HOWARD STEIN HUDSON
Engineers + Planners

SUPPLEMENTAL DATA REPORT

Proposed Redevelopment

Self-Storage Facility

147 Main Street

Leicester, Massachusetts

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Existing Conditions

The subject site consists of one parcel totaling approximately 2.86 acres, the parcel resides in two districts, the Business, B, District and the Residential 2, R2, District.. The majority of buildable area is within the Business district along Main Street, a portion of the rear is R2. Within Leicester by-laws development of a use allowed in the business district is allowed up to 30' within the residential district. The approximate zoning line and buffer area is shown on the plans. The address of record for the parcel is 147 Main Street.

The site exists as a vacant parking lot bordering Smith's Pond and Main Street. There is one existing curb cut along Main Street to allow vehicle access. Within the site, there is an unmaintained parking lot, piles of rubble, retaining walls and the remains of a building foundation.

The site topography generally slopes from northeast to southwest, with an overall grade difference of approximately 20 feet, from Main Street to the edge of Smith's Pond. There is no existing drainage infrastructure on site, which allows all the of the stormwater to runoff untreated directly to the wetlands apart of Smith's Pond.

Soil conditions on site are mainly Paxton-Urban Land and Swansea muck. The hydrologic soil group for these soils area C & B/D respectively. Conservatively we have modeled the entire site as a C soil group based on WebSoilSurvey.

Proposed Conditions

The proposal calls for the redevelopment of the existing parking lot and installation of semi-permanent storage containers. The existing pavement will be removed, and the area is to be re-graded to allow for proper access and setting of the containers.

The development will consist of 118 semi-permanent storage containers. A 6' security fence will border the lot and prevent unauthorized access to the facility. To access the units there will be one way traffic around the lot, labeled by appropriate signage and pavement markings. A second access will be gated with a knox box for fire and rescue use only.

The project proposes curbing throughout the site and will tie into the existing curbing along Main Street via a new curb cut towards the western side of the property frontage. The curbs will create islands where grass will be planted to increase the amount of pervious area on the site. The security fence will be installed on the site around the entirety of the accessible development, there will also be

security cameras installed. Retaining walls will be constructed on the east and west side of the site to improve the grading of the site allowing for level areas for the storage units and improved access around the site.

The proposed plan will provide 25' drive aisles throughout to create both vehicular and pedestrian accessibility to the storage units. The limit of work on the property is within the existing improvements proximity to the wetland. The existing pavement currently trespasses into the 25' no disturb buffer, this pavement is proposed to be removed, with a small area to remain disturbed with a retaining wall due to the steep grades around the pond. The overall area within the 25' no disturb buffer will have pavement removed and the area is to be loam and seeded to improve the area adjacent to the resource area. Appropriate signage will be put in place so the one-way traffic throughout the site can be easily followed.

Electric services will be provided from a nearby utility pole and installed underground to a transformer on site which will provide electric service throughout the site. The existing water line will be cut and capped at the property line. The project does not require sewerage, gas or telecommunications. The property will have security cameras throughout the site and at the entrance gate that will be monitored regularly. The site will also be lit via wall-paks mounted to the units. These lights only be on during business and accessible hours.

In the pre-development condition, the site totals 49,159 square feet of total impervious surface. In the post-development condition, with the site and access reconfigurations, the site totals 46,528 square feet of total impervious surface. Therefore, the site is considered a redevelopment project with a total reduction of 2,631 square feet of impervious surface.

Zoning Summary

147 Main Street – Leicester, MA 01611
Map 23 Block E35 & E38
Parcel ID: 23C E35 0
Business & Residential 2 District
Proposed Use: Storage Facility

Dimensional Requirements	Business District Requirements	Proposed
Lot Area	15,000 SF	124,581 SF
Lot Frontage	100 FT	414 FT ±
Front Yard Setback	25 FT	N/A
Side Yard Setback	10 FT	N/A
Rear Yard Setback	25 FT	N/A
Maximum Stories	2.5	N/A
Maximum Building Height	35 FT	N/A
Maximum Floor Area Ratio	N/A	N/A
Maximum Building Coverage	30%	N/A
Parking Requirements	Required	Proposed
Number of Parking Spaces	5 Spaces	**5 Spaces**

Stormwater Management Standards

Standard 1: No new untreated discharges

The Massachusetts Stormwater Handbook requires that the project demonstrates that no new stormwater conveyances (e.g., outfalls) discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

The proposed project will not discharge untreated stormwater directly to, or cause erosion in, wetlands or water of the Commonwealth.

Standard 2: Post-development peak discharge rates not to exceed pre-development peak discharge rates.

Post-development peak discharge rates do not exceed pre-development peak discharge rates per Massachusetts Stormwater Management Standards. Total runoff volumes for all storms are reported for informational purposes, showing reduction to analysis points.

Storm Event	2-year	10-year	25-year	100-year
Pre-Development Rates (cfs) AP1 *to Main Street*	0.27	0.43	0.52	0.67
Volume (cf)	948	1,510	1,862	2,405
Post-Development Rates (cfs) AP1 *To Main Street*	0.17	0.27	0.33	0.43
Volume (cf)	600	956	1,178	1,522
Rate Reductions (cfs)	**-0.10**	**-0.16**	**-0.19**	**-0.24**
Volume (cf)	**-348**	**-554**	**-684**	**-883**
Pre-Development Rates (cfs) AP2 *To abutter*	0.26	0.51	0.67	0.92
Volume (cf)	809	1,586	2,099	2,914
Post-Development Rates (cfs) AP2 *To abutter*	0.06	0.14	0.20	0.28
Volume (cf)	203	444	611	881
Rate Reductions (cfs)	**-0.20**	**-0.37**	**-0.47**	**-0.64**
Volume (cf)	**-626**	**-1,142**	**-1,488**	**-2,033**

Pre-Development Rates (cfs) AP3	3.80	6.74	8.57	11.38
To Smith's Pond				
Volume (cf)	11,806	21,378	27,532	37,178
Post-Development Rates (cfs) AP3	3.42	5.98	7.62	10.19
To Smith's Pond				
Volume (cf)	12,354	21,675	27,732	37,301
Rate Reductions (cfs)	**-0.38**	**-0.76**	**-0.95**	**-1.19**
Volume (cf)	**+548**	**+297**	**+200**	**+123**

Standard 3: Minimize or eliminate loss of annual recharge to groundwater.

The overall impervious area on site is reduced in the post-development conditions.

Standard 4: Stormwater management system to remove 80% of the average annual load of Total Suspended Solids (TSS)

Due to the overall reduction in site impervious, the project qualifies as a redevelopment site under the Massachusetts Stormwater Standards. For new developments, projects are required to remove 80% of total suspended solids (TSS) on site. For redevelopment projects, projects are required to meet this requirement to the maximum extent practicable.

The impervious area on site will be collected using area drains and catch basins and be directed to two CDS units. This system removes the minimum 80% TSS removal of the impervious on site. This water will then be discharged, towards Smith's Pond. The impervious in the pre-development conditions is untreated before discharging to Smith's Pond.

WATER QUALITY VOLUME

For new development, stormwater management systems must be designed to remove 80% of the average annual load (post-development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when:

a) *Suitable nonstructural practices for source control and pollution prevention are implemented.*
b) *Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and*
c) *Stormwater management BMPs are maintained as designed.*

Flow rate associated with Contech CDS units:

Q = (qu)*(A)*(WQV), where:

Q = Peak flow rate associated with first 1/2 -inch of runoff

qu = the unit peak discharge, in csm/in
A = impervious surface drainage area (in square miles)
WQV = water quality volume in watershed inches

Contech CDS-1 (2015-4):

Q = (752 csm/in)*(0.00065473628 square miles)*(0.5 inch)
Q = 0.11 CFS

Required Capacity = 0.25 CFS
0.25 CFS < 0.70 CFS Capacity
80% TSS Removal

Contech CDS-2 (2015-4):

Q = (752 csm/in)*(0.0002420153 square miles)*(0.5 inch)
Q = 0.09 CFS

Required Capacity = 0.09 CFS
0.09 CFS < 0.70 CFS Capacity
80% TSS Removal

Standard 5: Land uses with higher potential pollutant loads.

The development is not considered a land use that generally produces higher potential pollutant loads.

Standard 6: Stormwater discharges to critical areas

The development does not discharge to any critical areas.

Standard 7: Redevelopment projects

The project is considered a redevelopment project, with a total site impervious reduction of 2,631 SF.

Standard 8: Control construction-related impacts

The project will install erosion and sediment controls prior to any earthwork activity. Erosion control barriers will be placed down slope from the proposed construction to prevent erosion and sedimentation into the surrounding areas. The barriers will be maintained and inspected periodically during construction; sediment buildup will be removed, and any damaged barrier will be replaced as needed.

Standard 9: Long-term operation and maintenance plan

See Appendix A for the operation and maintenance requirements of the stormwater management system.

Standard 10: No illicit discharges

An illicit discharge compliance statement will be provided by the property owner under separate cover.

Appendix A – Long Term Pollution Prevention Plan

This Long-Term Pollution Prevention Plan (LTPPP) describes the approach for pollution prevention and related maintenance activities for ***147 Main Street, Leicester, MA*****.** In general, long-term pollution prevention and related maintenance activities will be conducted consistent with:

- The National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer System (MS4),
- MassDEP Stormwater Handbook

This LTPPP satisfies the requirements related to pollution prevention under Massachusetts Stormwater Standards 4, 5, 6, and 10.

Practices for Long-Term Pollution Prevention

For the facilities covered, long-term pollution prevention includes the following measures.

- *Good housekeeping;*
- *Storing materials and waste products inside or under cover;*
- *Vehicle washing;*
- *Routine inspections and maintenance of Stormwater Control Measures (SCM's);*
- *Spill prevention and response;*
- *Maintenance of lawns, gardens, and other landscaped areas;*
- *Storage and use of fertilizers, herbicides, and pesticides;*
- *Pet waste management; and*
- *Proper management of deicing chemicals and snow.*

Litter Pick-up

Safe N Lock Capital Partners, LLC, or whomever is contracted, both during and after construction, will conduct litter pick-up from the stormwater management facilities in conjunction with routine road maintenance activities.

Inspection and Maintenance of Stormwater Assets

Safe N Lock Capital Partners, LLC, or whomever is contracted, both during and after construction, will conduct inspection and maintenance of drainage infrastructure and the stormwater control measures (SCMs) in accordance with the O&M Plan, as described herein.

Maintenance of Landscaped Areas

Routine weeding and pruning will be conducted. Landscape maintenance is not to take place past limit of work on plans.

Snow and Ice Management

Snow and ice shall be stored within locations specified on the plan, and excess shall be hauled off site.

Parking Lot Sweeping

Routine sweeping of the parking lot with a brush-type street sweeper, will be conducted in accordance with standard Leicester practices. Sweeping will occur bi-annually in the spring and fall.

Prohibition of Illicit Discharges

The MassDEP Stormwater Management Standard 10 prohibits illicit discharges to the stormwater management system. Illicit discharges are discharges that do not consist entirely of stormwater, except for certain specified non-stormwater discharges.

In accordance with the existing MS4 permit and anticipated TS4 permit requirements, examples of discharges from the following sources are not considered illicit discharges:

- Firefighting activities*
- Foundation drains
- Water line flushing
- Footing drains
- Landscape irrigation
- Individual residential car washing
- Uncontaminated groundwater
- Rising groundwater
- Diverted stream flows
- Flows from riparian habitats/wetlands
- Potable water sources
- Dechlorinated swimming pool water
- Street wash waters
- Wash water from residential buildings (no detergents)
- Condensation from air conditioning units
- Run-on from private driveways caused by precipitation
- Lawn watering
- Water from crawl space pumps

*Water from firefighting activities is allowed and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

Based on plan review and confirmation in the field, there are no known or proposed illicit connections associated with 21-69 Main Street, Leicester.

Spill Prevention and Response

Response procedures will be implemented at the infiltration basin for any significant release of hazardous materials such as fuels, oils, or chemical materials to any stormwater inlet or the infiltration basin onsite.

Reportable quantities will immediately be reported to the applicable Federal, State, and local agencies as required by law. Reportable quantities of chemical, fuels, or oils are established under the Clean Water Act and enforced through MassDEP. The MassDEP Emergency

Response Program shall be immediately notified in accordance with required procedures for the report of a release (telephone (888) 304-1133).

In the case of a spill, applicable containment and clean-up procedures will be performed immediately. These procedures are implemented in accordance with the Unified Response Manual at the local level by first responders, which includes the Leicester local public safety departments (e.g., fire, police, public works, board of health). Spill material collected during the response will be promptly removed and disposed of in accordance with Federal, State, and local requirements. If necessary, a licensed emergency response contractor will assist in cleanup of releases depending on the amount of the release and the ability of the responsible party to perform the required response.

Contech CDS Unit (2015-4)

System Owner: Safe N Lock Capital Partners LLC, or future owner.

(See CDS Inspection and Maintenance Guide Attached)

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CDS TECHNOLOGIES

Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allows both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine weather the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

Cleaning of a CDS systems should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes.

CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y^3	m^3
CDS1515	3	0.9	3.0	0.9	0.5	0.4
CDS2015	4	1.2	3.0	0.9	0.9	0.7
CDS2015	5	1.3	3.0	0.9	1.3	1.0
CDS2020	5	1.3	3.5	1.1	1.3	1.0
CDS2025	5	1.3	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3025	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3
CDS5640	10	3.0	6.3	1.9	8.7	6.7
CDS5653	10	3.0	7.7	2.3	8.7	6.7
CDS5668	10	3.0	9.3	2.8	8.7	6.7
CDS5678	10	3.0	10.3	3.1	8.7	6.7

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities

Support

- Drawings and specifications are available at www.contechstormwater.com.
- Site-specific design support is available from our engineers.

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CDS Inspection & Maintenance Log

CDS Model: _____ Location: _____

Date	Water depth to sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface. If the difference between these measurements is less than the values listed in table 1 the system should be cleaned out. **Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.**

2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

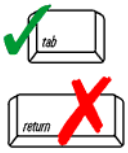
Appendix B – Massachusetts Stormwater Checklist

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

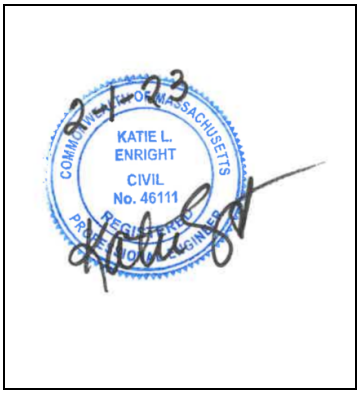
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



02/01/2023

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☒ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- [X] No disturbance to any Wetland Resource Areas
- [ ] Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- [X] Reduced Impervious Area (Redevelopment Only)
- [ ] Minimizing disturbance to existing trees and shrubs
- [ ] LID Site Design Credit Requested:
  - [ ] Credit 1
  - [ ] Credit 2
  - [ ] Credit 3
- [ ] Use of "country drainage" versus curb and gutter conveyance and pipe
- [ ] Bioretention Cells (includes Rain Gardens)
- [ ] Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- [ ] Treebox Filter
- [ ] Water Quality Swale
- [ ] Grass Channel
- [ ] Green Roof
- [ ] Other (describe): _____

Standard 1: No New Untreated Discharges

- [X] No new untreated discharges
- [X] Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- [X] Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☒ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

☒ Site is comprised solely of C and D soils and/or bedrock at the land surface

☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000

☐ Solid Waste Landfill pursuant to 310 CMR 19.000

☒ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☐ The ½" or 1" Water Quality Volume or
- ☒ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☒ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☒ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☒ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☒ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☒ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☒ Description and delineation of public safety features;
- ☒ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

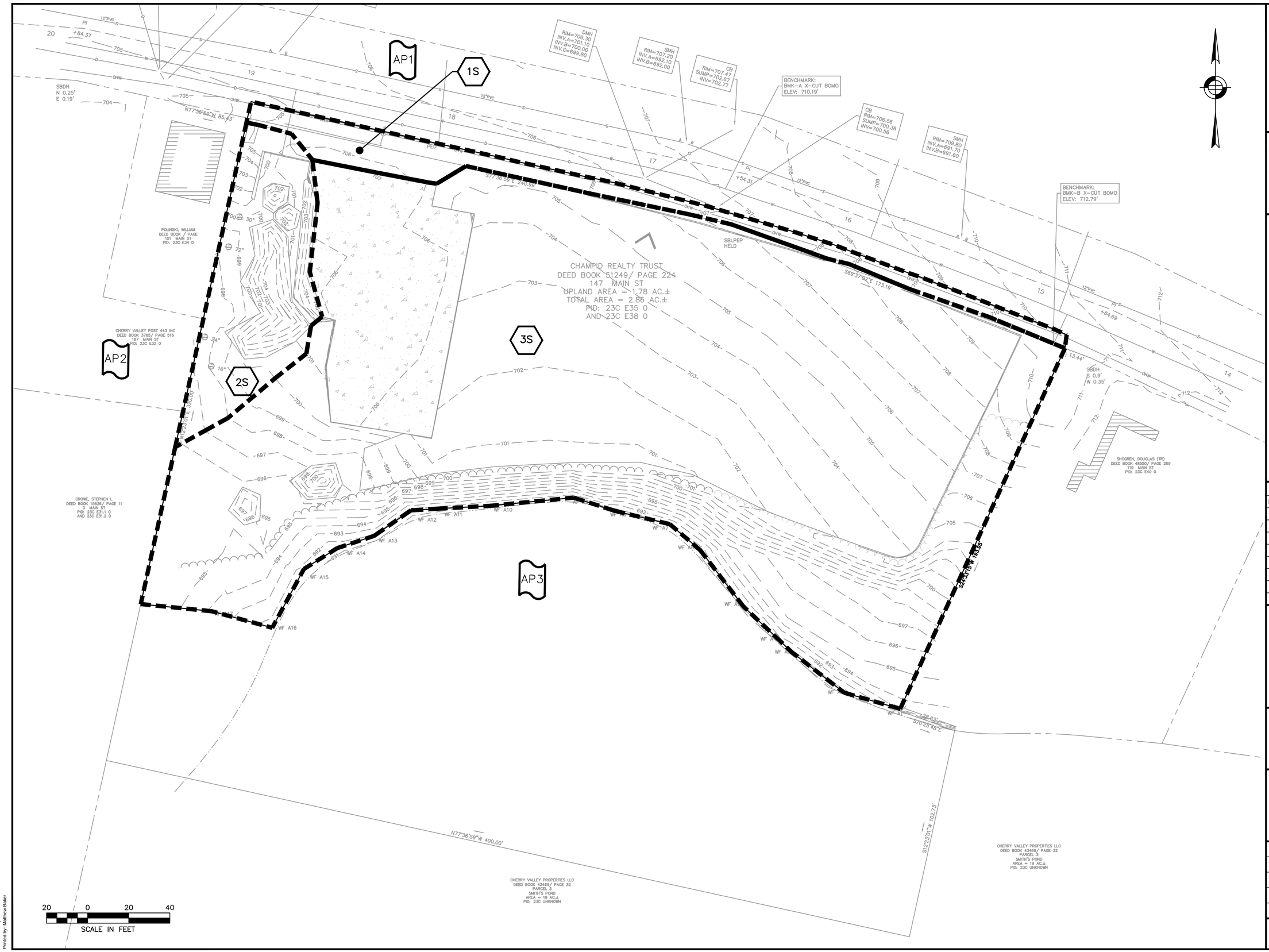
Standard 10: Prohibition of Illicit Discharges

☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☒ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

Appendix C – Drainage Watershed Maps



HOWARD STEIN HUDSON
114 Turnpike Road, Suite 2C
Chelmsford, MA 01824
www.hshassoc.com

PREPARED FOR:

SAFE N LOCK CAPITAL PARTNERS LLC
3333 NEW HYDE PARK ROAD
SUITE 200
LAKE SUCCESS, NY 11042

PROPOSED SELF-STORAGE
147 MAIN STREET
LEICESTER, MA, 01611
WORCESTER COUNTY

REVISIONS:

NO	BY	DATE	DESCRIPTION

SITE
PLAN

PRE
DEVELOPMENT
DRAINAGE PLAN

DATE:	JANUARY 26, 2023
PROJECT NUMBER:	21084.00
DESIGNED BY:	KL
DRAWN BY:	KL
CHECKED BY:	KE

C.1

SHEET 1 OF 2

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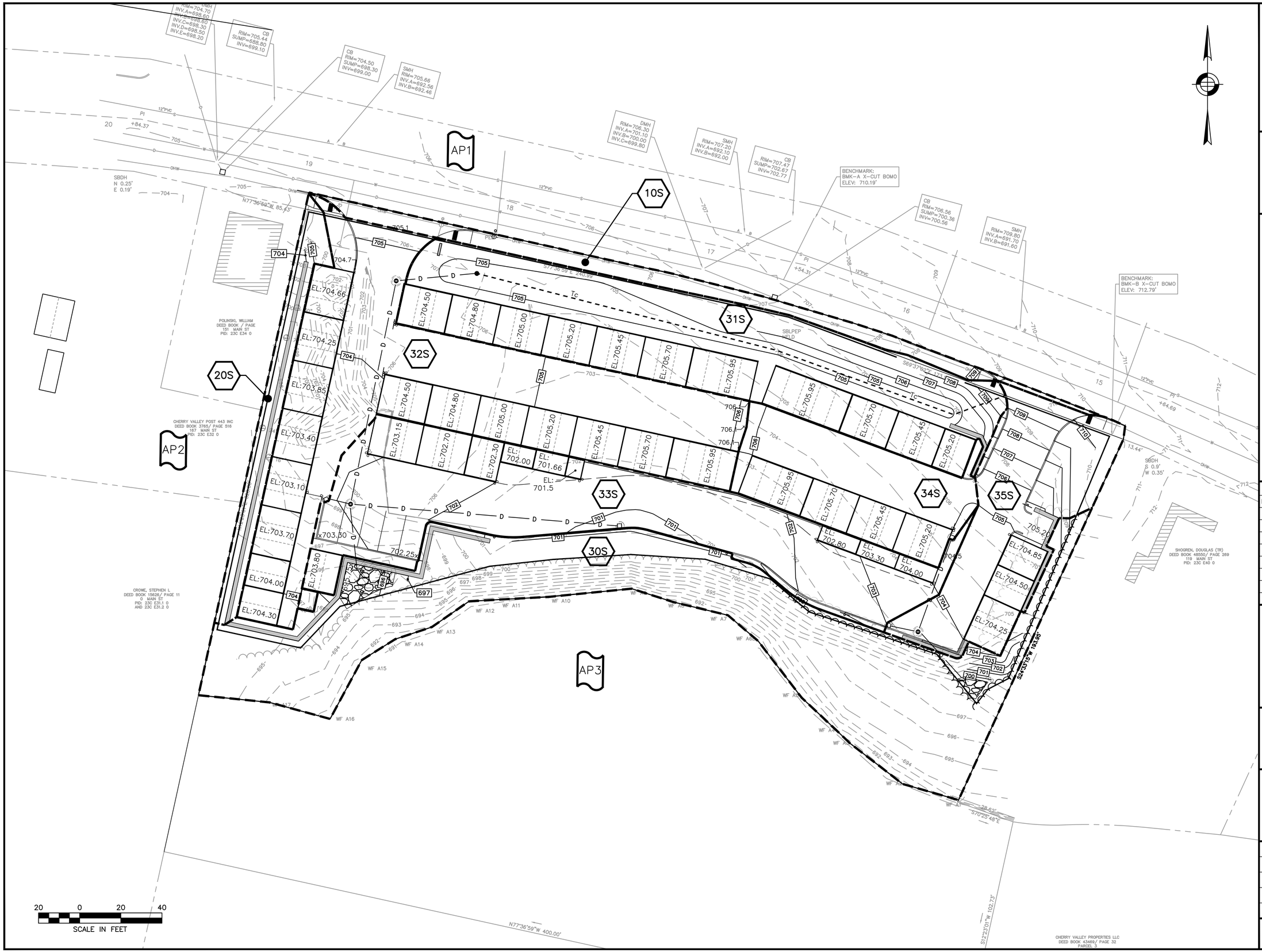
Printed by: Matthew Baker



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LEICESTER, MA, 01611
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REVISIONS:

NO	BY	DATE	DESCRIPTION

SITE
PLAN

POST
DEVELOPMENT
DRAINAGE PLAN

DATE:	JANUARY 26, 2023
PROJECT NUMBER:	21084.00
DESIGNED BY:	KL
DRAWN BY:	KL
CHECKED BY:	KE

C.2

SHEET 2 OF 2

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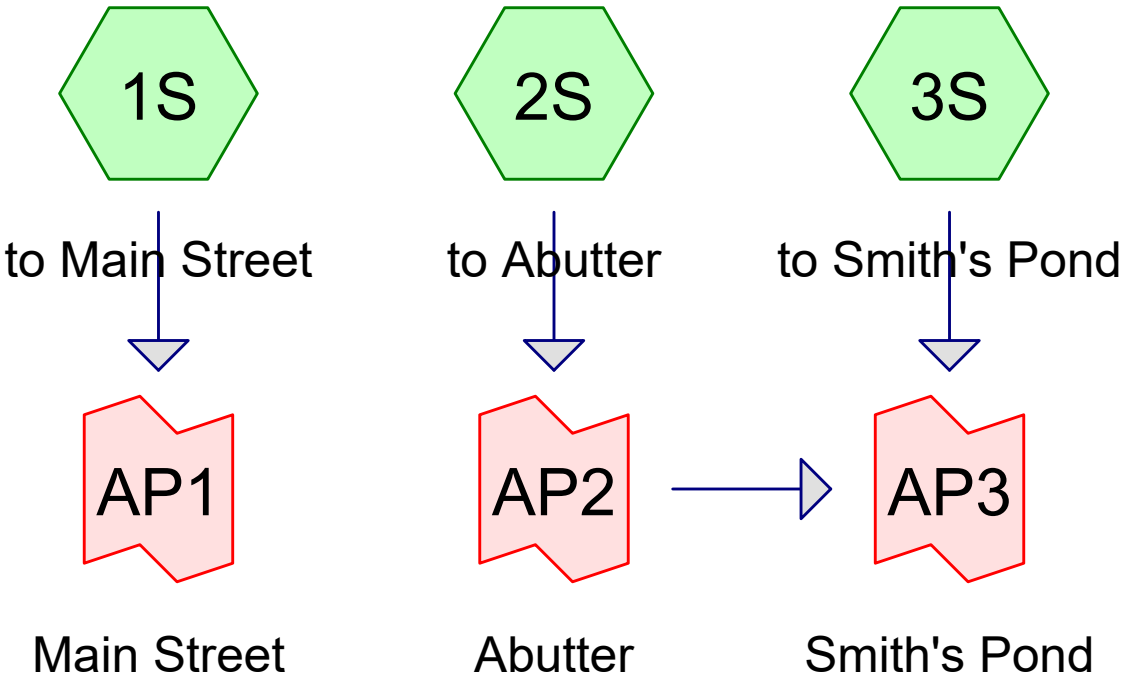
Appendix D - HydroCAD Report



Subcat Reach Pond Link

Routing Diagram for 21084 Pre 147 Main Rev.1
Prepared by Howard Stein Hudson Associates, Printed 2/2/2023
HydroCAD® 10.20-2d s/n 02930 © 2021 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "21084 Drainage Post.hcp"
Rainfall events imported from "21084 Post 147 Main.hcp"

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type III 24-hr		Default	24.00	1	3.14	2
2	10-year	Type III 24-hr		Default	24.00	1	4.87	2
3	25-year	Type III 24-hr		Default	24.00	1	5.95	2
4	100-year	Type III 24-hr		Default	24.00	1	7.62	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
11,910	74	>75% Grass cover, Good, HSG C (2S, 3S)
49,159	98	Paved parking, HSG C (1S, 2S, 3S)
14,253	70	Woods, Good, HSG C (3S)
75,322	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
75,322	HSG C	1S, 2S, 3S
0	HSG D	
0	Other	
75,322		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	0	11,910	0	0	11,910	>75% Grass cover, Good	
0	0	49,159	0	0	49,159	Paved parking	
0	0	14,253	0	0	14,253	Woods, Good	
0	**0**	**75,322**	**0**	**0**	**75,322**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: to Main Street Runoff Area=3,914 sf 100.00% Impervious Runoff Depth>2.91"
Tc=6.0 min CN=98 Runoff=0.27 cfs 948 cf

Subcatchment2S: to Abutter Runoff Area=6,233 sf 38.20% Impervious Runoff Depth>1.56"
Tc=6.0 min CN=83 Runoff=0.26 cfs 809 cf

Subcatchment3S: to Smith's Pond Runoff Area=65,175 sf 65.77% Impervious Runoff Depth>2.02"
Tc=6.0 min CN=89 Runoff=3.54 cfs 10,997 cf

Link AP1: Main Street Inflow=0.27 cfs 948 cf
Primary=0.27 cfs 948 cf

Link AP2: Abutter Inflow=0.26 cfs 809 cf
Primary=0.26 cfs 809 cf

Link AP3: Smith's Pond Inflow=3.80 cfs 11,806 cf
Primary=3.80 cfs 11,806 cf

Total Runoff Area = 75,322 sf Runoff Volume = 12,754 cf Average Runoff Depth = 2.03"
34.73% Pervious = 26,163 sf 65.27% Impervious = 49,159 sf

Summary for Subcatchment 1S: to Main Street

Runoff = 0.27 cfs @ 12.08 hrs, Volume= 948 cf, Depth> 2.91"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
3,914	98	Paved parking, HSG C
3,914		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: to Abutter

Runoff = 0.26 cfs @ 12.09 hrs, Volume= 809 cf, Depth> 1.56"
Routed to Link AP2 : Abutter

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
2,381	98	Paved parking, HSG C
3,852	74	>75% Grass cover, Good, HSG C
6,233	83	Weighted Average
3,852		61.80% Pervious Area
2,381		38.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 3S: to Smith's Pond

Runoff = 3.54 cfs @ 12.09 hrs, Volume= 10,997 cf, Depth> 2.02"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
42,864	98	Paved parking, HSG C
8,058	74	>75% Grass cover, Good, HSG C
14,253	70	Woods, Good, HSG C
65,175	89	Weighted Average
22,311		34.23% Pervious Area
42,864		65.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link AP1: Main Street

Inflow Area = 3,914 sf,100.00% Impervious, Inflow Depth > 2.91" for 2-year event
Inflow = 0.27 cfs @ 12.08 hrs, Volume= 948 cf
Primary = 0.27 cfs @ 12.08 hrs, Volume= 948 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: Abutter

Inflow Area = 6,233 sf, 38.20% Impervious, Inflow Depth > 1.56" for 2-year event
Inflow = 0.26 cfs @ 12.09 hrs, Volume= 809 cf
Primary = 0.26 cfs @ 12.09 hrs, Volume= 809 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 71,408 sf, 63.36% Impervious, Inflow Depth > 1.98" for 2-year event
Inflow = 3.80 cfs @ 12.09 hrs, Volume= 11,806 cf
Primary = 3.80 cfs @ 12.09 hrs, Volume= 11,806 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: to Main Street Runoff Area=3,914 sf 100.00% Impervious Runoff Depth>4.63"
Tc=6.0 min CN=98 Runoff=0.43 cfs 1,510 cf

Subcatchment2S: to Abutter Runoff Area=6,233 sf 38.20% Impervious Runoff Depth>3.05"
Tc=6.0 min CN=83 Runoff=0.51 cfs 1,586 cf

Subcatchment3S: to Smith's Pond Runoff Area=65,175 sf 65.77% Impervious Runoff Depth>3.64"
Tc=6.0 min CN=89 Runoff=6.22 cfs 19,792 cf

Link AP1: Main Street Inflow=0.43 cfs 1,510 cf
Primary=0.43 cfs 1,510 cf

Link AP2: Abutter Inflow=0.51 cfs 1,586 cf
Primary=0.51 cfs 1,586 cf

Link AP3: Smith's Pond Inflow=6.74 cfs 21,378 cf
Primary=6.74 cfs 21,378 cf

Total Runoff Area = 75,322 sf Runoff Volume = 22,888 cf Average Runoff Depth = 3.65"
34.73% Pervious = 26,163 sf 65.27% Impervious = 49,159 sf

Summary for Subcatchment 1S: to Main Street

Runoff = 0.43 cfs @ 12.08 hrs, Volume= 1,510 cf, Depth> 4.63"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
3,914	98	Paved parking, HSG C
3,914		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: to Abutter

Runoff = 0.51 cfs @ 12.09 hrs, Volume= 1,586 cf, Depth> 3.05"
Routed to Link AP2 : Abutter

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
2,381	98	Paved parking, HSG C
3,852	74	>75% Grass cover, Good, HSG C
6,233	83	Weighted Average
3,852		61.80% Pervious Area
2,381		38.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 3S: to Smith's Pond

Runoff = 6.22 cfs @ 12.09 hrs, Volume= 19,792 cf, Depth> 3.64"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
42,864	98	Paved parking, HSG C
8,058	74	>75% Grass cover, Good, HSG C
14,253	70	Woods, Good, HSG C
65,175	89	Weighted Average
22,311		34.23% Pervious Area
42,864		65.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link AP1: Main Street

Inflow Area = 3,914 sf,100.00% Impervious, Inflow Depth > 4.63" for 10-year event
Inflow = 0.43 cfs @ 12.08 hrs, Volume= 1,510 cf
Primary = 0.43 cfs @ 12.08 hrs, Volume= 1,510 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: Abutter

Inflow Area = 6,233 sf, 38.20% Impervious, Inflow Depth > 3.05" for 10-year event
Inflow = 0.51 cfs @ 12.09 hrs, Volume= 1,586 cf
Primary = 0.51 cfs @ 12.09 hrs, Volume= 1,586 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 71,408 sf, 63.36% Impervious, Inflow Depth > 3.59" for 10-year event
Inflow = 6.74 cfs @ 12.09 hrs, Volume= 21,378 cf
Primary = 6.74 cfs @ 12.09 hrs, Volume= 21,378 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: to Main Street Runoff Area=3,914 sf 100.00% Impervious Runoff Depth>5.71"
Tc=6.0 min CN=98 Runoff=0.52 cfs 1,862 cf

Subcatchment2S: to Abutter Runoff Area=6,233 sf 38.20% Impervious Runoff Depth>4.04"
Tc=6.0 min CN=83 Runoff=0.67 cfs 2,099 cf

Subcatchment3S: to Smith's Pond Runoff Area=65,175 sf 65.77% Impervious Runoff Depth>4.68"
Tc=6.0 min CN=89 Runoff=7.90 cfs 25,433 cf

Link AP1: Main Street Inflow=0.52 cfs 1,862 cf
Primary=0.52 cfs 1,862 cf

Link AP2: Abutter Inflow=0.67 cfs 2,099 cf
Primary=0.67 cfs 2,099 cf

Link AP3: Smith's Pond Inflow=8.57 cfs 27,532 cf
Primary=8.57 cfs 27,532 cf

Total Runoff Area = 75,322 sf Runoff Volume = 29,393 cf Average Runoff Depth = 4.68"
34.73% Pervious = 26,163 sf 65.27% Impervious = 49,159 sf

Summary for Subcatchment 1S: to Main Street

Runoff = 0.52 cfs @ 12.08 hrs, Volume= 1,862 cf, Depth> 5.71"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
3,914	98	Paved parking, HSG C
3,914		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: to Abutter

Runoff = 0.67 cfs @ 12.09 hrs, Volume= 2,099 cf, Depth> 4.04"
Routed to Link AP2 : Abutter

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
2,381	98	Paved parking, HSG C
3,852	74	>75% Grass cover, Good, HSG C
6,233	83	Weighted Average
3,852		61.80% Pervious Area
2,381		38.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 3S: to Smith's Pond

Runoff = 7.90 cfs @ 12.08 hrs, Volume= 25,433 cf, Depth> 4.68"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
42,864	98	Paved parking, HSG C
8,058	74	>75% Grass cover, Good, HSG C
14,253	70	Woods, Good, HSG C
65,175	89	Weighted Average
22,311		34.23% Pervious Area
42,864		65.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link AP1: Main Street

Inflow Area = 3,914 sf,100.00% Impervious, Inflow Depth > 5.71" for 25-year event
Inflow = 0.52 cfs @ 12.08 hrs, Volume= 1,862 cf
Primary = 0.52 cfs @ 12.08 hrs, Volume= 1,862 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: Abutter

Inflow Area = 6,233 sf, 38.20% Impervious, Inflow Depth > 4.04" for 25-year event
Inflow = 0.67 cfs @ 12.09 hrs, Volume= 2,099 cf
Primary = 0.67 cfs @ 12.09 hrs, Volume= 2,099 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 71,408 sf, 63.36% Impervious, Inflow Depth > 4.63" for 25-year event
Inflow = 8.57 cfs @ 12.09 hrs, Volume= 27,532 cf
Primary = 8.57 cfs @ 12.09 hrs, Volume= 27,532 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: to Main Street Runoff Area=3,914 sf 100.00% Impervious Runoff Depth>7.37"
Tc=6.0 min CN=98 Runoff=0.67 cfs 2,405 cf

Subcatchment2S: to Abutter Runoff Area=6,233 sf 38.20% Impervious Runoff Depth>5.61"
Tc=6.0 min CN=83 Runoff=0.92 cfs 2,914 cf

Subcatchment3S: to Smith's Pond Runoff Area=65,175 sf 65.77% Impervious Runoff Depth>6.31"
Tc=6.0 min CN=89 Runoff=10.46 cfs 34,264 cf

Link AP1: Main Street Inflow=0.67 cfs 2,405 cf
Primary=0.67 cfs 2,405 cf

Link AP2: Abutter Inflow=0.92 cfs 2,914 cf
Primary=0.92 cfs 2,914 cf

Link AP3: Smith's Pond Inflow=11.38 cfs 37,178 cf
Primary=11.38 cfs 37,178 cf

Total Runoff Area = 75,322 sf Runoff Volume = 39,583 cf Average Runoff Depth = 6.31"
34.73% Pervious = 26,163 sf 65.27% Impervious = 49,159 sf

Summary for Subcatchment 1S: to Main Street

Runoff = 0.67 cfs @ 12.08 hrs, Volume= 2,405 cf, Depth> 7.37"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
3,914	98	Paved parking, HSG C
3,914		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: to Abutter

Runoff = 0.92 cfs @ 12.09 hrs, Volume= 2,914 cf, Depth> 5.61"
Routed to Link AP2 : Abutter

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
2,381	98	Paved parking, HSG C
3,852	74	>75% Grass cover, Good, HSG C
6,233	83	Weighted Average
3,852		61.80% Pervious Area
2,381		38.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 3S: to Smith's Pond

Runoff = 10.46 cfs @ 12.08 hrs, Volume= 34,264 cf, Depth> 6.31"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
42,864	98	Paved parking, HSG C
8,058	74	>75% Grass cover, Good, HSG C
14,253	70	Woods, Good, HSG C
65,175	89	Weighted Average
22,311		34.23% Pervious Area
42,864		65.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link AP1: Main Street

Inflow Area = 3,914 sf,100.00% Impervious, Inflow Depth > 7.37" for 100-year event
Inflow = 0.67 cfs @ 12.08 hrs, Volume= 2,405 cf
Primary = 0.67 cfs @ 12.08 hrs, Volume= 2,405 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: Abutter

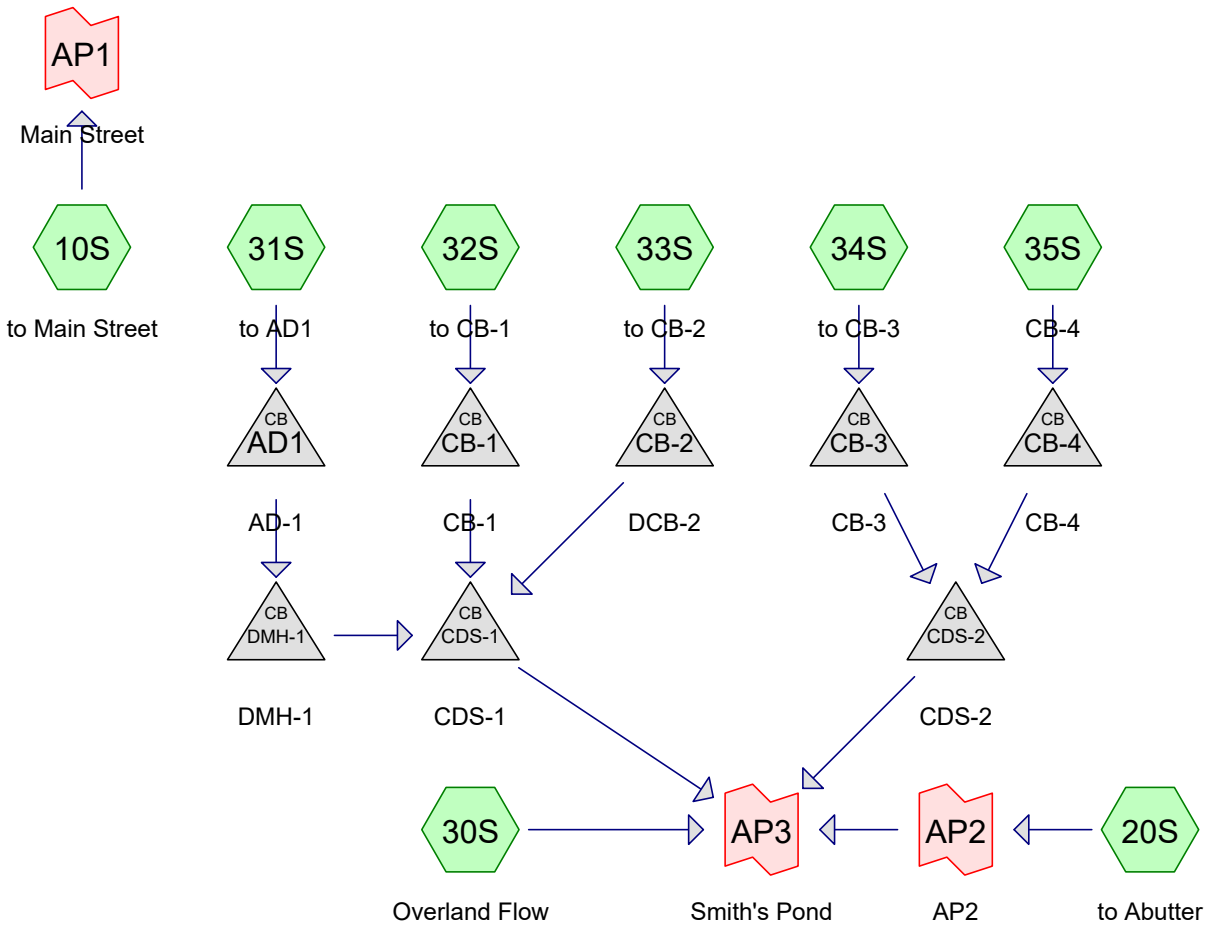
Inflow Area = 6,233 sf, 38.20% Impervious, Inflow Depth > 5.61" for 100-year event
Inflow = 0.92 cfs @ 12.09 hrs, Volume= 2,914 cf
Primary = 0.92 cfs @ 12.09 hrs, Volume= 2,914 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 71,408 sf, 63.36% Impervious, Inflow Depth > 6.25" for 100-year event
Inflow = 11.38 cfs @ 12.08 hrs, Volume= 37,178 cf
Primary = 11.38 cfs @ 12.08 hrs, Volume= 37,178 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



Subcat Reach Pond Link

Routing Diagram for 21084 Post 147 Main Rev.1
Prepared by Howard Stein Hudson Associates, Printed 2/2/2023
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Project Notes

Rainfall events imported from "21084 Drainage Post.hcp"

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type III 24-hr		Default	24.00	1	3.14	2
2	10-year	Type III 24-hr		Default	24.00	1	4.87	2
3	25-year	Type III 24-hr		Default	24.00	1	5.95	2
4	100-year	Type III 24-hr		Default	24.00	1	7.62	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
16,891	74	>75% Grass cover, Good, HSG C (20S, 30S, 31S, 32S, 33S, 34S, 35S)
27,477	98	Paved parking, HSG C (10S, 31S, 32S, 33S, 34S, 35S)
18,311	98	Roofs, HSG C (31S, 32S, 33S, 34S, 35S)
740	98	Unconnected pavement, HSG C (20S, 30S)
11,903	70	Woods, Good, HSG C (30S)
75,322	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
75,322	HSG C	10S, 20S, 30S, 31S, 32S, 33S, 34S, 35S
0	HSG D	
0	Other	
75,322		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	0	16,891	0	0	16,891	>75% Grass cover, Good	
0	0	27,477	0	0	27,477	Paved parking	
0	0	18,311	0	0	18,311	Roofs	
0	0	740	0	0	740	Unconnected pavement	
0	0	11,903	0	0	11,903	Woods, Good	
0	**0**	**75,322**	**0**	**0**	**75,322**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	AD1	701.75	701.02	36.4	0.0201	0.013	0.0	8.0	0.0
2	CB-1	699.55	699.46	9.3	0.0097	0.013	0.0	12.0	0.0
3	CB-2	697.34	696.70	128.1	0.0050	0.013	0.0	12.0	0.0
4	CB-3	701.36	700.45	45.7	0.0199	0.013	0.0	12.0	0.0
5	CB-4	700.00	699.88	11.6	0.0103	0.013	0.0	12.0	0.0
6	CDS-1	696.60	695.75	29.6	0.0287	0.013	0.0	15.0	0.0
7	CDS-2	699.75	699.40	34.7	0.0101	0.013	0.0	12.0	0.0
8	DMH-1	700.92	698.78	106.8	0.0200	0.013	0.0	12.0	0.0

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10S: to Main Street Runoff Area=2,477 sf 100.00% Impervious Runoff Depth>2.91"
Tc=6.0 min CN=98 Runoff=0.17 cfs 600 cf

Subcatchment20S: to Abutter Runoff Area=2,198 sf 18.02% Impervious Runoff Depth>1.11"
Tc=6.0 min UI Adjusted CN=76 Runoff=0.06 cfs 203 cf

Subcatchment30S: Overland Flow Runoff Area=17,538 sf 1.96% Impervious Runoff Depth>0.84"
Tc=6.0 min UI Adjusted CN=71 Runoff=0.36 cfs 1,229 cf

Subcatchment31S: to AD1 Runoff Area=13,275 sf 43.13% Impervious Runoff Depth>1.63"
Flow Length=269' Tc=14.5 min CN=84 Runoff=0.45 cfs 1,800 cf

Subcatchment32S: to CB-1 Runoff Area=15,515 sf 97.45% Impervious Runoff Depth>2.79"
Tc=6.0 min CN=97 Runoff=1.07 cfs 3,613 cf

Subcatchment33S: to CB-2 Runoff Area=12,630 sf 99.14% Impervious Runoff Depth>2.91"
Tc=6.0 min CN=98 Runoff=0.88 cfs 3,058 cf

Subcatchment34S: to CB-3 Runoff Area=5,221 sf 96.46% Impervious Runoff Depth>2.79"
Tc=6.0 min CN=97 Runoff=0.36 cfs 1,216 cf

Subcatchment35S: CB-4 Runoff Area=6,468 sf 75.88% Impervious Runoff Depth>2.29"
Tc=6.0 min CN=92 Runoff=0.39 cfs 1,235 cf

Pond AD1: AD-1 Peak Elev=702.20' Inflow=0.45 cfs 1,800 cf
8.0" Round Culvert n=0.013 L=36.4' S=0.0201 '/' Outflow=0.45 cfs 1,800 cf

Pond CB-1: CB-1 Peak Elev=700.21' Inflow=1.07 cfs 3,613 cf
12.0" Round Culvert n=0.013 L=9.3' S=0.0097 '/' Outflow=1.07 cfs 3,613 cf

Pond CB-2: DCB-2 Peak Elev=697.98' Inflow=0.88 cfs 3,058 cf
12.0" Round Culvert n=0.013 L=128.1' S=0.0050 '/' Outflow=0.88 cfs 3,058 cf

Pond CB-3: CB-3 Peak Elev=701.62' Inflow=0.36 cfs 1,216 cf
12.0" Round Culvert n=0.013 L=45.7' S=0.0199 '/' Outflow=0.36 cfs 1,216 cf

Pond CB-4: CB-4 Peak Elev=700.40' Inflow=0.39 cfs 1,235 cf
12.0" Round Culvert n=0.013 L=11.6' S=0.0103 '/' Outflow=0.39 cfs 1,235 cf

Pond CDS-1: CDS-1 Peak Elev=697.46' Inflow=2.26 cfs 8,471 cf
15.0" Round Culvert n=0.013 L=29.6' S=0.0287 '/' Outflow=2.26 cfs 8,471 cf

Pond CDS-2: CDS-2 Peak Elev=700.25' Inflow=0.75 cfs 2,451 cf
12.0" Round Culvert n=0.013 L=34.7' S=0.0101 '/' Outflow=0.75 cfs 2,451 cf

Pond DMH-1: DMH-1 Peak Elev=701.30' Inflow=0.45 cfs 1,800 cf
12.0" Round Culvert n=0.013 L=106.8' S=0.0200 '/' Outflow=0.45 cfs 1,800 cf

Link AP1: Main Street Inflow=0.17 cfs 600 cf
Primary=0.17 cfs 600 cf

Link AP2: AP2 Inflow=0.06 cfs 203 cf
Primary=0.06 cfs 203 cf

Link AP3: Smith's Pond Inflow=3.42 cfs 12,354 cf
Primary=3.42 cfs 12,354 cf

Total Runoff Area = 75,322 sf Runoff Volume = 12,954 cf Average Runoff Depth = 2.06"
38.23% Pervious = 28,794 sf 61.77% Impervious = 46,528 sf

Summary for Subcatchment 10S: to Main Street

Runoff = 0.17 cfs @ 12.08 hrs, Volume= 600 cf, Depth> 2.91"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
2,477	98	Paved parking, HSG C
2,477		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 20S: to Abutter

Runoff = 0.06 cfs @ 12.09 hrs, Volume= 203 cf, Depth> 1.11"
Routed to Link AP2 : AP2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Adj	Description
1,802	74		>75% Grass cover, Good, HSG C
396	98		Unconnected pavement, HSG C
2,198	78	76	Weighted Average, UI Adjusted
1,802			81.98% Pervious Area
396			18.02% Impervious Area
396			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 30S: Overland Flow

Runoff = 0.36 cfs @ 12.10 hrs, Volume= 1,229 cf, Depth> 0.84"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Adj	Description
344	98		Unconnected pavement, HSG C
11,903	70		Woods, Good, HSG C
5,291	74		>75% Grass cover, Good, HSG C
17,538	72	71	Weighted Average, UI Adjusted
17,194			98.04% Pervious Area
344			1.96% Impervious Area
344			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: to AD1

Runoff = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf, Depth> 1.63"
Routed to Pond AD1 : AD-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
7,550	74	>75% Grass cover, Good, HSG C
5,601	98	Roofs, HSG C
124	98	Paved parking, HSG C
13,275	84	Weighted Average
7,550		56.87% Pervious Area
5,725		43.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	27	0.2000	0.33		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
7.7	23	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
5.4	219	0.0020	0.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
14.5	269	Total			

Summary for Subcatchment 32S: to CB-1

Runoff = 1.07 cfs @ 12.08 hrs, Volume= 3,613 cf, Depth> 2.79"
Routed to Pond CB-1 : CB-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
8,085	98	Paved parking, HSG C
395	74	>75% Grass cover, Good, HSG C
7,035	98	Roofs, HSG C
15,515	97	Weighted Average
395		2.55% Pervious Area
15,120		97.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 33S: to CB-2

Runoff = 0.88 cfs @ 12.08 hrs, Volume= 3,058 cf, Depth> 2.91"
Routed to Pond CB-2 : DCB-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
10,044	98	Paved parking, HSG C
108	74	>75% Grass cover, Good, HSG C
2,478	98	Roofs, HSG C
12,630	98	Weighted Average
108		0.86% Pervious Area
12,522		99.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 34S: to CB-3

Runoff = 0.36 cfs @ 12.08 hrs, Volume= 1,216 cf, Depth> 2.79"
Routed to Pond CB-3 : CB-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
2,955	98	Paved parking, HSG C
185	74	>75% Grass cover, Good, HSG C
2,081	98	Roofs, HSG C
5,221	97	Weighted Average
185		3.54% Pervious Area
5,036		96.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 35S: CB-4

Runoff = 0.39 cfs @ 12.09 hrs, Volume= 1,235 cf, Depth> 2.29"
Routed to Pond CB-4 : CB-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.14"

Area (sf)	CN	Description
3,792	98	Paved parking, HSG C
1,560	74	>75% Grass cover, Good, HSG C
1,116	98	Roofs, HSG C
6,468	92	Weighted Average
1,560		24.12% Pervious Area
4,908		75.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond AD1: AD-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 1.63" for 2-year event
Inflow = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf
Outflow = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf
Routed to Pond DMH-1 : DMH-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 702.20' @ 12.20 hrs
Flood Elev= 704.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.75'	**8.0" Round Culvert** L= 36.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 701.75' / 701.02' S= 0.0201 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.45 cfs @ 12.20 hrs HW=702.20' TW=701.30' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.45 cfs @ 1.80 fps)

Summary for Pond CB-1: CB-1

Inflow Area = 15,515 sf, 97.45% Impervious, Inflow Depth > 2.79" for 2-year event
Inflow = 1.07 cfs @ 12.08 hrs, Volume= 3,613 cf
Outflow = 1.07 cfs @ 12.08 hrs, Volume= 3,613 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.07 cfs @ 12.08 hrs, Volume= 3,613 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.21' @ 12.08 hrs
Flood Elev= 703.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	699.55'	**12.0" Round Culvert** L= 9.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.55' / 699.46' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.07 cfs @ 12.08 hrs HW=700.21' TW=697.46' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.07 cfs @ 2.74 fps)

Summary for Pond CB-2: DCB-2

Inflow Area = 12,630 sf, 99.14% Impervious, Inflow Depth > 2.91" for 2-year event
Inflow = 0.88 cfs @ 12.08 hrs, Volume= 3,058 cf
Outflow = 0.88 cfs @ 12.08 hrs, Volume= 3,058 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.88 cfs @ 12.08 hrs, Volume= 3,058 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 697.98' @ 12.09 hrs
Flood Elev= 700.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	697.34'	**12.0" Round Culvert** L= 128.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 697.34' / 696.70' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.88 cfs @ 12.08 hrs HW=697.98' TW=697.46' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.88 cfs @ 2.36 fps)

Summary for Pond CB-3: CB-3

Inflow Area = 5,221 sf, 96.46% Impervious, Inflow Depth > 2.79" for 2-year event
Inflow = 0.36 cfs @ 12.08 hrs, Volume= 1,216 cf
Outflow = 0.36 cfs @ 12.08 hrs, Volume= 1,216 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.36 cfs @ 12.08 hrs, Volume= 1,216 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 701.62' @ 12.08 hrs
Flood Elev= 704.86'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.36'	**12.0" Round Culvert** L= 45.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 701.36' / 700.45' S= 0.0199 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.36 cfs @ 12.08 hrs HW=701.62' TW=700.25' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.36 cfs @ 2.18 fps)

Summary for Pond CB-4: CB-4

Inflow Area = 6,468 sf, 75.88% Impervious, Inflow Depth > 2.29" for 2-year event
Inflow = 0.39 cfs @ 12.09 hrs, Volume= 1,235 cf
Outflow = 0.39 cfs @ 12.09 hrs, Volume= 1,235 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.39 cfs @ 12.09 hrs, Volume= 1,235 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.40' @ 12.09 hrs
Flood Elev= 703.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.00'	**12.0" Round Culvert** L= 11.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.00' / 699.88' S= 0.0103 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.39 cfs @ 12.09 hrs HW=700.40' TW=700.25' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.39 cfs @ 1.96 fps)

Summary for Pond CDS-1: CDS-1

Inflow Area = 41,420 sf, 80.56% Impervious, Inflow Depth > 2.45" for 2-year event
Inflow = 2.26 cfs @ 12.09 hrs, Volume= 8,471 cf
Outflow = 2.26 cfs @ 12.09 hrs, Volume= 8,471 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.26 cfs @ 12.09 hrs, Volume= 8,471 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 697.46' @ 12.09 hrs
Flood Elev= 703.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	696.60'	**15.0" Round Culvert** L= 29.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 696.60' / 695.75' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.26 cfs @ 12.09 hrs HW=697.46' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.26 cfs @ 2.50 fps)

Summary for Pond CDS-2: CDS-2

[57] Hint: Peaked at 700.25' (Flood elevation advised)

Inflow Area = 11,689 sf, 85.07% Impervious, Inflow Depth > 2.52" for 2-year event
Inflow = 0.75 cfs @ 12.08 hrs, Volume= 2,451 cf
Outflow = 0.75 cfs @ 12.08 hrs, Volume= 2,451 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.75 cfs @ 12.08 hrs, Volume= 2,451 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.25' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	699.75'	**12.0" Round Culvert** L= 34.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.75' / 699.40' S= 0.0101 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.75 cfs @ 12.08 hrs HW=700.25' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.75 cfs @ 1.90 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 1.63" for 2-year event
Inflow = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf
Outflow = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.45 cfs @ 12.20 hrs, Volume= 1,800 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 701.30' @ 12.20 hrs
Flood Elev= 704.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.92'	**12.0" Round Culvert** L= 106.8' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.92' / 698.78' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.45 cfs @ 12.20 hrs HW=701.30' TW=697.29' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.45 cfs @ 1.65 fps)

Summary for Link AP1: Main Street

Inflow Area = 2,477 sf,100.00% Impervious, Inflow Depth > 2.91" for 2-year event
Inflow = 0.17 cfs @ 12.08 hrs, Volume= 600 cf
Primary = 0.17 cfs @ 12.08 hrs, Volume= 600 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: AP2

Inflow Area = 2,198 sf, 18.02% Impervious, Inflow Depth > 1.11" for 2-year event
Inflow = 0.06 cfs @ 12.09 hrs, Volume= 203 cf
Primary = 0.06 cfs @ 12.09 hrs, Volume= 203 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 72,845 sf, 60.47% Impervious, Inflow Depth > 2.04" for 2-year event
Inflow = 3.42 cfs @ 12.09 hrs, Volume= 12,354 cf
Primary = 3.42 cfs @ 12.09 hrs, Volume= 12,354 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10S: to Main Street Runoff Area=2,477 sf 100.00% Impervious Runoff Depth>4.63"
Tc=6.0 min CN=98 Runoff=0.27 cfs 956 cf

Subcatchment20S: to Abutter Runoff Area=2,198 sf 18.02% Impervious Runoff Depth>2.43"
Tc=6.0 min UI Adjusted CN=76 Runoff=0.14 cfs 444 cf

Subcatchment30S: Overland Flow Runoff Area=17,538 sf 1.96% Impervious Runoff Depth>2.02"
Tc=6.0 min UI Adjusted CN=71 Runoff=0.94 cfs 2,946 cf

Subcatchment31S: to AD1 Runoff Area=13,275 sf 43.13% Impervious Runoff Depth>3.14"
Flow Length=269' Tc=14.5 min CN=84 Runoff=0.86 cfs 3,477 cf

Subcatchment32S: to CB-1 Runoff Area=15,515 sf 97.45% Impervious Runoff Depth>4.51"
Tc=6.0 min CN=97 Runoff=1.68 cfs 5,836 cf

Subcatchment33S: to CB-2 Runoff Area=12,630 sf 99.14% Impervious Runoff Depth>4.63"
Tc=6.0 min CN=98 Runoff=1.38 cfs 4,873 cf

Subcatchment34S: to CB-3 Runoff Area=5,221 sf 96.46% Impervious Runoff Depth>4.51"
Tc=6.0 min CN=97 Runoff=0.57 cfs 1,964 cf

Subcatchment35S: CB-4 Runoff Area=6,468 sf 75.88% Impervious Runoff Depth>3.96"
Tc=6.0 min CN=92 Runoff=0.66 cfs 2,134 cf

Pond AD1: AD-1 Peak Elev=702.50' Inflow=0.86 cfs 3,477 cf
8.0" Round Culvert n=0.013 L=36.4' S=0.0201 '/' Outflow=0.86 cfs 3,477 cf

Pond CB-1: CB-1 Peak Elev=700.43' Inflow=1.68 cfs 5,836 cf
12.0" Round Culvert n=0.013 L=9.3' S=0.0097 '/' Outflow=1.68 cfs 5,836 cf

Pond CB-2: DCB-2 Peak Elev=698.28' Inflow=1.38 cfs 4,873 cf
12.0" Round Culvert n=0.013 L=128.1' S=0.0050 '/' Outflow=1.38 cfs 4,873 cf

Pond CB-3: CB-3 Peak Elev=701.69' Inflow=0.57 cfs 1,964 cf
12.0" Round Culvert n=0.013 L=45.7' S=0.0199 '/' Outflow=0.57 cfs 1,964 cf

Pond CB-4: CB-4 Peak Elev=700.57' Inflow=0.66 cfs 2,134 cf
12.0" Round Culvert n=0.013 L=11.6' S=0.0103 '/' Outflow=0.66 cfs 2,134 cf

Pond CDS-1: CDS-1 Peak Elev=697.84' Inflow=3.68 cfs 14,186 cf
15.0" Round Culvert n=0.013 L=29.6' S=0.0287 '/' Outflow=3.68 cfs 14,186 cf

Pond CDS-2: CDS-2 Peak Elev=700.42' Inflow=1.22 cfs 4,098 cf
12.0" Round Culvert n=0.013 L=34.7' S=0.0101 '/' Outflow=1.22 cfs 4,098 cf

Pond DMH-1: DMH-1 Peak Elev=701.46' Inflow=0.86 cfs 3,477 cf
12.0" Round Culvert n=0.013 L=106.8' S=0.0200 '/' Outflow=0.86 cfs 3,477 cf

Link AP1: Main Street Inflow=0.27 cfs 956 cf
Primary=0.27 cfs 956 cf

Link AP2: AP2 Inflow=0.14 cfs 444 cf
Primary=0.14 cfs 444 cf

Link AP3: Smith's Pond Inflow=5.98 cfs 21,675 cf
Primary=5.98 cfs 21,675 cf

Total Runoff Area = 75,322 sf Runoff Volume = 22,630 cf Average Runoff Depth = 3.61"
38.23% Pervious = 28,794 sf 61.77% Impervious = 46,528 sf

Summary for Subcatchment 10S: to Main Street

Runoff = 0.27 cfs @ 12.08 hrs, Volume= 956 cf, Depth> 4.63"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
2,477	98	Paved parking, HSG C
2,477		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 20S: to Abutter

Runoff = 0.14 cfs @ 12.09 hrs, Volume= 444 cf, Depth> 2.43"
Routed to Link AP2 : AP2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Adj	Description
1,802	74		>75% Grass cover, Good, HSG C
396	98		Unconnected pavement, HSG C
2,198	78	76	Weighted Average, UI Adjusted
1,802			81.98% Pervious Area
396			18.02% Impervious Area
396			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 30S: Overland Flow

Runoff = 0.94 cfs @ 12.09 hrs, Volume= 2,946 cf, Depth> 2.02"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Adj	Description
344	98		Unconnected pavement, HSG C
11,903	70		Woods, Good, HSG C
5,291	74		>75% Grass cover, Good, HSG C
17,538	72	71	Weighted Average, UI Adjusted
17,194			98.04% Pervious Area
344			1.96% Impervious Area
344			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: to AD1

Runoff = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf, Depth> 3.14"
Routed to Pond AD1 : AD-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
7,550	74	>75% Grass cover, Good, HSG C
5,601	98	Roofs, HSG C
124	98	Paved parking, HSG C
13,275	84	Weighted Average
7,550		56.87% Pervious Area
5,725		43.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	27	0.2000	0.33		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
7.7	23	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
5.4	219	0.0020	0.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
14.5	269	Total			

Summary for Subcatchment 32S: to CB-1

Runoff = 1.68 cfs @ 12.08 hrs, Volume= 5,836 cf, Depth> 4.51"
Routed to Pond CB-1 : CB-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
8,085	98	Paved parking, HSG C
395	74	>75% Grass cover, Good, HSG C
7,035	98	Roofs, HSG C
15,515	97	Weighted Average
395		2.55% Pervious Area
15,120		97.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 33S: to CB-2

Runoff = 1.38 cfs @ 12.08 hrs, Volume= 4,873 cf, Depth> 4.63"
Routed to Pond CB-2 : DCB-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
10,044	98	Paved parking, HSG C
108	74	>75% Grass cover, Good, HSG C
2,478	98	Roofs, HSG C
12,630	98	Weighted Average
108		0.86% Pervious Area
12,522		99.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 34S: to CB-3

Runoff = 0.57 cfs @ 12.08 hrs, Volume= 1,964 cf, Depth> 4.51"
Routed to Pond CB-3 : CB-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
2,955	98	Paved parking, HSG C
185	74	>75% Grass cover, Good, HSG C
2,081	98	Roofs, HSG C
5,221	97	Weighted Average
185		3.54% Pervious Area
5,036		96.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 35S: CB-4

Runoff = 0.66 cfs @ 12.08 hrs, Volume= 2,134 cf, Depth> 3.96"
Routed to Pond CB-4 : CB-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.87"

Area (sf)	CN	Description
3,792	98	Paved parking, HSG C
1,560	74	>75% Grass cover, Good, HSG C
1,116	98	Roofs, HSG C
6,468	92	Weighted Average
1,560		24.12% Pervious Area
4,908		75.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond AD1: AD-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf
Outflow = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf
Routed to Pond DMH-1 : DMH-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 702.50' @ 12.20 hrs
Flood Elev= 704.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.75'	**8.0" Round Culvert** L= 36.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 701.75' / 701.02' S= 0.0201 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.86 cfs @ 12.20 hrs HW=702.50' TW=701.46' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.86 cfs @ 2.46 fps)

Summary for Pond CB-1: CB-1

Inflow Area = 15,515 sf, 97.45% Impervious, Inflow Depth > 4.51" for 10-year event
Inflow = 1.68 cfs @ 12.08 hrs, Volume= 5,836 cf
Outflow = 1.68 cfs @ 12.08 hrs, Volume= 5,836 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.68 cfs @ 12.08 hrs, Volume= 5,836 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.43' @ 12.08 hrs
Flood Elev= 703.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	699.55'	**12.0" Round Culvert** L= 9.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.55' / 699.46' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.68 cfs @ 12.08 hrs HW=700.43' TW=697.84' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.68 cfs @ 3.06 fps)

Summary for Pond CB-2: DCB-2

Inflow Area = 12,630 sf, 99.14% Impervious, Inflow Depth > 4.63" for 10-year event
Inflow = 1.38 cfs @ 12.08 hrs, Volume= 4,873 cf
Outflow = 1.38 cfs @ 12.08 hrs, Volume= 4,873 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.38 cfs @ 12.08 hrs, Volume= 4,873 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 698.28' @ 12.09 hrs
Flood Elev= 700.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	697.34'	**12.0" Round Culvert** L= 128.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 697.34' / 696.70' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.38 cfs @ 12.08 hrs HW=698.27' TW=697.83' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.38 cfs @ 2.35 fps)

Summary for Pond CB-3: CB-3

Inflow Area = 5,221 sf, 96.46% Impervious, Inflow Depth > 4.51" for 10-year event
Inflow = 0.57 cfs @ 12.08 hrs, Volume= 1,964 cf
Outflow = 0.57 cfs @ 12.08 hrs, Volume= 1,964 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.57 cfs @ 12.08 hrs, Volume= 1,964 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 701.69' @ 12.08 hrs
Flood Elev= 704.86'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.36'	**12.0" Round Culvert** L= 45.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 701.36' / 700.45' S= 0.0199 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.57 cfs @ 12.08 hrs HW=701.69' TW=700.42' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.57 cfs @ 2.46 fps)

Summary for Pond CB-4: CB-4

Inflow Area = 6,468 sf, 75.88% Impervious, Inflow Depth > 3.96" for 10-year event
Inflow = 0.66 cfs @ 12.08 hrs, Volume= 2,134 cf
Outflow = 0.66 cfs @ 12.08 hrs, Volume= 2,134 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.66 cfs @ 12.08 hrs, Volume= 2,134 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.57' @ 12.08 hrs
Flood Elev= 703.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.00'	**12.0" Round Culvert** L= 11.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.00' / 699.88' S= 0.0103 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.65 cfs @ 12.08 hrs HW=700.57' TW=700.42' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.65 cfs @ 2.05 fps)

Summary for Pond CDS-1: CDS-1

Inflow Area = 41,420 sf, 80.56% Impervious, Inflow Depth > 4.11" for 10-year event
Inflow = 3.68 cfs @ 12.09 hrs, Volume= 14,186 cf
Outflow = 3.68 cfs @ 12.09 hrs, Volume= 14,186 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.68 cfs @ 12.09 hrs, Volume= 14,186 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 697.84' @ 12.09 hrs
Flood Elev= 703.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	696.60'	**15.0" Round Culvert** L= 29.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 696.60' / 695.75' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.67 cfs @ 12.09 hrs HW=697.84' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.67 cfs @ 3.00 fps)

Summary for Pond CDS-2: CDS-2

[57] Hint: Peaked at 700.42' (Flood elevation advised)

Inflow Area = 11,689 sf, 85.07% Impervious, Inflow Depth > 4.21" for 10-year event
Inflow = 1.22 cfs @ 12.08 hrs, Volume= 4,098 cf
Outflow = 1.22 cfs @ 12.08 hrs, Volume= 4,098 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.22 cfs @ 12.08 hrs, Volume= 4,098 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.42' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	699.75'	**12.0" Round Culvert** L= 34.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.75' / 699.40' S= 0.0101 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.22 cfs @ 12.08 hrs HW=700.42' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.22 cfs @ 2.19 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 3.14" for 10-year event
Inflow = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf
Outflow = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.86 cfs @ 12.20 hrs, Volume= 3,477 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 701.46' @ 12.20 hrs
Flood Elev= 704.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.92'	**12.0" Round Culvert** L= 106.8' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.92' / 698.78' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.86 cfs @ 12.20 hrs HW=701.46' TW=697.54' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.86 cfs @ 1.98 fps)

Summary for Link AP1: Main Street

Inflow Area = 2,477 sf,100.00% Impervious, Inflow Depth > 4.63" for 10-year event
Inflow = 0.27 cfs @ 12.08 hrs, Volume= 956 cf
Primary = 0.27 cfs @ 12.08 hrs, Volume= 956 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: AP2

Inflow Area = 2,198 sf, 18.02% Impervious, Inflow Depth > 2.43" for 10-year event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 444 cf
Primary = 0.14 cfs @ 12.09 hrs, Volume= 444 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 72,845 sf, 60.47% Impervious, Inflow Depth > 3.57" for 10-year event
Inflow = 5.98 cfs @ 12.09 hrs, Volume= 21,675 cf
Primary = 5.98 cfs @ 12.09 hrs, Volume= 21,675 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10S: to Main Street Runoff Area=2,477 sf 100.00% Impervious Runoff Depth>5.71"
Tc=6.0 min CN=98 Runoff=0.33 cfs 1,178 cf

Subcatchment20S: to Abutter Runoff Area=2,198 sf 18.02% Impervious Runoff Depth>3.33"
Tc=6.0 min UI Adjusted CN=76 Runoff=0.20 cfs 611 cf

Subcatchment30S: Overland Flow Runoff Area=17,538 sf 1.96% Impervious Runoff Depth>2.85"
Tc=6.0 min UI Adjusted CN=71 Runoff=1.34 cfs 4,172 cf

Subcatchment31S: to AD1 Runoff Area=13,275 sf 43.13% Impervious Runoff Depth>4.14"
Flow Length=269' Tc=14.5 min CN=84 Runoff=1.12 cfs 4,579 cf

Subcatchment32S: to CB-1 Runoff Area=15,515 sf 97.45% Impervious Runoff Depth>5.59"
Tc=6.0 min CN=97 Runoff=2.07 cfs 7,227 cf

Subcatchment33S: to CB-2 Runoff Area=12,630 sf 99.14% Impervious Runoff Depth>5.71"
Tc=6.0 min CN=98 Runoff=1.69 cfs 6,007 cf

Subcatchment34S: to CB-3 Runoff Area=5,221 sf 96.46% Impervious Runoff Depth>5.59"
Tc=6.0 min CN=97 Runoff=0.70 cfs 2,432 cf

Subcatchment35S: CB-4 Runoff Area=6,468 sf 75.88% Impervious Runoff Depth>5.02"
Tc=6.0 min CN=92 Runoff=0.82 cfs 2,704 cf

Pond AD1: AD-1 Peak Elev=702.80' Inflow=1.12 cfs 4,579 cf
8.0" Round Culvert n=0.013 L=36.4' S=0.0201 '/' Outflow=1.12 cfs 4,579 cf

Pond CB-1: CB-1 Peak Elev=700.56' Inflow=2.07 cfs 7,227 cf
12.0" Round Culvert n=0.013 L=9.3' S=0.0097 '/' Outflow=2.07 cfs 7,227 cf

Pond CB-2: DCB-2 Peak Elev=698.58' Inflow=1.69 cfs 6,007 cf
12.0" Round Culvert n=0.013 L=128.1' S=0.0050 '/' Outflow=1.69 cfs 6,007 cf

Pond CB-3: CB-3 Peak Elev=701.73' Inflow=0.70 cfs 2,432 cf
12.0" Round Culvert n=0.013 L=45.7' S=0.0199 '/' Outflow=0.70 cfs 2,432 cf

Pond CB-4: CB-4 Peak Elev=700.67' Inflow=0.82 cfs 2,704 cf
12.0" Round Culvert n=0.013 L=11.6' S=0.0103 '/' Outflow=0.82 cfs 2,704 cf

Pond CDS-1: CDS-1 Peak Elev=698.18' Inflow=4.57 cfs 17,813 cf
15.0" Round Culvert n=0.013 L=29.6' S=0.0287 '/' Outflow=4.57 cfs 17,813 cf

Pond CDS-2: CDS-2 Peak Elev=700.51' Inflow=1.52 cfs 5,136 cf
12.0" Round Culvert n=0.013 L=34.7' S=0.0101 '/' Outflow=1.52 cfs 5,136 cf

Pond DMH-1: DMH-1 Peak Elev=701.55' Inflow=1.12 cfs 4,579 cf
12.0" Round Culvert n=0.013 L=106.8' S=0.0200 '/' Outflow=1.12 cfs 4,579 cf

Link AP1: Main Street Inflow=0.33 cfs 1,178 cf
Primary=0.33 cfs 1,178 cf

Link AP2: AP2 Inflow=0.20 cfs 611 cf
Primary=0.20 cfs 611 cf

Link AP3: Smith's Pond Inflow=7.62 cfs 27,732 cf
Primary=7.62 cfs 27,732 cf

Total Runoff Area = 75,322 sf Runoff Volume = 28,910 cf Average Runoff Depth = 4.61"
38.23% Pervious = 28,794 sf 61.77% Impervious = 46,528 sf

Summary for Subcatchment 10S: to Main Street

Runoff = 0.33 cfs @ 12.08 hrs, Volume= 1,178 cf, Depth> 5.71"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
2,477	98	Paved parking, HSG C
2,477		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 20S: to Abutter

Runoff = 0.20 cfs @ 12.09 hrs, Volume= 611 cf, Depth> 3.33"
Routed to Link AP2 : AP2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Adj	Description
1,802	74		>75% Grass cover, Good, HSG C
396	98		Unconnected pavement, HSG C
2,198	78	76	Weighted Average, UI Adjusted
1,802			81.98% Pervious Area
396			18.02% Impervious Area
396			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 30S: Overland Flow

Runoff = 1.34 cfs @ 12.09 hrs, Volume= 4,172 cf, Depth> 2.85"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Adj	Description
344	98		Unconnected pavement, HSG C
11,903	70		Woods, Good, HSG C
5,291	74		>75% Grass cover, Good, HSG C
17,538	72	71	Weighted Average, UI Adjusted
17,194			98.04% Pervious Area
344			1.96% Impervious Area
344			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: to AD1

Runoff = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf, Depth> 4.14"
Routed to Pond AD1 : AD-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
7,550	74	>75% Grass cover, Good, HSG C
5,601	98	Roofs, HSG C
124	98	Paved parking, HSG C
13,275	84	Weighted Average
7,550		56.87% Pervious Area
5,725		43.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	27	0.2000	0.33		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
7.7	23	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
5.4	219	0.0020	0.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
14.5	269	Total			

Summary for Subcatchment 32S: to CB-1

Runoff = 2.07 cfs @ 12.08 hrs, Volume= 7,227 cf, Depth> 5.59"
Routed to Pond CB-1 : CB-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
8,085	98	Paved parking, HSG C
395	74	>75% Grass cover, Good, HSG C
7,035	98	Roofs, HSG C
15,515	97	Weighted Average
395		2.55% Pervious Area
15,120		97.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 33S: to CB-2

Runoff = 1.69 cfs @ 12.08 hrs, Volume= 6,007 cf, Depth> 5.71"
Routed to Pond CB-2 : DCB-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
10,044	98	Paved parking, HSG C
108	74	>75% Grass cover, Good, HSG C
2,478	98	Roofs, HSG C
12,630	98	Weighted Average
108		0.86% Pervious Area
12,522		99.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 34S: to CB-3

Runoff = 0.70 cfs @ 12.08 hrs, Volume= 2,432 cf, Depth> 5.59"
Routed to Pond CB-3 : CB-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
2,955	98	Paved parking, HSG C
185	74	>75% Grass cover, Good, HSG C
2,081	98	Roofs, HSG C
5,221	97	Weighted Average
185		3.54% Pervious Area
5,036		96.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 35S: CB-4

Runoff = 0.82 cfs @ 12.08 hrs, Volume= 2,704 cf, Depth> 5.02"
Routed to Pond CB-4 : CB-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.95"

Area (sf)	CN	Description
3,792	98	Paved parking, HSG C
1,560	74	>75% Grass cover, Good, HSG C
1,116	98	Roofs, HSG C
6,468	92	Weighted Average
1,560		24.12% Pervious Area
4,908		75.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond AD1: AD-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 4.14" for 25-year event
Inflow = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf
Outflow = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf
Routed to Pond DMH-1 : DMH-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 702.80' @ 12.20 hrs
Flood Elev= 704.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.75'	**8.0" Round Culvert** L= 36.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 701.75' / 701.02' S= 0.0201 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.12 cfs @ 12.20 hrs HW=702.80' TW=701.55' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.12 cfs @ 3.22 fps)

Summary for Pond CB-1: CB-1

Inflow Area = 15,515 sf, 97.45% Impervious, Inflow Depth > 5.59" for 25-year event
Inflow = 2.07 cfs @ 12.08 hrs, Volume= 7,227 cf
Outflow = 2.07 cfs @ 12.08 hrs, Volume= 7,227 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.07 cfs @ 12.08 hrs, Volume= 7,227 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.56' @ 12.08 hrs
Flood Elev= 703.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	699.55'	**12.0" Round Culvert** L= 9.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.55' / 699.46' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.06 cfs @ 12.08 hrs HW=700.56' TW=698.17' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.06 cfs @ 3.22 fps)

Summary for Pond CB-2: DCB-2

Inflow Area = 12,630 sf, 99.14% Impervious, Inflow Depth > 5.71" for 25-year event
Inflow = 1.69 cfs @ 12.08 hrs, Volume= 6,007 cf
Outflow = 1.69 cfs @ 12.08 hrs, Volume= 6,007 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.69 cfs @ 12.08 hrs, Volume= 6,007 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 698.58' @ 12.09 hrs
Flood Elev= 700.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	697.34'	**12.0" Round Culvert** L= 128.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 697.34' / 696.70' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.69 cfs @ 12.08 hrs HW=698.57' TW=698.17' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.69 cfs @ 2.23 fps)

Summary for Pond CB-3: CB-3

Inflow Area = 5,221 sf, 96.46% Impervious, Inflow Depth > 5.59" for 25-year event
Inflow = 0.70 cfs @ 12.08 hrs, Volume= 2,432 cf
Outflow = 0.70 cfs @ 12.08 hrs, Volume= 2,432 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.70 cfs @ 12.08 hrs, Volume= 2,432 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 701.73' @ 12.08 hrs
Flood Elev= 704.86'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.36'	**12.0" Round Culvert** L= 45.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 701.36' / 700.45' S= 0.0199 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.69 cfs @ 12.08 hrs HW=701.73' TW=700.51' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.69 cfs @ 2.60 fps)

Summary for Pond CB-4: CB-4

Inflow Area = 6,468 sf, 75.88% Impervious, Inflow Depth > 5.02" for 25-year event
Inflow = 0.82 cfs @ 12.08 hrs, Volume= 2,704 cf
Outflow = 0.82 cfs @ 12.08 hrs, Volume= 2,704 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.82 cfs @ 12.08 hrs, Volume= 2,704 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.67' @ 12.08 hrs
Flood Elev= 703.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.00'	**12.0" Round Culvert** L= 11.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.00' / 699.88' S= 0.0103 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.82 cfs @ 12.08 hrs HW=700.67' TW=700.51' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.82 cfs @ 2.08 fps)

Summary for Pond CDS-1: CDS-1

Inflow Area = 41,420 sf, 80.56% Impervious, Inflow Depth > 5.16" for 25-year event
Inflow = 4.57 cfs @ 12.09 hrs, Volume= 17,813 cf
Outflow = 4.57 cfs @ 12.09 hrs, Volume= 17,813 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.57 cfs @ 12.09 hrs, Volume= 17,813 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 698.18' @ 12.09 hrs
Flood Elev= 703.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	696.60'	**15.0" Round Culvert** L= 29.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 696.60' / 695.75' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=4.56 cfs @ 12.09 hrs HW=698.18' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 4.56 cfs @ 3.72 fps)

Summary for Pond CDS-2: CDS-2

[57] Hint: Peaked at 700.51' (Flood elevation advised)

Inflow Area = 11,689 sf, 85.07% Impervious, Inflow Depth > 5.27" for 25-year event
Inflow = 1.52 cfs @ 12.08 hrs, Volume= 5,136 cf
Outflow = 1.52 cfs @ 12.08 hrs, Volume= 5,136 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.52 cfs @ 12.08 hrs, Volume= 5,136 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.51' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	699.75'	**12.0" Round Culvert** L= 34.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.75' / 699.40' S= 0.0101 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.51 cfs @ 12.08 hrs HW=700.51' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.51 cfs @ 2.35 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 4.14" for 25-year event
Inflow = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf
Outflow = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.12 cfs @ 12.20 hrs, Volume= 4,579 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 701.55' @ 12.20 hrs
Flood Elev= 704.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.92'	**12.0" Round Culvert** L= 106.8' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.92' / 698.78' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.12 cfs @ 12.20 hrs HW=701.55' TW=697.71' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.12 cfs @ 2.14 fps)

Summary for Link AP1: Main Street

Inflow Area = 2,477 sf,100.00% Impervious, Inflow Depth > 5.71" for 25-year event
Inflow = 0.33 cfs @ 12.08 hrs, Volume= 1,178 cf
Primary = 0.33 cfs @ 12.08 hrs, Volume= 1,178 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: AP2

Inflow Area = 2,198 sf, 18.02% Impervious, Inflow Depth > 3.33" for 25-year event
Inflow = 0.20 cfs @ 12.09 hrs, Volume= 611 cf
Primary = 0.20 cfs @ 12.09 hrs, Volume= 611 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 72,845 sf, 60.47% Impervious, Inflow Depth > 4.57" for 25-year event
Inflow = 7.62 cfs @ 12.09 hrs, Volume= 27,732 cf
Primary = 7.62 cfs @ 12.09 hrs, Volume= 27,732 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment10S: to Main Street Runoff Area=2,477 sf 100.00% Impervious Runoff Depth>7.37"
Tc=6.0 min CN=98 Runoff=0.43 cfs 1,522 cf

Subcatchment20S: to Abutter Runoff Area=2,198 sf 18.02% Impervious Runoff Depth>4.81"
Tc=6.0 min UI Adjusted CN=76 Runoff=0.28 cfs 881 cf

Subcatchment30S: Overland Flow Runoff Area=17,538 sf 1.96% Impervious Runoff Depth>4.25"
Tc=6.0 min UI Adjusted CN=71 Runoff=2.01 cfs 6,206 cf

Subcatchment31S: to AD1 Runoff Area=13,275 sf 43.13% Impervious Runoff Depth>5.72"
Flow Length=269' Tc=14.5 min CN=84 Runoff=1.53 cfs 6,325 cf

Subcatchment32S: to CB-1 Runoff Area=15,515 sf 97.45% Impervious Runoff Depth>7.26"
Tc=6.0 min CN=97 Runoff=2.66 cfs 9,381 cf

Subcatchment33S: to CB-2 Runoff Area=12,630 sf 99.14% Impervious Runoff Depth>7.37"
Tc=6.0 min CN=98 Runoff=2.17 cfs 7,762 cf

Subcatchment34S: to CB-3 Runoff Area=5,221 sf 96.46% Impervious Runoff Depth>7.26"
Tc=6.0 min CN=97 Runoff=0.89 cfs 3,157 cf

Subcatchment35S: CB-4 Runoff Area=6,468 sf 75.88% Impervious Runoff Depth>6.66"
Tc=6.0 min CN=92 Runoff=1.07 cfs 3,591 cf

Pond AD1: AD-1 Peak Elev=703.42' Inflow=1.53 cfs 6,325 cf
8.0" Round Culvert n=0.013 L=36.4' S=0.0201 '/' Outflow=1.53 cfs 6,325 cf

Pond CB-1: CB-1 Peak Elev=700.84' Inflow=2.66 cfs 9,381 cf
12.0" Round Culvert n=0.013 L=9.3' S=0.0097 '/' Outflow=2.66 cfs 9,381 cf

Pond CB-2: DCB-2 Peak Elev=699.54' Inflow=2.17 cfs 7,762 cf
12.0" Round Culvert n=0.013 L=128.1' S=0.0050 '/' Outflow=2.17 cfs 7,762 cf

Pond CB-3: CB-3 Peak Elev=701.79' Inflow=0.89 cfs 3,157 cf
12.0" Round Culvert n=0.013 L=45.7' S=0.0199 '/' Outflow=0.89 cfs 3,157 cf

Pond CB-4: CB-4 Peak Elev=700.84' Inflow=1.07 cfs 3,591 cf
12.0" Round Culvert n=0.013 L=11.6' S=0.0103 '/' Outflow=1.07 cfs 3,591 cf

Pond CDS-1: CDS-1 Peak Elev=698.85' Inflow=5.94 cfs 23,467 cf
15.0" Round Culvert n=0.013 L=29.6' S=0.0287 '/' Outflow=5.94 cfs 23,467 cf

Pond CDS-2: CDS-2 Peak Elev=700.68' Inflow=1.96 cfs 6,747 cf
12.0" Round Culvert n=0.013 L=34.7' S=0.0101 '/' Outflow=1.96 cfs 6,747 cf

Pond DMH-1: DMH-1 Peak Elev=701.69' Inflow=1.53 cfs 6,325 cf
12.0" Round Culvert n=0.013 L=106.8' S=0.0200 '/' Outflow=1.53 cfs 6,325 cf

Link AP1: Main Street Inflow=0.43 cfs 1,522 cf
Primary=0.43 cfs 1,522 cf

Link AP2: AP2 Inflow=0.28 cfs 881 cf
Primary=0.28 cfs 881 cf

Link AP3: Smith's Pond Inflow=10.19 cfs 37,301 cf
Primary=10.19 cfs 37,301 cf

Total Runoff Area = 75,322 sf Runoff Volume = 38,823 cf Average Runoff Depth = 6.19"
38.23% Pervious = 28,794 sf 61.77% Impervious = 46,528 sf

Summary for Subcatchment 10S: to Main Street

Runoff = 0.43 cfs @ 12.08 hrs, Volume= 1,522 cf, Depth> 7.37"
Routed to Link AP1 : Main Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
2,477	98	Paved parking, HSG C
2,477		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 20S: to Abutter

Runoff = 0.28 cfs @ 12.09 hrs, Volume= 881 cf, Depth> 4.81"
Routed to Link AP2 : AP2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Adj	Description
1,802	74		>75% Grass cover, Good, HSG C
396	98		Unconnected pavement, HSG C
2,198	78	76	Weighted Average, UI Adjusted
1,802			81.98% Pervious Area
396			18.02% Impervious Area
396			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 30S: Overland Flow

Runoff = 2.01 cfs @ 12.09 hrs, Volume= 6,206 cf, Depth> 4.25"
Routed to Link AP3 : Smith's Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Adj	Description
344	98		Unconnected pavement, HSG C
11,903	70		Woods, Good, HSG C
5,291	74		>75% Grass cover, Good, HSG C
17,538	72	71	Weighted Average, UI Adjusted
17,194			98.04% Pervious Area
344			1.96% Impervious Area
344			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: to AD1

Runoff = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf, Depth> 5.72"
Routed to Pond AD1 : AD-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
7,550	74	>75% Grass cover, Good, HSG C
5,601	98	Roofs, HSG C
124	98	Paved parking, HSG C
13,275	84	Weighted Average
7,550		56.87% Pervious Area
5,725		43.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	27	0.2000	0.33		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
7.7	23	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.14"
5.4	219	0.0020	0.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
14.5	269	Total			

Summary for Subcatchment 32S: to CB-1

Runoff = 2.66 cfs @ 12.08 hrs, Volume= 9,381 cf, Depth> 7.26"
Routed to Pond CB-1 : CB-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
8,085	98	Paved parking, HSG C
395	74	>75% Grass cover, Good, HSG C
7,035	98	Roofs, HSG C
15,515	97	Weighted Average
395		2.55% Pervious Area
15,120		97.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 33S: to CB-2

Runoff = 2.17 cfs @ 12.08 hrs, Volume= 7,762 cf, Depth> 7.37"
Routed to Pond CB-2 : DCB-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
10,044	98	Paved parking, HSG C
108	74	>75% Grass cover, Good, HSG C
2,478	98	Roofs, HSG C
12,630	98	Weighted Average
108		0.86% Pervious Area
12,522		99.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 34S: to CB-3

Runoff = 0.89 cfs @ 12.08 hrs, Volume= 3,157 cf, Depth> 7.26"
Routed to Pond CB-3 : CB-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
2,955	98	Paved parking, HSG C
185	74	>75% Grass cover, Good, HSG C
2,081	98	Roofs, HSG C
5,221	97	Weighted Average
185		3.54% Pervious Area
5,036		96.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 35S: CB-4

Runoff = 1.07 cfs @ 12.08 hrs, Volume= 3,591 cf, Depth> 6.66"
Routed to Pond CB-4 : CB-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=7.62"

Area (sf)	CN	Description
3,792	98	Paved parking, HSG C
1,560	74	>75% Grass cover, Good, HSG C
1,116	98	Roofs, HSG C
6,468	92	Weighted Average
1,560		24.12% Pervious Area
4,908		75.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond AD1: AD-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 5.72" for 100-year event
Inflow = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf
Outflow = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf
Routed to Pond DMH-1 : DMH-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 703.42' @ 12.19 hrs
Flood Elev= 704.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.75'	**8.0" Round Culvert** L= 36.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 701.75' / 701.02' S= 0.0201 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.53 cfs @ 12.19 hrs HW=703.42' TW=701.69' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.53 cfs @ 4.39 fps)

Summary for Pond CB-1: CB-1

Inflow Area = 15,515 sf, 97.45% Impervious, Inflow Depth > 7.26" for 100-year event
Inflow = 2.66 cfs @ 12.08 hrs, Volume= 9,381 cf
Outflow = 2.66 cfs @ 12.08 hrs, Volume= 9,381 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.66 cfs @ 12.08 hrs, Volume= 9,381 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.84' @ 12.08 hrs
Flood Elev= 703.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	699.55'	**12.0" Round Culvert** L= 9.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.55' / 699.46' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.65 cfs @ 12.08 hrs HW=700.84' TW=698.83' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.65 cfs @ 3.38 fps)

Summary for Pond CB-2: DCB-2

Inflow Area = 12,630 sf, 99.14% Impervious, Inflow Depth > 7.37" for 100-year event
Inflow = 2.17 cfs @ 12.08 hrs, Volume= 7,762 cf
Outflow = 2.17 cfs @ 12.08 hrs, Volume= 7,762 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.17 cfs @ 12.08 hrs, Volume= 7,762 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 699.54' @ 12.09 hrs
Flood Elev= 700.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	697.34'	**12.0" Round Culvert** L= 128.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 697.34' / 696.70' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.17 cfs @ 12.08 hrs HW=699.53' TW=698.83' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.17 cfs @ 2.76 fps)

Summary for Pond CB-3: CB-3

Inflow Area = 5,221 sf, 96.46% Impervious, Inflow Depth > 7.26" for 100-year event
Inflow = 0.89 cfs @ 12.08 hrs, Volume= 3,157 cf
Outflow = 0.89 cfs @ 12.08 hrs, Volume= 3,157 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.89 cfs @ 12.08 hrs, Volume= 3,157 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 701.79' @ 12.08 hrs
Flood Elev= 704.86'

Device	Routing	Invert	Outlet Devices
#1	Primary	701.36'	**12.0" Round Culvert** L= 45.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 701.36' / 700.45' S= 0.0199 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.89 cfs @ 12.08 hrs HW=701.79' TW=700.68' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 0.89 cfs @ 2.78 fps)

Summary for Pond CB-4: CB-4

Inflow Area = 6,468 sf, 75.88% Impervious, Inflow Depth > 6.66" for 100-year event
Inflow = 1.07 cfs @ 12.08 hrs, Volume= 3,591 cf
Outflow = 1.07 cfs @ 12.08 hrs, Volume= 3,591 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.07 cfs @ 12.08 hrs, Volume= 3,591 cf
Routed to Pond CDS-2 : CDS-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.84' @ 12.08 hrs
Flood Elev= 703.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.00'	**12.0" Round Culvert** L= 11.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.00' / 699.88' S= 0.0103 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.07 cfs @ 12.08 hrs HW=700.84' TW=700.68' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.07 cfs @ 1.52 fps)

Summary for Pond CDS-1: CDS-1

Inflow Area = 41,420 sf, 80.56% Impervious, Inflow Depth > 6.80" for 100-year event
Inflow = 5.94 cfs @ 12.09 hrs, Volume= 23,467 cf
Outflow = 5.94 cfs @ 12.09 hrs, Volume= 23,467 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.94 cfs @ 12.09 hrs, Volume= 23,467 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 698.85' @ 12.09 hrs
Flood Elev= 703.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	696.60'	**15.0" Round Culvert** L= 29.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 696.60' / 695.75' S= 0.0287 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=5.94 cfs @ 12.09 hrs HW=698.84' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 5.94 cfs @ 4.84 fps)

Summary for Pond CDS-2: CDS-2

[57] Hint: Peaked at 700.68' (Flood elevation advised)

Inflow Area = 11,689 sf, 85.07% Impervious, Inflow Depth > 6.93" for 100-year event
Inflow = 1.96 cfs @ 12.08 hrs, Volume= 6,747 cf
Outflow = 1.96 cfs @ 12.08 hrs, Volume= 6,747 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.96 cfs @ 12.08 hrs, Volume= 6,747 cf
Routed to Link AP3 : Smith's Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 700.68' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	699.75'	**12.0" Round Culvert** L= 34.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 699.75' / 699.40' S= 0.0101 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.96 cfs @ 12.08 hrs HW=700.68' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.96 cfs @ 2.59 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 13,275 sf, 43.13% Impervious, Inflow Depth > 5.72" for 100-year event
Inflow = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf
Outflow = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.53 cfs @ 12.19 hrs, Volume= 6,325 cf
Routed to Pond CDS-1 : CDS-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 701.69' @ 12.19 hrs
Flood Elev= 704.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	700.92'	**12.0" Round Culvert** L= 106.8' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 700.92' / 698.78' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.53 cfs @ 12.19 hrs HW=701.69' TW=698.07' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.53 cfs @ 2.36 fps)

Summary for Link AP1: Main Street

Inflow Area = 2,477 sf,100.00% Impervious, Inflow Depth > 7.37" for 100-year event
Inflow = 0.43 cfs @ 12.08 hrs, Volume= 1,522 cf
Primary = 0.43 cfs @ 12.08 hrs, Volume= 1,522 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP2: AP2

Inflow Area = 2,198 sf, 18.02% Impervious, Inflow Depth > 4.81" for 100-year event
Inflow = 0.28 cfs @ 12.09 hrs, Volume= 881 cf
Primary = 0.28 cfs @ 12.09 hrs, Volume= 881 cf, Atten= 0%, Lag= 0.0 min
Routed to Link AP3 : Smith's Pond

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link AP3: Smith's Pond

Inflow Area = 72,845 sf, 60.47% Impervious, Inflow Depth > 6.14" for 100-year event
Inflow = 10.19 cfs @ 12.09 hrs, Volume= 37,301 cf
Primary = 10.19 cfs @ 12.09 hrs, Volume= 37,301 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs