g. >3.0" in a 24-hour period). One inspection shall occur immediately following the completion of winter sanding and subsequent sweeping operations, and one shall occur just prior to the winter season. Any accumulated debris and sediments shall be removed.
   
   g. Check draining time of bioretention/biofiltration areas and rain gardens annually. Check within 72 hours after a minimum one inch rain event. If there is no standing water, infiltration is acceptable. If draining time is excessive, quantitatively determine infiltration rate. Use a double ring infiltrometer or monitor drop in water level after a significant storm. If infiltration rate <0.5 in. /hour, remedial action shall be taken.
   
   h. A soil-core investigation may be used to identify the clogged portion of stormwater facility and depth of clogging. Remedial measures may include removal of clogged soil layer and replacement with suitable media, aeration, and mixing upper strata with lower soil strata. After corrective measures have been implemented, infiltration rate and draining time shall be retested.

7. **Roof Gutters:**

   a. Remove accumulated debris and inspect for damage. Any damage should be repaired as required.

**Disposal of Debris and Sediment:**

All debris and sediment removed from the stormwater structures and bioretention/biofiltration basins shall be disposed of legally. There shall be no dumping of silt or debris into or in proximity to any inland or tidal wetlands.

**Maintenance Records:**

The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times.
Operations and Maintenance Log (Page 1 of 3)
7 Dempsey Lane – Lot 2
January 3, 2020

Type of Inspection: □ Spring □ Fall □ Other

Inspector’s Name: __________________________ Date of Inspection: __________________

Affiliation: __________________________ Phone #: __________________

Catch Basins & Drainage Inlets:

- Has accumulated debris been removed from grates? □ Yes □ No □ N/A
- Do any basins require additional repair? (identify below): □ Yes □ No □ N/A
- Have sumps been cleaned of sediment? □ Yes □ No □ N/A

Notes:

Storm Drainage Piping and Manholes/Junction Boxes:

- Has accumulated debris been removed? □ Yes □ No □ N/A
- Do any manholes require additional repair? (identify below): □ Yes □ No □ N/A
- Is there any evidence of stormwater piping failure? □ Yes □ No □ N/A
- Has a comprehensive video inspection been completed? □ Yes □ No □ N/A

Notes:

Stormwater Control Structures:

- Has accumulated debris been removed? □ Yes □ No □ N/A
- Are any repairs required? (identify below): □ Yes □ No □ N/A
- Have orifices and weirs been cleaned of debris? □ Yes □ No □ N/A

Notes:

18UR LTMP Lot 2 2
Operations and Maintenance Log (Page 2 of 3)
7 Dempsey Lane – Lot 2
January 3, 2020

Drainage Outfalls/Splash Pads/Scour Holes/Level Spreaders:
- Have all drainage outlets been cleared of debris? □ Yes □ No □ N/A
- Have all outlet protections been inspected/repaired? □ Yes □ No □ N/A
- Have all erosion issues been repaired? □ Yes □ No □ N/A

Notes:

Bioretention/Biofiltration Basins/Rain Gardens:
- Have basins been cleared of debris/sediments? □ Yes □ No □ N/A
- Have draining times of basins been verified? □ Yes □ No □ N/A
- Has vegetation been mowed (twice/year max.)? □ Yes □ No □ N/A
- Has plantings and mulch been replaced (twice/year)? □ Yes □ No □ N/A

Notes:

Drywells and Infiltration Systems:
- Have units been cleared of debris/sediments? □ Yes □ No □ N/A
- Do units require additional repair? (identify below): □ Yes □ No □ N/A
- Has draining times of system been verified? □ Yes □ No □ N/A

Notes:
### Operations and Maintenance Log (Page 3 of 3)

7 Dempsey Lane – Lot 2
January 3, 2020

**Roof Gutters:**

- Has accumulated debris been removed from gutters? □ Yes □ No □ N/A
- Do any gutters require additional repair? (identify below): □ Yes □ No □ N/A

**Notes:**

Please make additional notes/observations and particular concerns below. Also record any additional maintenance that has been performed:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature of Inspector:</td>
</tr>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

18UR LTMP Lot 2 2
July 21, 2021

Re: Greenwich Planning & Zoning Commission
Subdivision
7 Dempsey Lane, Tax ID: 11-1711

Dear Adjacent Property Owner:

Our office is representing Pablo Calderini, owner of 7 Dempsey Lane, in an application to the Greenwich Planning and Zoning Commission seeking re-approval of a Re-Subdivision previously approved under PLPZ 2019-483.

This letter serves as written notice of the said application as required by the Planning and Zoning Commission and Sec. 6-14(a)(3) of the Greenwich Building Zone Regulations.

If you have any questions concerning the above matter, please contact our office or the office of the Planning and Zoning Commission.

Sincerely,

ROCCO V. D'ANDREA, INC.

Anthony L. D’Andrea, PE&LS

ALD:adm
21NTP&ZNotice

cc: Phil Toohey, Esquire
John Tesei, Esquire
AFFIDAVIT

STATE OF CONNECTICUT  )
COUNTY OF FAIRFIELD  )
                     ) : GREENWICH

I, Anthony L. D'Andrea, being first duly sworn, do hereby certify that on July 21, 2021, I caused to be mailed, postage prepaid, to those persons whose names are set forth, attached hereto, a copy of the notice attached hereto. Said persons were the record owners, as of July 19, 2021, of property abutting (as said term is defined in Sec. 6-14(a)(14) of the Greenwich Building Zone Regulations) the properties belonging to Pablo Calderini for whom an application for re-approval of a Re-Subdivision has been filed with the Greenwich Planning & Zoning Commission.

Anthony L. D'Andrea, PE&LS

Subscribed and sworn to
before me on
July 21, 2021

Alicia D. Melillo
Notary Public
My Commission Expires 4/30/2026
CERTIFICATE OF MAILING
7 Dempsey Lane
Tax Acct. #11-1711
July 20, 2021

Tax ID No.: 11-1661
JDH LLC
535 North Street
Greenwich CT 06830

Tax ID No.: 11-3166
Linda S. Profusek
541 North Street
Greenwich CT 06830

Tax ID No.: 11-1309
Warren B. Kanders
21 Dairy Road
Greenwich CT 06830

Tax ID No.: 11-2156
SJN1 LLC
14 Dempsey Lane
Greenwich CT 06830

Tax ID No.: 11-2154
Jocelyn S. Woolworth
21 Dempsey Lane
Greenwich CT 06830

Tax ID No.: 11-4058
(0 Dempsey Lane)
Greenwich Land Trust
370 Round Hill Road
Greenwich CT 06831

Tax ID No.: 11-2155
Iain Leigh
8 Dempsey Lane
Greenwich CT 06830

Tax ID No.: 11-2202
(10 Wynn Lane)
US Bank Trust NA AS Trust
3701 Regent Boulevard
Suite 200
Irving TX 75036

21NT
RESIDENTIAL

Assessment Year 10/01/2015 10/01/2015 10/01/2016 10/01/2017 10/01/2018 10/01/2019 10/01/2020


VALUATION
Market $4431000 $4431000 $4431000 $4431000 $4431000 $4431000 $4431000

T $5824500 $5824500 $5824500 $5824500 $5824500 $5824500 $5824500

70% Assessed $3101700 $3101700 $3101700 $3101700 $3101700 $3101700 $3101700

T $4077150 $4077150 $4077150 $4077150 $4077150 $4077150 $4077150

LAND DATA AND CALCULATIONS

<table>
<thead>
<tr>
<th>Land Type</th>
<th>Rating</th>
<th>Measured Acreage</th>
<th>Table</th>
<th>Effective Depth</th>
<th>Prox. Factor</th>
<th>Base Rate</th>
<th>Adjusted Rate</th>
<th>Extended Value</th>
<th>Influence Factor</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Land</td>
<td>2.0000</td>
<td>1.00</td>
<td>750000.00 750000.00</td>
<td>750000.00</td>
<td>750000.00</td>
<td>1500000</td>
<td>-10%</td>
<td>1350000</td>
<td>3081000</td>
<td></td>
</tr>
<tr>
<td>Residential Excess</td>
<td>10.2700</td>
<td>1.00</td>
<td>300000.00 300000.00</td>
<td>300000.00</td>
<td>300000.00</td>
<td>3081000</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL LAND VALUE 4431000

Supplemental Cards

TRUE TAX VALUE 4431000