STORMWATER REPORT

FOR

GROTON FARMS 500 MAIN STREET

IN

GROTON, MASSACHUSETTS

PREPARED BY: DILLIS & ROY

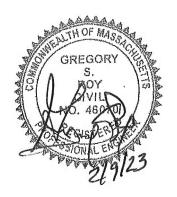
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PREPARED FOR: 500 MG LLC

6 Lyberty Way

WESTFORD, MA 01886

FEBRUARY 9TH, 2023 CDG PROJECT # 6842





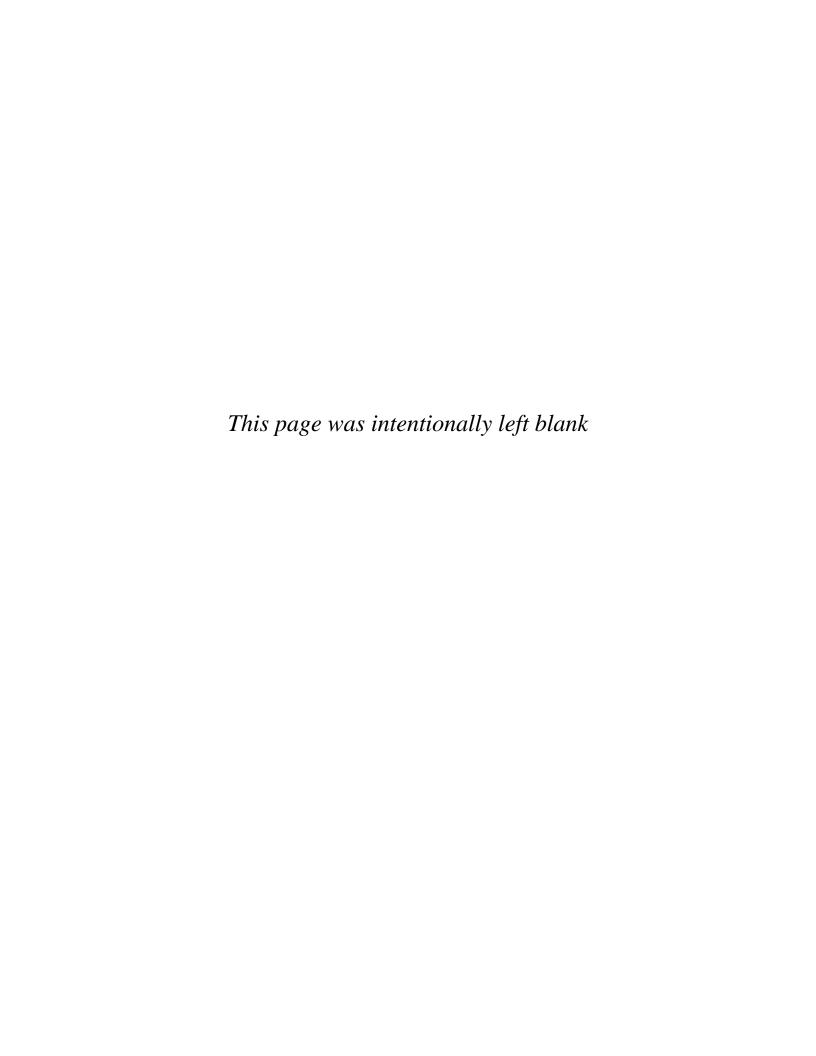
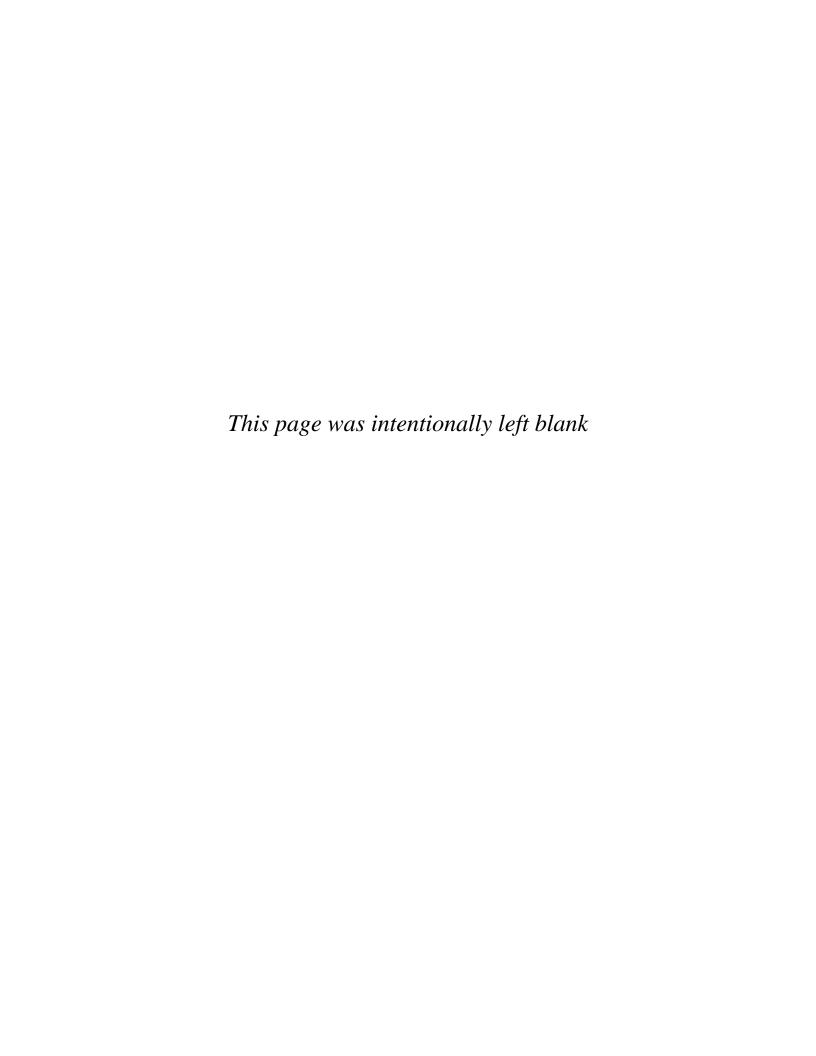


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1.0 Project Narrative

1.1 Project Type

The Applicant, 500 MG LLC is proposing the construction of a residential development on the north side of Route 119 just northerly of the intersection of Mill Street & Main Street. The proposed development consists of 16 quadplex units (1,220 SF ea.), 16 quadplex units (643 SF ea.), 3 apartment buildings (17,818 sf ea.), and clubhouse building (4,950 sf). The proposed work is located on Assessor's Map 216- Block 94, 95, & 96. The proposed scope of construction also includes a private roadway, on-site parking, clubhouse area with associated amenities, stormwater management systems, and new utility connections with their associated appurtenances.

1.2 Purpose and Scope

This report has been prepared to comply with the requirements of the Stormwater Management Standards incorporated in the Massachusetts Wetlands Protection Act Regulations, 310 CMR 10.00. These standards are intended to promote increased groundwater recharge and prevent stormwater discharges from causing or contributing to the pollution of surface waters and ground waters of the Commonwealth. The standards aim to accomplish these goals by encouraging the greater use of low impact development (LID) techniques and improving the operation and maintenance of stormwater best management practices (BMP).

This report addresses compliance of the proposed development with each of the ten stormwater standards, it provides calculations to support the compliance information, and it provides a Long-Term Pollution Prevention Plan and an Operation and Maintenance Plan for the stormwater management system.

1.3 LID Measures

Care has been taken to lay out the proposed site in a manner that works with existing topography. BMPs, have been specified to manage the stormwater runoff. Stormwater from the proposed impervious surface locations is routed to infiltration basins via land flow, curb and gutter systems, or the proposed drainage pipe system. The stormwater basins will reduce run off rates below pre-developed rates while providing water quality pre-treatment by sediment forebays.

1.4 Site Description

The subject site is found on the North side of Route 119 just northerly of the intersection of Mill Street & Main Street. An existing internal road runs from Main Street and travels northeast connecting to the onsite parking lot and existing building. The existing 101,570 SF building is located towards center of the site. An existing parking lot is located towards the northern corner of the site and

wraps around the eastern side of the building. The southwestern half of the site is primarily undeveloped grassed area with clusters of woods. Multiple wetland areas as shown on the attached Site Plans are present on site located to the north, east, and west of the proposed development. Under existing conditions, the wetlands receive untreated stormwater sheet flow and point discharges.

An existing detention basin located adjacent to the building collects and treats a substantial portion of the existing impervious area on site. An outlet pipe runs from the subject detention basin under the existing paved parking area to the north where it then discharges into an existing wetland system. A smaller stormwater management area is located just north of the northern parking area where it receives run-off from portions of the existing parking lot & tributary undeveloped overland flow. The remaining stormwater runoff generated from the existing impervious area that is not collected will sheet flow towards the surrounding wetland systems without any form of treatment.

The NRCS soil survey information indicates that all of the site is underlain by soils classified as belonging to Hydrologic Soil Groups A (Carlton Fine Sandy Loam), B (Charlton-Hollis-Rock outcrop & Hollis-Rock Outcrop-Charlton complex), C (Paxton Fine Sandy Loam) & D (Swansea Muck, Freetown Muck, Ridgebury Fine Sandy Loam & Whitman Fine Sandy Loam).

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Soils belonging to group B have a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Soils belonging to group D have a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Please refer to Appendix C for further information regarding the soils on-site & existing test hole data.

1.5 Proposed Stormwater Management System

Runoff from the proposed development will be conveyed and treated through a combination of Best Management Practices (BMP's). The following is a brief discussion of each conveyance and treatment BMP proposed.

Deep Sump Hooded Catch Basin

Deep sump hooded catch basins are proposed to convey the runoff from the proposed paved areas and roofs to the infiltration basins. These catch basins will discharge to manholes and conventional storm drains. Please refer to Sediment Loading Calculations in Appendix F.

Infiltration Basin

The infiltration basins are designed to reduce the runoff rates and increase the groundwater recharge rates. Sediment forebays designed at the entrance of each basin were included to decrease the velocity of flow and increase the settlement of heavy solids prior to the infiltration basin. Riprap will also be installed at the inlet of the sediment forebays and the outlet of the basins to control the overflow of stormwater into the adjacent wetlands and will reduce the potential for scouring. Please refer to Groundwater Mounding Calculations in Appendix F.

Wet Basin

The proposed reconstructed wet basin utilizes a permanent pool of water as the primary mechanism to treat stormwater runoff. The permanent pool has been set at an elevation to intercept the existing groundwater table to ensure sufficient permanent pool volume. The pool allows sediments to settle (including fine sediments) and removes soluble pollutants. The wet basin has been designed to provide additional dry storage capacity to control peak discharge rates. The wet basin allows incoming stormwater to displace the water present in the pool. This stormwater remains until displaced by runoff from another storm event. Increased retention time allows particulates, including fine sediments, to settle out of the water column. The permanent pool also serves to protect deposited sediments from resuspending during large storm events. Sediment forebays designed at the entrance of the basin was included to decrease the velocity of flow and increase the settlement of heavy solids prior to the infiltration basin. Riprap will also be installed at the inlet of the sediment forebays and the outlet of the basin to control the overflow of stormwater into the adjacent wetlands and will reduce the potential for scouring.

Grassed Swales

The grassed channels have been designed with a relatively flat (2.0%) slope to reduced runoff velocity and increase hydraulic residency time to promote particulate settling. The grassed channel has been provided with a sediment forebay for stormwater pretreatment. The grass swales will receive runoff from the proposed roofs along the townhomes & sheet flow from the entrance road. The entrance road has been designed with a 2% cross-slope to pitch towards a grassed swale system to convey the runoff to Infiltration Basin #1's sediment forebay for additional treatment.

1.6 Methods of Analysis

The United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil cover complex methods (TR-20) were employed to compute runoff quantities for the subject property. Watershed analysis demonstrate that natural drainage patterns drain toward the wetlands (design point). Two design points were modeled to analyze the total runoff from the site. HydroCAD 10.0 computer software was employed in this hydrologic analysis.

A comparison of pre- and post-development runoff quantities at the analysis points were performed in order to design a stormwater management system that will limit peak rates of runoff from the development to predevelopment levels for 24-hour rainfall events of 2-, 10-, 25- and 100-year return frequencies. Watershed boundaries for existing conditions are depicted on the attached Predevelopment Watershed Plan. Post-Developed watershed boundaries are indicated on the Post-development Watershed Plan.

2.0 Stormwater Standards Compliance

2.1 Standard 1 – Untreated Discharge

The stormwater management system for the proposed development will not result in any new discharges of untreated stormwater to wetland resource areas. Stormwater management structures have been designed such that there is no erosion or scour to wetland resource areas or waters of the Commonwealth.

2.2 Standard 2 – Peak Rate Attenuation

Hydrologic calculations for existing and proposed site conditions are included in Appendices D and E respectively. Calculations for 24-hour rainfall events of 2-, 10-, 25- and 100-year return frequencies are provided. The "NRCC Extreme Precipitation in New York & New England" rainfall rates were used in the hydraulic model. The following table provides a summary of peak rates of runoff related to each of these storms for the design point through which all runoff from

the subject property must flow. For all rainfall events considered, the proposed stormwater management system will control runoff from the development such that corresponding peak flows at the design point will be lower than predeveloped rates.

Table 1:	Wetland	Design Point	Runoff	Summary

	Pre-Developed (ft ³ / sec)	Post-Developed (ft ³ / sec)	
Design Point "A"			
2-Year	11.73	3.17	
10-Year	23.20	11.61	
25-Year	34.21	22.80	
100-Year	60.31	38.91	

2.3 Standard 3 – Recharge

The NRCS soil survey information indicates that all of the site is underlain by soils classified as belonging to Hydrologic Soil Groups A (Carlton Fine Sandy Loam), B (Charlton-Hollis-Rock outcrop & Hollis-Rock Outcrop-Charlton complex), C (Paxton Fine Sandy Loam) & D (Swansea Muck, Freetown Muck, Ridgebury Fine Sandy Loam & Whitman Fine Sandy Loam). Infiltration Basin 1 &2 have been designed with an exfiltration rate of 2.41 inches/hour (Loamy/Medium Sand) as confirmed by the attached in-situ soil testing logs. Please refer to Appendix C for further information regarding the soils on-site & existing test hole data.

Recharge calculations can be found in Appendix F.

2.4 Standard 4 – Water Quality

TSS removal calculations have been provided (Appendix F) showing that the proposed TSS removal efficiency from these areas will be >80% using the infiltration/wet basins with the sediment forebay & deep sump hooded catch basins for pretreatment. This BMP train is proposed for both infiltration basins along with the proposed wet basin (as documented). Four TSS calculation sheets have been provided. The sheet with a deep sump catch basin into a sediment forebay shows proper pre-treatment before entering the infiltration basins/wet basin. An additional pretreatment sheet has been included documenting the proper pretreatment for the collected sheet flow from the entrance road into the grassed channel / sediment forebay. The sheet with deep sump catch basin into a infiltration basin & wet basin shows there is enough TSS removal within the whole system.

2.5 Standard 5 – Land Uses with Higher Pollutant Loads

The current and proposed uses of the subject site do not constitute land use with higher potential pollutant load, thus Standard 5 does not apply to the proposed project.

2.6 Standard 6 –Critical Areas

The proposed project is located within the Petapawag Watershed. The proposed stormwater management system has been designed in accordance with the specifications and sizing methodologies in Volumes 2 and 3 of the Massachusetts Stormwater Handbook. Please refer to Appendix F for required water quality volumes of 1.0-inch times the proposed impervious area. Proper pre-treatment of at least 44% has been achieved with the proposed BMP trains (as recommended in Table CA 1 Standard 6 within the Massachusetts Stormwater Manual). Please refer to Appendix F for TSS calculations regarding the proposed treatment methods.

2.7 Standard 7 – Redevelopment

The proposed project does meet the standards to be considered a Redevelopment project, however the stormwater management system has been designed to meet the standards set forth for a new development project. All requirements have been met with this proposal.

2.8 Standard 8 – Construction Period Pollution Prevention Plan and Erosion and Sediment Control

The project is subject to the filing of an Environmental Protection Agency Notice of Intent (EPA NOI), and the work will be pursuant to the NPDES Construction General Permit for disturbance to an area greater than 1 acre, a copy of the Stormwater Pollution Prevention Plan (SWPPP) will be submitted prior to construction. The SWPPP will satisfy the Standard 8 Construction Period Pollution prevention. And Erosion and Sediment Control Plan is included in the attached Site Plans.

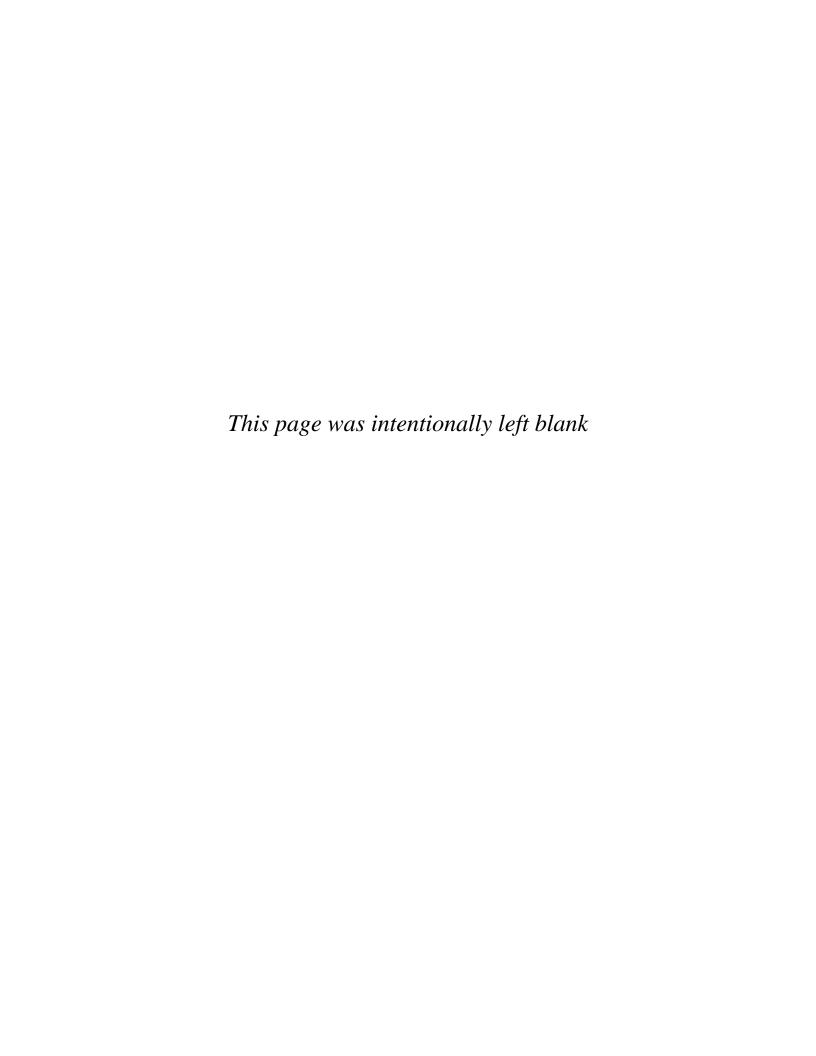
2.9 Standard 9 – Operation and Maintenance Plan

Refer to Appendix H for a complete copy of the Stormwater Operation and Maintenance Plan.

2.10 Standard 10 – Prohibition of Illicit Discharge

An illicit discharge statement will be prepared after approvals are received and prior to construction.

3.0 Appendices



Appendix A - Locus Map

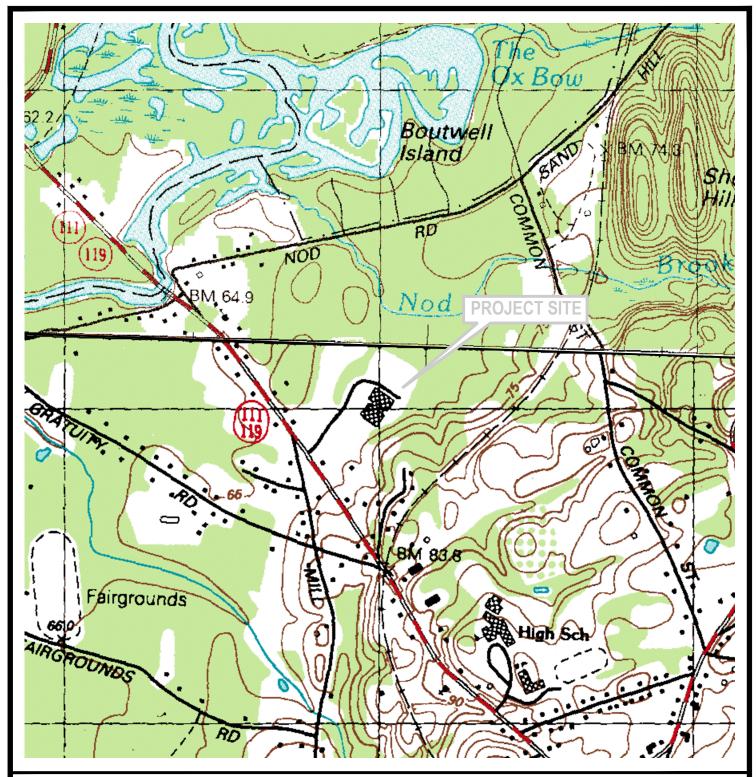


FIGURE 1 - LOCUS MAP

1"=1,000"

Prepared By: Dillis & Roy Civil Design Goup, Inc.

1 Main Street, Suite #1 Lunenburg, Massachusetts



CIVIL ENGINEERS LAND SURVEYORS
1 MAIN STREET, SUITE 1
LUNENBURG, MA 01462

WETLAND CONSULTANTS
PHONE: (978) 779-6091
www.dillisandroy.com

References: 1988 USGS Townsend & Ayer

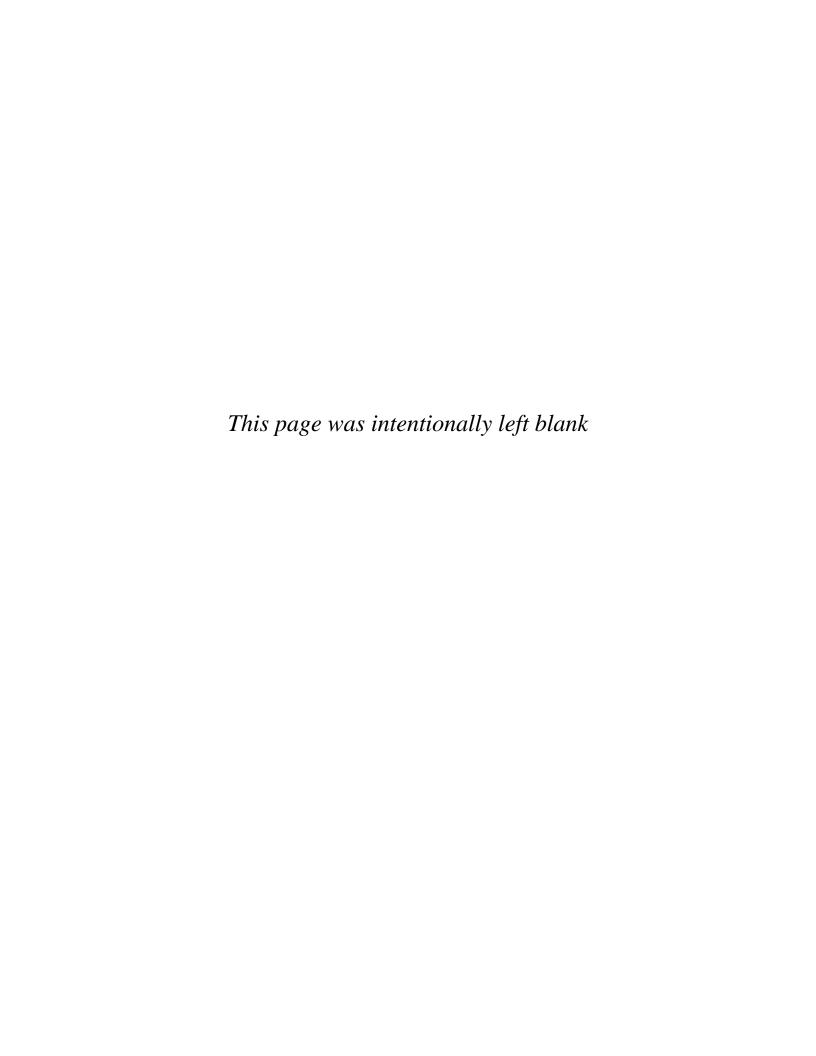
Massachusetts Topographic Map

Prepared For: Omni Properties

200 Baker Ave, Suite 303

Concord, MA

Appendix B - Checklist for Stormwater Report





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. 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 8²
- 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.

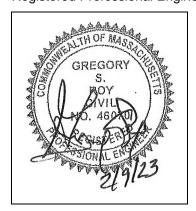
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



Signature and Date

Checklist

expect Type: Is the application for new development, redevelopment, or a mix of new and evelopment?
New development
Redevelopment
Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

env	rironmentally sensitive design and LID Techniques were considered during the planning and design of project:
	No disturbance to any Wetland Resource Areas
	Site Design Practices (e.g. clustered development, reduced frontage setbacks)
	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):
Sta	ndard 1: No New Untreated Discharges
	No new untreated discharges
	Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
	$\label{thm:continuous} \textbf{Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.}$



Checklist for Stormwater Report

Cł	necklist (continued)			
Sta	ndard 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.			
Sta	indard 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 <i>not</i> 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 <i>only</i> 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

Cł	necklist (continued)
Sta	ndard 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.
Sta	ndard 4: Water Quality
The • • • • • • • • • • • • • • • • • • •	E 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

Cł	Checklist (continued)					
Sta	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.					
Sta	ndard 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 <i>prior</i>					
	to the discharge of stormwater to the post-construction stormwater BMPs.					
Ш	The NPDES Multi-Sector General Permit does <i>not</i> 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 <i>not</i> 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.					
Sta	ndard 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)

	,
	andard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum tent 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.
Sta	andard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control
	Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the owing 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 Frosion and Sedimentation Controls;

Operation and Maintenance of Erosion and Sedimentation Controls;

the information set forth above has been included in the Stormwater Report.

☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing

Inspection Schedule; Maintenance Schedule;

Inspection and Maintenance Log Form.

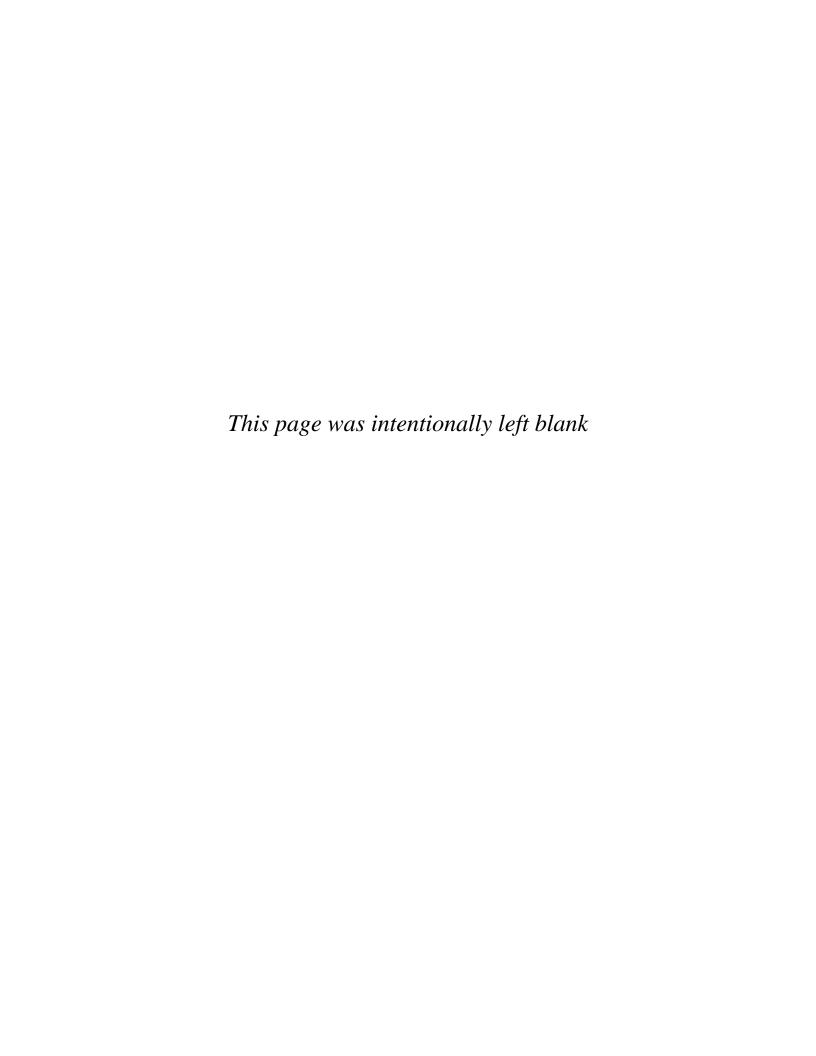


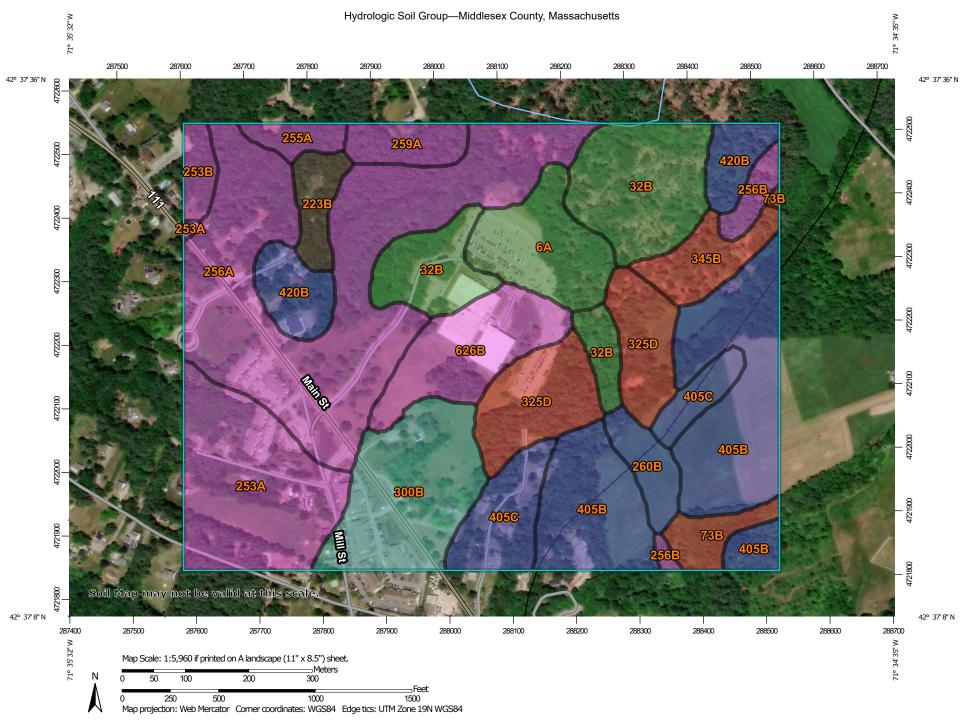
Checklist for Stormwater Report

Checklist (continued)

	Indard 8: Construction Period Pollution Prevention and Erosion and Sedimentation (ntinued)	Control
	The project is highly complex and information is included in the Stormwater Report that e it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Preventi Erosion and Sedimentation Control has <i>not</i> been included in the Stormwater Report but a submitted <i>before</i> land disturbance begins.	on and
	The project is <i>not</i> covered by a NPDES Construction General Permit.	
	The project is covered by a NPDES Construction General Permit and a copy of the SWPI Stormwater Report.	PP is in the
	The project is covered by a NPDES Construction General Permit but no SWPPP been su The SWPPP will be submitted BEFORE land disturbance begins.	bmitted.
Sta	indard 9: Operation and Maintenance Plan	
	The Post Construction Operation and Maintenance Plan is included in the Stormwater Reincludes the following information:	port and
	☐ 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 St Report includes the following submissions:	ormwater
	A copy of the legal instrument (deed, homeowner's association, utility trust or other legal that establishes the terms of and legal responsibility for the operation and maintenance project site stormwater BMPs;	
	A plan and easement deed that allows site access for the legal entity to operate and BMP functions.	maintain
Sta	ndard 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 <i>prior to</i> the any stormwater to post-construction BMPs.	discharge of

Appendix C - Soils Data





MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:25.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D Soil Rating Polygons Enlargement of maps beyond the scale of mapping can cause Not rated or not available Α misunderstanding of the detail of mapping and accuracy of soil **Water Features** line placement. The maps do not show the small areas of A/D contrasting soils that could have been shown at a more detailed Streams and Canals Transportation B/D Rails ---Please rely on the bar scale on each map sheet for map measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service **US Routes** Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available -Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the Aerial Photography Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: Middlesex County, Massachusetts Survey Area Data: Version 20, Jun 9, 2020 Soil map units are labeled (as space allows) for map scales 1:50.000 or larger. Not rated or not available Date(s) aerial images were photographed: May 22, 2015—Jun 14. 2017 **Soil Rating Points** The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background A/D imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. B/D

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	A/D	7.7	4.7%
32B	Wareham loamy fine sand, 0 to 5 percent slopes	A/D	17.1	10.4%
73B	Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	D	2.6	1.6%
223B	Scio very fine sandy loam, 3 to 8 percent slopes	B/D	2.8	1.7%
253A	Hinckley loamy sand, 0 to 3 percent slopes	А	15.1	9.2%
253B	Hinckley loamy sand, 3 to 8 percent slopes	А	1.8	1.1%
255A	Windsor loamy sand, 0 to 3 percent slopes	А	1.8	1.1%
256A	Deerfield loamy fine sand, 0 to 3 percent slopes	A	34.5	21.0%
256B	Deerfield loamy fine sand, 3 to 8 percent slopes	A	2.0	1.2%
259A	Carver loamy coarse sand, 0 to 3 percent slopes	A	3.1	1.9%
260B	Sudbury fine sandy loam, 3 to 8 percent slopes	В	2.9	1.8%
300B	Montauk fine sandy loam, 3 to 8 percent slopes	С	12.3	7.5%
325D	Newport channery fine sandy loam, 8 to 25 percent slopes	D	11.5	7.0%
345B	Pittstown silt loam, 3 to 8 percent slopes	D	4.1	2.5%
405B	Charlton fine sandy loam, 3 to 8 percent slopes	В	23.2	14.1%
405C	Charlton fine sandy loam, 8 to 15 percent slopes	В	7.4	4.5%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
420B	Canton fine sandy loam, 3 to 8 percent slopes	В	6.1	3.7%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	A	8.4	5.1%
Totals for Area of Interest			164.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

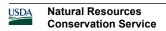
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher





Commonwealth of Massachusetts

City/Town of Bolton

Form 11 - Soil Suitability Assessment of On-Site Sewage Disposal

Deep Observation Hole Number:

		1			· · · · · · · · · · · · · · · · · · ·		_	
Addition	.			400	8	12	()	Depth (In)
Additional Notes:				0	NA DE	AP		Soil
				2546/4	8/24/5 9/5 what	104 to 3/4	Moist (Munsell)	Soil Matrix: Color-
u			X/EEP/				Depth	Redo
			ug / Sta		30:		Color	Redoximorphic Features (mottles)
			KLEEPING / STYLOING XLATER @66		+50		Percent	atures
			XIDTEL	Swo	57	25	(USDA)	Soil Texture
			990				Gravel	Coarse Fragments % by Volume
			•			l	Cobbles & Stones	
			9				Silucture	
),						(Moist)	Soil
								Other



Commonwealth of Massachusetts

City/Town of Bolton

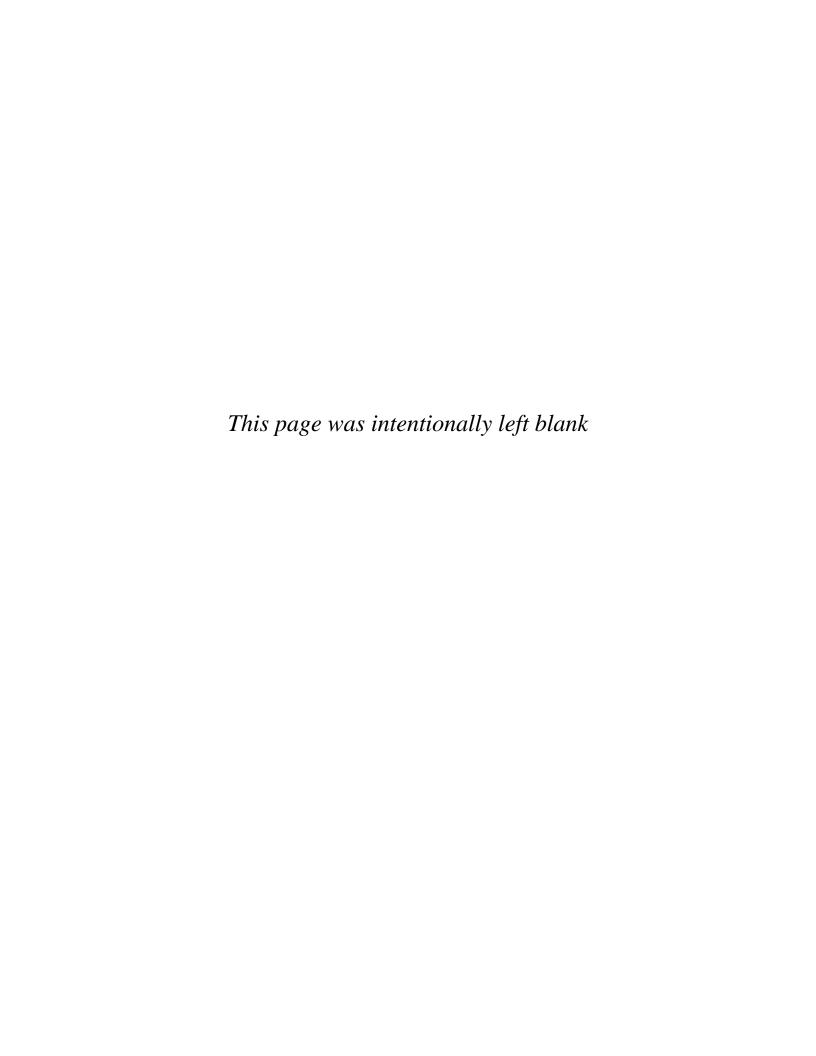
Form 11 - Soil Suitability Assessment of On-Site Sewage Disposal

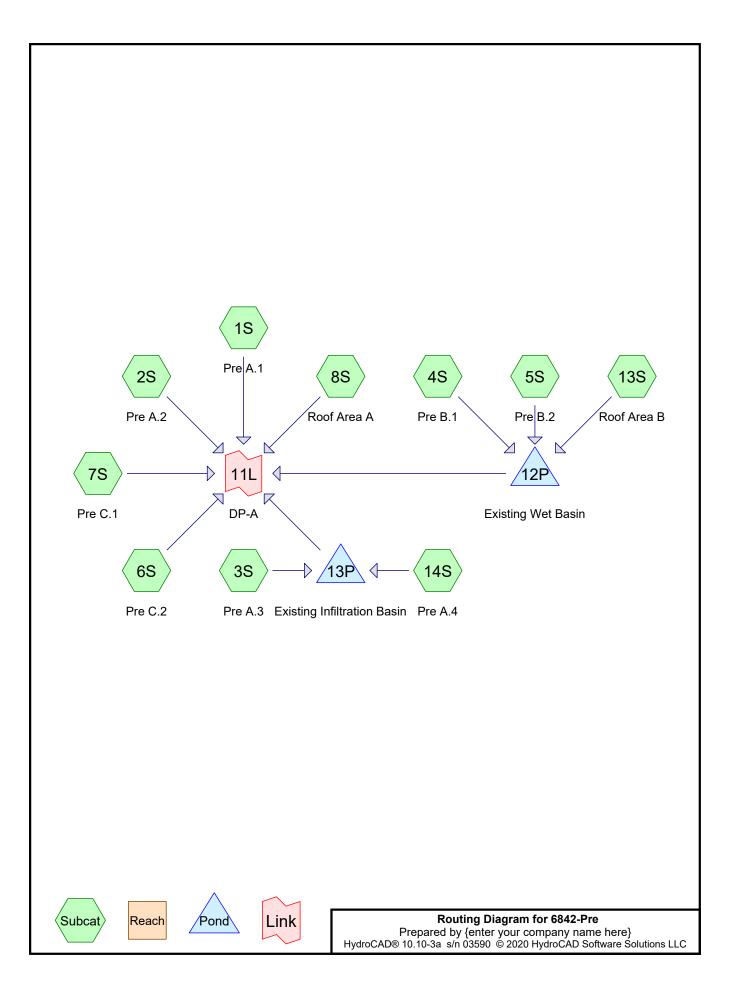
456

Deep Observation Hole Number:

		4				2	2	48 36		
					15 35 July 2018	39 29	36	Depth (In.)		
		dition				20	8	00		,
		Additional Notes:				0	QQ E	MIX MIN		Soil Horizon/I aver
6 65	3	2				2546/4	र्ड सम्ब	10/23/4	Moist (Munsell)	Soil Matrix: Color-
W80 102	1000 1000 1000 1000 1000 1000 1000 100	WED 24)			66.		Depth	Redo
2	90	4					2/2 2/8		Color	Redoximorphic Features (mottles)
							1 50		Percent	eatures
						-	,		(USDA)	Soil
									Gravel	Coarse Fragments % by Volume
									Cobbles & Stones	
					· I				Ollactale	
			((Moist)	Soil
		2								Other

Appendix D - Existing Conditions Hydrologic Calculations





Primary=11.73 cfs 2.079 af

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Page 2

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre A.1	Runoff Area=242,230 sf 49.29% Impervious Runoff Depth=0.96" Flow Length=298' Tc=10.8 min CN=75 Runoff=4.98 cfs 0.445 af
Subcatchment 2S: Pre A.2	Runoff Area=289,668 sf 0.00% Impervious Runoff Depth=0.02" Flow Length=658' Tc=28.0 min CN=44 Runoff=0.01 cfs 0.009 af
Subcatchment 3S: Pre A.3	Runoff Area=19,199 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=1.25 cfs 0.102 af
Subcatchment 4S: Pre B.1	Runoff Area=220,300 sf 66.26% Impervious Runoff Depth=1.98" Flow Length=736' Tc=24.4 min CN=90 Runoff=7.24 cfs 0.836 af
Subcatchment 5S: Pre B.2 Flow Lengt	Runoff Area=71,871 sf 5.57% Impervious Runoff Depth=0.47" h=416' Tc=12.4 min UI Adjusted CN=64 Runoff=0.50 cfs 0.064 af
Subcatchment 6S: Pre C.2	Runoff Area=100,825 sf 0.00% Impervious Runoff Depth=0.40" Flow Length=364' Tc=16.2 min CN=62 Runoff=0.49 cfs 0.077 af
Subcatchment 7S: Pre C.1	Runoff Area=258,507 sf 5.40% Impervious Runoff Depth=0.22" Flow Length=754' Tc=15.2 min CN=56 Runoff=0.46 cfs 0.109 af
Subcatchment 8S: Roof Area A	Runoff Area=71,756 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=4.68 cfs 0.380 af
Subcatchment 13S: Roof Area B	Runoff Area=29,814 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=1.94 cfs 0.158 af
Subcatchment 14S: Pre A.4	Runoff Area=31,394 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=33 Runoff=0.00 cfs 0.000 af
Pond 12P: Existing Wet Basin 15.0" Round	Peak Elev=214.82' Storage=10,111 cf Inflow=8.44 cfs 1.059 af d Culvert n=0.013 L=517.0' S=0.0011 '/' Outflow=3.51 cfs 1.058 af
Pond 13P: Existing Infiltration Basin Discarded=0.22	Peak Elev=212.92' Storage=1,264 cf Inflow=1.25 cfs 0.102 af cfs 0.100 af Primary=0.03 cfs 0.001 af Outflow=0.25 cfs 0.102 af
Link 11L: DP-A	Inflow=11.73 cfs 2.079 af

Total Runoff Area = 30.660 ac Runoff Volume = 2.180 af Average Runoff Depth = 0.85" 69.74% Pervious = 21.383 ac 30.26% Impervious = 9.277 ac

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Summary for Subcatchment 1S: Pre A.1

Runoff = 4.98 cfs @ 12.16 hrs, Volume= 0.445 af, Depth= 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

A	rea (sf)	CN E	escription		
	71,903	98 F	aved park	ing, HSG A	1
	41,850	98 F	aved park	ing, HSG B	3
	45,336	39 >	75% Gras	s cover, Go	ood, HSG A
	77,493	61 >	75% Gras	s cover, Go	ood, HSG B
	485	98 L	Inconnecte	ed pavemei	nt, HSG A
	5,163	98 L	Inconnecte	ed pavemer	nt, HSG B
2	242,230	75 V	Veighted A	verage	
1	22,829	5	0.71% Per	vious Area	
1	19,401	4	9.29% Imp	ervious Ar	ea
	5,648	4	.73% Unco	onnected	
Tc	Length	Slope	Velocity	Capacity	Description
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)	
7.7	50	0.0100	0.11		Sheet Flow,
					Grass: Short n= 0.150 P2= 2.95"
2.9	223	0.0330	1.27		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
0.2	25	0.0081	1.83		Shallow Concentrated Flow,
					Paved Kv= 20.3 fps
10.8	298	Total			

Summary for Subcatchment 2S: Pre A.2

Runoff = 0.01 cfs @ 21.48 hrs, Volume= 0.009 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Area (sf)	CN	Description			
78,930	30	Woods, Good, HSG A			
49,074	55	Woods, Good, HSG B			
31,909	77	Woods, Good, HSG D			
116,373	39	>75% Grass cover, Good, HSG A			
13,268	61	>75% Grass cover, Good, HSG B			
114	80	>75% Grass cover, Good, HSG D			
289,668	44	Weighted Average			
289,668		100.00% Pervious Area			

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.0600	0.22		Sheet Flow,
21.0	536	0.0037	0.43		Grass: Short n= 0.150 P2= 2.95" Shallow Concentrated Flow,
21.0	330	0.0037	0.43		Short Grass Pasture Kv= 7.0 fps
3.2	72	0.0055	0.37		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
28.0	658	Total			

Summary for Subcatchment 3S: Pre A.3

Runoff = 1.25 cfs @ 12.09 hrs, Volume= 0.102 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

	Area (sf)	CN I	Description							
	19,199	98 I	Paved parking, HSG A							
	19,199	•	100.00% Impervious Area							
To (min	c Length) (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
6.0)				Direct Entry,					

Summary for Subcatchment 4S: Pre B.1

Runoff = 7.24 cfs @ 12.33 hrs, Volume= 0.836 af, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Area (sf)	CN	Description				
59,394	98	Paved parking, HSG A				
49,116	98	Paved parking, HSG B				
36,430	98	Paved parking, HSG D				
3,947	39	>75% Grass cover, Good, HSG A				
9,665	61	>75% Grass cover, Good, HSG B				
556	80	>75% Grass cover, Good, HSG D				
1,032	98	Unconnected pavement, HSG B				
60,160	77	Woods, Good, HSG D				
220,300	90	Weighted Average				
74,328		33.74% Pervious Area				
145,972		66.26% Impervious Area				
1,032		0.71% Unconnected				

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	19.0	50	0.0300	0.04		Sheet Flow,
						Woods: Dense underbrush n= 0.800 P2= 2.95"
	3.0	100	0.0500	0.56		Shallow Concentrated Flow,
						Forest w/Heavy Litter Kv= 2.5 fps
	2.4	586	0.0410	4.11		Shallow Concentrated Flow,
_						Paved Kv= 20.3 fps
	24 4	736	Total			

Summary for Subcatchment 5S: Pre B.2

0.50 cfs @ 12.23 hrs, Volume= 0.064 af, Depth= 0.47" Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

A	rea (sf)	CN /	Adj Desc	ription	
	16,037	61	>75%	% Grass co	ver, Good, HSG B
	15,072	80			ver, Good, HSG D
	2,551	98			avement, HSG B
	1,451	98			avement, HSG D
	32,793	55		ds, Good, I	
	3,967	77		ds, Good, I	HSG D
	71,871	65			ige, UI Adjusted
	67,869		_	3% Perviou	
	4,002			% Impervio	
	4,002		100.0	00% Uncon	nected
-	1	01	17.1	0: 1	December
Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	01 (F)
7.5	50	0.0780	0.11		Sheet Flow,
0.1	10	0.1000	1.58		Woods: Light underbrush n= 0.400 P2= 2.95"
0.1	10	0.1000	1.30		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	39	0.3230	2.84		Shallow Concentrated Flow,
0.2	33	0.5250	2.04		Woodland Kv= 5.0 fps
2.8	165	0.0380	0.97		Shallow Concentrated Flow,
2.0	100	0.0000	0.01		Woodland Kv= 5.0 fps
0.2	10	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
0.8	55	0.0520	1.14		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.0	87	0.1430	1.89		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
12.4	416	Total			

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Summary for Subcatchment 6S: Pre C.2

Runoff = 0.49 cfs @ 12.34 hrs, Volume= 0.077 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

	Α	rea (sf)	CN D	escription		
		26,537	55 V	Voods, Go	od, HSG B	
		2,127			od, HSG D	
		62,399				ood, HSG B
_		9,762	80 >	75% Gras	s cover, Go	ood, HSG D
	1	00,825	62 V	Veighted A	verage	
	1	00,825	1	00.00% Pe	ervious Are	a
	Тс	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	10.8	18	0.0160	0.03		Sheet Flow,
						Woods: Dense underbrush n= 0.800 P2= 2.95"
	2.5	33	0.0730	0.22		Sheet Flow,
		404	0.4440	0.00		Grass: Short n= 0.150 P2= 2.95"
	0.8	121	0.1440	2.66		Shallow Concentrated Flow,
	0.4	40	0.4700	0.40		Short Grass Pasture Kv= 7.0 fps
	0.1	10	0.1790	2.12		Shallow Concentrated Flow,
	0.0	4.4	0.4000	0.40		Woodland Kv= 5.0 fps
	0.3	41	0.1260	2.48		Shallow Concentrated Flow,
	1.5	125	0.0800	1.41		Short Grass Pasture Kv= 7.0 fps
	1.5	123	0.0000	1.41		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
	0.1	6	0.0170	0.91		Shallow Concentrated Flow,
	0.1	U	0.0170	0.91		Short Grass Pasture Kv= 7.0 fps
	0.0	5	0.0210	2.94		Shallow Concentrated Flow,
	0.0	3	0.0210	2.07		Paved Kv= 20.3 fps
	0.1	5	0.0190	0.96		Shallow Concentrated Flow,
	0.1	Ū	3.3100	3.00		Short Grass Pasture Kv= 7.0 fps
_	16.2	364	Total			
	10.2	004	· Otal			

Summary for Subcatchment 7S: Pre C.1

Runoff = 0.46 cfs @ 12.49 hrs, Volume= 0.109 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

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	Α	rea (sf)	CN E	Description		
		78,314	39 >	75% Gras	s cover, Go	ood, HSG A
	1	47,609	61 >	75% Gras	s cover, Go	ood, HSG B
		2,514	98 F	Roofs, HSG	ВВ	
		11,441	98 F	Paved park	ing, HSG B	
		18,629	55 V	Voods, Go	od, HSG B	
	2	58,507	56 V	Veighted A	verage	
	2	44,552	9	4.60% Per	vious Area	
		13,955	5	.40% Impe	ervious Area	a
	Tc	Length	Slope	Velocity		Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	1.9	10	0.1000	0.09		Sheet Flow,
						Woods: Light underbrush n= 0.400 P2= 2.95"
	2.7	40	0.0900	0.25		Sheet Flow,
						Grass: Short n= 0.150 P2= 2.95"
	1.1	120	0.0700	1.85		Shallow Concentrated Flow,
	۰		0.0050	4.07		Short Grass Pasture Kv= 7.0 fps
	0.5	36	0.0650	1.27		Shallow Concentrated Flow,
	4.0	475	0.0050	4.70		Woodland Kv= 5.0 fps
	1.6	175	0.0650	1.78		Shallow Concentrated Flow,
	0.0	F	0.0400	2.00		Short Grass Pasture Kv= 7.0 fps
	0.0	5	0.0190	2.80		Shallow Concentrated Flow,
	7.4	368	0.0140	0.83		Paved Kv= 20.3 fps
	1.4	300	0.0140	0.03		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
	15.0	751	Total			Short Grass Fasture TV-1.0 Ips
	15.2	754	Total			

Summary for Subcatchment 8S: Roof Area A

Runoff = 4.68 cfs @ 12.09 hrs, Volume= 0.380 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

A	rea (sf)	CN	Description		
	71,756	98	Roofs, HSG	βB	
	71,756		100.00% In	npervious A	\rea
Tc (min)	Length (feet)	Slope (ft/ft)	,	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 13S: Roof Area B

Runoff = 1.94 cfs @ 12.09 hrs, Volume= 0.158 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

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_	Ar	ea (sf)	CN E	Description						
_		29,814	98 F	Roofs, HSG B						
		29,814	1	00.00% Im	pervious A	Area				
_	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	6.0					Direct Entry.				

Summary for Subcatchment 14S: Pre A.4

Runoff 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

A	rea (sf)	CN	Description						
	10,963	39	>75% Grass cover, Good, HSG A						
	20,431	30	Woods, Go	od, HSG A					
	31,394	33	Weighted A						
	31,394		100.00% Pe	ervious Area	ea				
Tc	Length	Slope	e Velocity	Capacity	Description				
(min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
6.0					Direct Entry,				

Summary for Pond 12P: Existing Wet Basin

Inflow Area = 7.392 ac, 55.84% Impervious, Inflow Depth = 1.72" for 2-yr event

Inflow 8.44 cfs @ 12.31 hrs, Volume= 1.059 af

3.51 cfs @ 12.76 hrs, Volume= Outflow = 1.058 af, Atten= 58%, Lag= 26.7 min

Primary 3.51 cfs @ 12.76 hrs, Volume= 1.058 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 214.82' @ 12.76 hrs Surf.Area= 12,236 sf Storage= 10,111 cf

Plug-Flow detention time= 20.6 min calculated for 1.058 af (100% of inflow)

Center-of-Mass det. time= 20.6 min (842.1 - 821.5)

Volume	Invert Av	ail.Storage	Storage Descripti	ion		
#1	212.30'	64,778 cf	Custom Stage D	ata (Irregular) Lis	ted below (Recalc)
Elevation (feet)	Surf.Area (sq-ft		Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
212.30	50	75.0	0	0	50	
213.00	556	100.0	180	180	403	
214.00	5,786	393.0	2,712	2,892	11,901	
215.00	13,981	580.0	9,587	12,479	26,388	
216.00	19,970	757.0	16,887	29,366	45,232	
217.00	53,560	1,442.0	35,412	64,778	165,106	

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Device	Routing	Invert	Outlet Devices
#1	Primary	212.37'	15.0" Round Culvert L= 517.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 212.37' / 211.80' S= 0.0011 '/' Cc= 0.900
			n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.23 sf

Primary OutFlow Max=3.51 cfs @ 12.76 hrs HW=214.82' (Free Discharge) 1=Culvert (Barrel Controls 3.51 cfs @ 2.86 fps)

Summary for Pond 13P: Existing Infiltration Basin

Inflow Area = 1.161 ac, 37.95% Impervious, Inflow Depth = 1.05" for 2-yr event
Inflow = 1.25 cfs @ 12.09 hrs, Volume= 0.102 af
Outflow = 0.25 cfs @ 12.52 hrs, Volume= 0.102 af, Atten= 80%, Lag= 25.9 min
Discarded = 0.22 cfs @ 12.52 hrs, Volume= 0.100 af
Primary = 0.03 cfs @ 12.52 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 212.92' @ 12.52 hrs Surf.Area= 3,299 sf Storage= 1,264 cf

Plug-Flow detention time= 38.5 min calculated for 0.102 af (100% of inflow)

Center-of-Mass det. time= 38.5 min (796.3 - 757.8)

Volume	Inve	urt Δvai	I.Storage	Storage Description	2	
-						ad balaw (Danala)
#1	212.5	U	11,128 cf	Custom Stage Dat	ia (irregular)List	ed below (Recalc)
Elevatio	n	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	t)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
212.5	0	2,793	372.0	0	0	2,793
213.0	0	3,407	450.0	1,547	1,547	7,899
214.0	0	4,790	473.0	4,079	5,626	9,651
215.0	0	6,246	497.0	5,502	11,128	11,566
Device	Routing	Inv	vert Outle	et Devices		
#1	Primary	212		" Round Culvert		
			L= 9	0.0' CPP, projecting	g, no headwall, l	Ke= 0.900
			Inlet	/ Outlet Invert= 212.	83' / 210.39' S=	= 0.0271 '/' Cc= 0.900
			n= 0	.013, Flow Area= 1.	23 sf	
#2	Discarde	d 212	.50' 2.41	0 in/hr Exfiltration of	over Surface are	ea
			Cond	ductivity to Groundwa	ater Elevation =	210.40'
#3	Device 1	212				ted to weir flow at low heads

Discarded OutFlow Max=0.22 cfs @ 12.52 hrs HW=212.92' (Free Discharge) = 2=Exfiltration (Controls 0.22 cfs)

Primary OutFlow Max=0.03 cfs @ 12.52 hrs HW=212.92' (Free Discharge)

1=Culvert (Inlet Controls 0.03 cfs @ 0.78 fps)

3=Orifice/Grate (Passes 0.03 cfs of 0.07 cfs potential flow)

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Summary for Link 11L: DP-A

Inflow Area = 30.660 ac, 30.26% Impervious, Inflow Depth = 0.81" for 2-yr event

Inflow = 11.73 cfs @ 12.13 hrs, Volume= 2.079 af

Primary = 11.73 cfs @ 12.13 hrs, Volume= 2.079 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Primary=23.20 cfs 4.064 af

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

,	5 ,
Subcatchment 1S: Pre A.1	Runoff Area=242,230 sf 49.29% Impervious Runoff Depth=2.00" Flow Length=298' Tc=10.8 min CN=75 Runoff=10.94 cfs 0.928 af
Subcatchment 2S: Pre A.2	Runoff Area=289,668 sf 0.00% Impervious Runoff Depth=0.25" Flow Length=658' Tc=28.0 min CN=44 Runoff=0.35 cfs 0.136 af
Subcatchment 3S: Pre A.3	Runoff Area=19,199 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=1.87 cfs 0.154 af
Subcatchment 4S: Pre B.1	Runoff Area=220,300 sf 66.26% Impervious Runoff Depth=3.34" Flow Length=736' Tc=24.4 min CN=90 Runoff=11.97 cfs 1.407 af
Subcatchment 5S: Pre B.2 Flow Length	Runoff Area=71,871 sf 5.57% Impervious Runoff Depth=1.23" th=416' Tc=12.4 min UI Adjusted CN=64 Runoff=1.73 cfs 0.169 af
Subcatchment 6S: Pre C.2	Runoff Area=100,825 sf 0.00% Impervious Runoff Depth=1.11" Flow Length=364' Tc=16.2 min CN=62 Runoff=1.92 cfs 0.213 af
Subcatchment 7S: Pre C.1	Runoff Area=258,507 sf 5.40% Impervious Runoff Depth=0.77" Flow Length=754' Tc=15.2 min CN=56 Runoff=2.95 cfs 0.379 af
Subcatchment 8S: Roof Area A	Runoff Area=71,756 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=6.98 cfs 0.577 af
Subcatchment 13S: Roof Area B	Runoff Area=29,814 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=2.90 cfs 0.240 af
Subcatchment 14S: Pre A.4	Runoff Area=31,394 sf 0.00% Impervious Runoff Depth=0.01" Tc=6.0 min CN=33 Runoff=0.00 cfs 0.000 af
Pond 12P: Existing Wet Basin 15.0" Roun	Peak Elev=215.66' Storage=22,873 cf Inflow=14.49 cfs 1.816 af ad Culvert n=0.013 L=517.0' S=0.0011 '/' Outflow=4.26 cfs 1.816 af
Pond 13P: Existing Infiltration Basin Discarded=0.25	Peak Elev=213.13' Storage=2,008 cf Inflow=1.87 cfs 0.155 af 5 cfs 0.141 af Primary=0.13 cfs 0.014 af Outflow=0.38 cfs 0.155 af
Link 11L: DP-A	Inflow=23.20 cfs 4.064 af

Total Runoff Area = 30.660 ac Runoff Volume = 4.205 af Average Runoff Depth = 1.65" 69.74% Pervious = 21.383 ac 30.26% Impervious = 9.277 ac

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Summary for Subcatchment 1S: Pre A.1

Runoff = 10.94 cfs @ 12.16 hrs, Volume= 0.928 af, Depth= 2.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

A	rea (sf)	CN E	escription					
	71,903	98 F	Paved parking, HSG A					
	41,850	98 F	aved park	ing, HSG B	3			
	45,336	39 >	75% Gras	s cover, Go	ood, HSG A			
	77,493	61 >	75% Gras	s cover, Go	ood, HSG B			
	485			ed pavemei	,			
	5,163	98 L	Inconnecte	ed pavemer	nt, HSG B			
2	242,230	75 V	Veighted A	verage				
1	22,829	5	0.71% Per	vious Area	l e e e e e e e e e e e e e e e e e e e			
1	19,401			ervious Ar	ea			
	5,648	4	.73% Unco	onnected				
_				_				
Tc	Length	Slope	Velocity	Capacity	Description			
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)				
7.7	50	0.0100	0.11		Sheet Flow,			
					Grass: Short n= 0.150 P2= 2.95"			
2.9	223	0.0330	1.27		Shallow Concentrated Flow,			
					Short Grass Pasture Kv= 7.0 fps			
0.2	25	0.0081	1.83		Shallow Concentrated Flow,			
					Paved Kv= 20.3 fps			
10.8	298	Total						

Summary for Subcatchment 2S: Pre A.2

Runoff = 0.35 cfs @ 12.76 hrs, Volume= 0.136 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Area (sf)	CN	Description			
78,930	30	Woods, Good, HSG A			
49,074	55	Woods, Good, HSG B			
31,909	77	Woods, Good, HSG D			
116,373	39	>75% Grass cover, Good, HSG A			
13,268	61	>75% Grass cover, Good, HSG B			
114	80	>75% Grass cover, Good, HSG D			
289,668	44	Weighted Average			
289,668		100.00% Pervious Area			

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
_	3.8	50	0.0600	0.22		Sheet Flow,
						Grass: Short n= 0.150 P2= 2.95"
	21.0	536	0.0037	0.43		Shallow Concentrated Flow,
						Short Grass Pasture Kv= 7.0 fps
	3.2	72	0.0055	0.37		Shallow Concentrated Flow,
_						Woodland Kv= 5.0 fps
	28.0	658	Total			

Summary for Subcatchment 3S: Pre A.3

Runoff = 1.87 cfs @ 12.09 hrs, Volume= 0.154 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

_	Α	rea (sf)	CN	Description					
		19,199	98	Paved parking, HSG A					
		19,199		100.00% Impervious Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
	6.0					Direct Entry,			

Summary for Subcatchment 4S: Pre B.1

Runoff = 11.97 cfs @ 12.33 hrs, Volume= 1.407 af, Depth= 3.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Area (sf)	CN	Description
59,394	98	Paved parking, HSG A
49,116	98	Paved parking, HSG B
36,430	98	Paved parking, HSG D
3,947	39	>75% Grass cover, Good, HSG A
9,665	61	>75% Grass cover, Good, HSG B
556	80	>75% Grass cover, Good, HSG D
1,032	98	Unconnected pavement, HSG B
60,160	77	Woods, Good, HSG D
220,300	90	Weighted Average
74,328		33.74% Pervious Area
145,972		66.26% Impervious Area
1,032		0.71% Unconnected

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	19.0	50	0.0300	0.04		Sheet Flow,
						Woods: Dense underbrush n= 0.800 P2= 2.95"
	3.0	100	0.0500	0.56		Shallow Concentrated Flow,
						Forest w/Heavy Litter Kv= 2.5 fps
	2.4	586	0.0410	4.11		Shallow Concentrated Flow,
_						Paved Kv= 20.3 fps
	24 4	736	Total			

Summary for Subcatchment 5S: Pre B.2

1.73 cfs @ 12.19 hrs, Volume= 0.169 af, Depth= 1.23" Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

A	rea (sf)	CN /	Adj Desc	ription	
	16,037	61			ver, Good, HSG B
	15,072	80			ver, Good, HSG D
	2,551	98			avement, HSG B
	1,451	98			avement, HSG D
	32,793	55		ds, Good, H	
	3,967	77	Woo	ds, Good, I	HSG D
	71,871	65	64 Weig	hted Avera	nge, UI Adjusted
	67,869		94.43	3% Perviou	is Area
	4,002			% Impervio	
	4,002		100.0	00% Uncon	nected
Tc	Length	Slope	Velocity	Capacity	Description
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)	
7.5	50	0.0780	0.11		Sheet Flow,
					Woods: Light underbrush n= 0.400 P2= 2.95"
0.1	10	0.1000	1.58		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
0.2	39	0.3230	2.84		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
2.8	165	0.0380	0.97		Shallow Concentrated Flow,
0.0	40	0.0000	0.74		Woodland Kv= 5.0 fps
0.2	10	0.0200	0.71		Shallow Concentrated Flow,
0.0		0.0500	4.44		Woodland Kv= 5.0 fps
8.0	55	0.0520	1.14		Shallow Concentrated Flow,
0.0	0.7	0.4420	1.00		Woodland Kv= 5.0 fps
8.0	87	0.1430	1.89		Shallow Concentrated Flow,
40.4	440	T.4.1			Woodland Kv= 5.0 fps
12.4	416	Total			

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Summary for Subcatchment 6S: Pre C.2

Runoff = 1.92 cfs @ 12.26 hrs, Volume= 0.213 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

A	rea (sf)	CN D	escription						
	26,537	55 Woods, Good, HSG B							
	2,127			od, HSG D					
	62,399				ood, HSG B				
	9,762	80 >	75% Gras	s cover, Go	cover, Good, HSG D				
	00,825			eighted Average					
1	00,825	1	00.00% Pe	ervious Are	a				
_		-							
Tc	Length	Slope	Velocity	Capacity	Description				
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)					
10.8	18	0.0160	0.03		Sheet Flow,				
0.5	00	0.0700	0.00		Woods: Dense underbrush n= 0.800 P2= 2.95"				
2.5	33	0.0730	0.22		Sheet Flow, Grass: Short n= 0.150 P2= 2.95"				
0.8	121	0.1440	2.66						
0.0	121	0.1440	2.00		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps				
0.1	10	0.1790	2.12		Shallow Concentrated Flow,				
0.1	10	0.1750	2.12		Woodland Kv= 5.0 fps				
0.3	41	0.1260	2.48		Shallow Concentrated Flow,				
0.0	• •	000			Short Grass Pasture Kv= 7.0 fps				
1.5	125	0.0800	1.41		Shallow Concentrated Flow,				
					Woodland Kv= 5.0 fps				
0.1	6	0.0170	0.91		Shallow Concentrated Flow,				
					Short Grass Pasture Kv= 7.0 fps				
0.0	5	0.0210	2.94		Shallow Concentrated Flow,				
					Paved Kv= 20.3 fps				
0.1	5	0.0190	0.96		Shallow Concentrated Flow,				
					Short Grass Pasture Kv= 7.0 fps				
16.2	364	Total							

Summary for Subcatchment 7S: Pre C.1

Runoff = 2.95 cfs @ 12.27 hrs, Volume= 0.379 af, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

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		ON 5							
	Area (sf)		escription)						
	78,314								
	147,609	61 >	75% Gras	s cover, Go	ood, HSG B				
	2,514		Roofs, HSG						
	11,441			ing, HSG B					
	18,629	55 V	<u>Voods, Go</u>	od, HSG B					
	258,507	56 V	Veighted A	verage					
	244,552	9	4.60% Pei	vious Area					
	13,955	5	.40% Impe	ervious Area	a				
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
1.9	10	0.1000	0.09		Sheet Flow,				
					Woods: Light underbrush n= 0.400 P2= 2.95"				
2.7	40	0.0900	0.25		Sheet Flow,				
					Grass: Short n= 0.150 P2= 2.95"				
1.1	120	0.0700	1.85		Shallow Concentrated Flow,				
					Short Grass Pasture Kv= 7.0 fps				
0.5	36	0.0650	1.27		Shallow Concentrated Flow,				
					Woodland Kv= 5.0 fps				
1.6	175	0.0650	1.78		Shallow Concentrated Flow,				
					Short Grass Pasture Kv= 7.0 fps				
0.0	5	0.0190	2.80		Shallow Concentrated Flow,				
					Paved Kv= 20.3 fps				
7.4	368	0.0140	0.83		Shallow Concentrated Flow,				
					Short Grass Pasture Kv= 7.0 fps				
15.2	754	Total							

Summary for Subcatchment 8S: Roof Area A

Runoff = 6.98 cfs @ 12.09 hrs, Volume= 0.577 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Area (sf)	CN	Description		
71,756	98	Roofs, HSG	В	
71,756		100.00% Im	pervious A	Area
Tc Length (min) (feet)	Slope (ft/ft	,	Capacity (cfs)	Description
6.0				Direct Entry,

Summary for Subcatchment 13S: Roof Area B

Runoff = 2.90 cfs @ 12.09 hrs, Volume= 0.240 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

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Α	rea (sf)	CN [Description						
	29,814	98 F	Roofs, HSG B						
	29,814	•	100.00% Impervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
6.0					Direct Entry.				

Summary for Subcatchment 14S: Pre A.4

Runoff = 0.00 cfs @ 23.22 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

A	rea (sf)	CN	Description		
	10,963	39	>75% Gras	s cover, Go	ood, HSG A
	20,431	30	Woods, Go	od, HSG A	
	31,394	33	Weighted A	verage	
	31,394		100.00% Pe	ervious Area	ea
Tc	Length	Slope	e Velocity	Capacity	Description
(min)	(feet)	(ft/ft) (ft/sec)	(cfs)	
6.0					Direct Entry,

Summary for Pond 12P: Existing Wet Basin

Inflow Area = 7.392 ac, 55.84% Impervious, Inflow Depth = 2.95" for 10-yr event

Inflow = 14.49 cfs @ 12.30 hrs, Volume= 1.816 af

Outflow = 4.26 cfs @ 12.88 hrs, Volume= 1.816 af, Atten= 71%, Lag= 34.9 min

Primary = 4.26 cfs @ 12.88 hrs, Volume= 1.816 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.66' @ 12.88 hrs Surf.Area= 17,789 sf Storage= 22,873 cf

Plug-Flow detention time= 41.1 min calculated for 1.816 af (100% of inflow)

Center-of-Mass det. time= 40.8 min (850.6 - 809.8)

Volume	Invert	Avail	l.Storage	Storage Description	on		
#1	212.30'	6	64,778 cf	Custom Stage Da	ata (Irregular) List	ed below (Recalc))
Elevation (feet)		.Area sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
212.30		50	75.0	0	0	50	
213.00		556	100.0	180	180	403	
214.00	Į	5,786	393.0	2,712	2,892	11,901	
215.00	13	3,981	580.0	9,587	12,479	26,388	
216.00	19	9,970	757.0	16,887	29,366	45,232	
217.00	53	3,560	1,442.0	35,412	64,778	165,106	

#3

Device 1

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Device	Routing	Invert	Outlet Devices			
#1	Primary	212.37'	15.0" Round Culvert			
			L= 517.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 212.37' / 211.80' S= 0.0011 '/' Cc= 0.900			
			n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.23 sf			

Primary OutFlow Max=4.26 cfs @ 12.88 hrs HW=215.66' (Free Discharge) 1=Culvert (Barrel Controls 4.26 cfs @ 3.47 fps)

Summary for Pond 13P: Existing Infiltration Basin

Inflow Area = 1.161 ac, 37.95% Impervious, Inflow Depth = 1.60" for 10-yr event

Inflow = 1.87 cfs @ 12.09 hrs, Volume= 0.155 af

Outflow = 0.38 cfs @ 12.51 hrs, Volume= 0.155 af, Atten= 80%, Lag= 25.3 min

Discarded = 0.13 cfs @ 12.51 hrs, Volume= 0.141 af

Primary = 0.13 cfs @ 12.51 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 213.13' @ 12.51 hrs Surf.Area= 3,576 sf Storage= 2,008 cf

Plug-Flow detention time= 46.5 min calculated for 0.155 af (100% of inflow) Center-of-Mass det. time= 46.4 min (797.9 - 751.5)

Volume	Inve	ert Avail	l.Storage	ge Storage Description					
#1	212.5	0' 1	11,128 cf	Custom Stage Data (Irregular)Listed below (Recalc)					
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)			
212.50	0	2,793	372.0	0	0	2,793			
213.0	0	3,407	450.0	1,547	1,547	7,899			
214.0	0	4,790	473.0	4,079	5,626	9,651			
215.0	0	6,246	497.0	5,502	11,128	11,566			
Device Routing Invert (ert Outle	et Devices					
#1	Primary	212.	.83' 15.0 '	5.0" Round Culvert					
	•		L= 9	L= 90.0' CPP, projecting, no headwall, Ke= 0.900					
			Inlet	Inlet / Outlet Invert= 212.83' / 210.39' S= 0.0271 '/' Cc= 0.900					
			n= 0	.013, Flow Area= 1	.23 sf				
#2	Discarde	d 212.		0 in/hr Exfiltration ductivity to Groundy					

3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.25 cfs @ 12.51 hrs HW=213.13' (Free Discharge) 2=Exfiltration (Controls 0.25 cfs)

Primary OutFlow Max=0.13 cfs @ 12.51 hrs HW=213.13' (Free Discharge)
1=Culvert (Passes 0.13 cfs of 0.34 cfs potential flow)
3=Orifice/Grate (Orifice Controls 0.13 cfs @ 2.64 fps)

212.63'

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Summary for Link 11L: DP-A

Inflow Area = 30.660 ac, 30.26% Impervious, Inflow Depth = 1.59" for 10-yr event

Inflow = 23.20 cfs @ 12.15 hrs, Volume= 4.064 af

Primary = 23.20 cfs @ 12.15 hrs, Volume= 4.064 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre A.1	Runoff Area=242,230 sf 49.29% Impervious Runoff Depth=2.90" Flow Length=298' Tc=10.8 min CN=75 Runoff=15.98 cfs 1.345 af
Subcatchment 2S: Pre A.2	Runoff Area=289,668 sf 0.00% Impervious Runoff Depth=0.57" Flow Length=658' Tc=28.0 min CN=44 Runoff=1.46 cfs 0.318 af
Subcatchment 3S: Pre A.3	Runoff Area=19,199 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=2.34 cfs 0.195 af
Subcatchment 4S: Pre B.1	Runoff Area=220,300 sf 66.26% Impervious Runoff Depth=4.41" Flow Length=736' Tc=24.4 min CN=90 Runoff=15.63 cfs 1.858 af
Subcatchment 5S: Pre B.2 Flow Length	Runoff Area=71,871 sf 5.57% Impervious Runoff Depth=1.95" th=416' Tc=12.4 min UI Adjusted CN=64 Runoff=2.89 cfs 0.268 af
Subcatchment 6S: Pre C.2	Runoff Area=100,825 sf 0.00% Impervious Runoff Depth=1.79" Flow Length=364' Tc=16.2 min CN=62 Runoff=3.33 cfs 0.345 af
Subcatchment 7S: Pre C.1	Runoff Area=258,507 sf 5.40% Impervious Runoff Depth=1.34" Flow Length=754' Tc=15.2 min CN=56 Runoff=6.01 cfs 0.661 af
Subcatchment 8S: Roof Area A	Runoff Area=71,756 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=8.74 cfs 0.729 af
Subcatchment 13S: Roof Area B	Runoff Area=29,814 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=3.63 cfs 0.303 af
Subcatchment 14S: Pre A.4	Runoff Area=31,394 sf 0.00% Impervious Runoff Depth=0.10" Tc=6.0 min CN=33 Runoff=0.01 cfs 0.006 af
Pond 12P: Existing Wet Basin 15.0" Rour	Peak Elev=216.21' Storage=34,261 cf Inflow=19.29 cfs 2.429 af ad Culvert n=0.013 L=517.0' S=0.0011 '/' Outflow=4.69 cfs 2.429 af
Pond 13P: Existing Infiltration Basin Discarded=0.28	Peak Elev=213.31' Storage=2,667 cf Inflow=2.34 cfs 0.201 af 3 cfs 0.175 af Primary=0.16 cfs 0.026 af Outflow=0.45 cfs 0.201 af
Link 11L: DP-A	Inflow=34.21 cfs 5.853 af Primary=34.21 cfs 5.853 af

Total Runoff Area = 30.660 ac Runoff Volume = 6.029 af Average Runoff Depth = 2.36" 69.74% Pervious = 21.383 ac 30.26% Impervious = 9.277 ac

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Summary for Subcatchment 1S: Pre A.1

Runoff = 15.98 cfs @ 12.16 hrs, Volume= 1.345 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

A	rea (sf)	CN E	escription				
	71,903	98 F	aved park	ing, HSG A	\ \		
	41,850	98 F	aved park	ing, HSG B			
	45,336	39 >	75% Gras	s cover, Go	ood, HSG A		
	77,493	61 >	75% Gras	s cover, Go	ood, HSG B		
	485	98 L	Inconnecte	ed pavemer	nt, HSG A		
	5,163	98 L	Inconnecte	ed pavemer	nt, HSG B		
2	242,230	75 V	Veighted A	verage			
1	22,829	5	0.71% Per	vious Area			
1	19,401	4	49.29% Impervious Area				
	5,648	4	.73% Unco	onnected			
Tc	Length	Slope	Velocity	Capacity	Description		
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
7.7	50	0.0100	0.11		Sheet Flow,		
					Grass: Short n= 0.150 P2= 2.95"		
2.9	223	0.0330	1.27		Shallow Concentrated Flow,		
					Short Grass Pasture Kv= 7.0 fps		
0.2	25	0.0081	1.83		Shallow Concentrated Flow,		
					Paved Kv= 20.3 fps		
10.8	298	Total					

Summary for Subcatchment 2S: Pre A.2

Runoff = 1.46 cfs @ 12.60 hrs, Volume= 0.318 af, Depth= 0.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Area (sf)	CN	Description
78,930	30	Woods, Good, HSG A
49,074	55	Woods, Good, HSG B
31,909	77	Woods, Good, HSG D
116,373	39	>75% Grass cover, Good, HSG A
13,268	61	>75% Grass cover, Good, HSG B
114	80	>75% Grass cover, Good, HSG D
289,668	44	Weighted Average
289,668		100.00% Pervious Area

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
_	3.8	50	0.0600	0.22		Sheet Flow,
						Grass: Short n= 0.150 P2= 2.95"
	21.0	536	0.0037	0.43		Shallow Concentrated Flow,
						Short Grass Pasture Kv= 7.0 fps
	3.2	72	0.0055	0.37		Shallow Concentrated Flow,
_						Woodland Kv= 5.0 fps
	28.0	658	Total		•	

Summary for Subcatchment 3S: Pre A.3

Runoff = 2.34 cfs @ 12.09 hrs, Volume= 0.195 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

_	Α	rea (sf)	CN	Description						
		19,199	98	Paved parking, HSG A						
		19,199		100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	6.0					Direct Entry,				

Summary for Subcatchment 4S: Pre B.1

Runoff = 15.63 cfs @ 12.32 hrs, Volume= 1.858 af, Depth= 4.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Area (sf)	CN	Description
59,394	98	Paved parking, HSG A
49,116	98	Paved parking, HSG B
36,430	98	Paved parking, HSG D
3,947	39	>75% Grass cover, Good, HSG A
9,665	61	>75% Grass cover, Good, HSG B
556	80	>75% Grass cover, Good, HSG D
1,032	98	Unconnected pavement, HSG B
60,160	77	Woods, Good, HSG D
220,300	90	Weighted Average
74,328		33.74% Pervious Area
145,972		66.26% Impervious Area
1,032		0.71% Unconnected

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
_	19.0	50	0.0300	0.04		Sheet Flow, Woods: Dense underbrush n= 0.800 P2= 2.95"
	3.0	100	0.0500	0.56		Shallow Concentrated Flow,
	2.4	586	0.0410	4.11		Forest w/Heavy Litter Kv= 2.5 fps Shallow Concentrated Flow, Paved Kv= 20.3 fps
-	24.4	736	Total			

Summary for Subcatchment 5S: Pre B.2

2.89 cfs @ 12.19 hrs, Volume= Runoff 0.268 af, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

A	rea (sf)	CN /	Adj Desc	Description			
	16,037	61	>75%	√ Grass co	ver, Good, HSG B		
	15,072	80	>75%	% Grass co	ver, Good, HSG D		
	2,551	98	Unco	nnected pa	avement, HSG B		
	1,451	98	Unco	nnected pa	avement, HSG D		
	32,793	55		ds, Good, I			
	3,967	77	Woo	ds, Good, I	HSG D		
	71,871	65	64 Weig	hted Avera	ige, UI Adjusted		
	67,869		94.43	3% Perviou	is Area		
	4,002		5.579	% Impervio	us Area		
	4,002		100.0	00% Uncon	nected		
Tc	Length	Slope	Velocity	Capacity	Description		
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)			
7.5	50	0.0780	0.11		Sheet Flow,		
					Woods: Light underbrush n= 0.400 P2= 2.95"		
0.1	10	0.1000	1.58		Shallow Concentrated Flow,		
					Woodland Kv= 5.0 fps		
0.2	39	0.3230	2.84		Shallow Concentrated Flow,		
					Woodland Kv= 5.0 fps		
2.8	165	0.0380	0.97		Shallow Concentrated Flow,		
0.0	40	0.0000	0.74		Woodland Kv= 5.0 fps		
0.2	10	0.0200	0.71		Shallow Concentrated Flow,		
0.0		0.0500	4.44		Woodland Kv= 5.0 fps		
8.0	55	0.0520	1.14		Shallow Concentrated Flow,		
0.0	07	0.4420	1 00		Woodland Kv= 5.0 fps		
8.0	87	0.1430	1.89		Shallow Concentrated Flow,		
40.4	440	Tatal			Woodland Kv= 5.0 fps		
12.4	416	Total					

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Summary for Subcatchment 6S: Pre C.2

Runoff = 3.33 cfs @ 12.24 hrs, Volume= 0.345 af, Depth= 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

	A	rea (sf)	CN E	escription		
		26,537			od, HSG B	
		2,127			od, HSG D	
		62,399				ood, HSG B
		9,762	> 08	75% Gras	s cover, Go	ood, HSG D
	1	00,825	62 V	Veighted A	verage	
	1	00,825	1	00.00% Pe	ervious Area	a
	Тс	Length	Slope	Velocity	Capacity	Description
	nin)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
1	8.0	18	0.0160	0.03		Sheet Flow,
						Woods: Dense underbrush n= 0.800 P2= 2.95"
	2.5	33	0.0730	0.22		Sheet Flow,
						Grass: Short n= 0.150 P2= 2.95"
	8.0	121	0.1440	2.66		Shallow Concentrated Flow,
	0.4	40	0.4700	0.40		Short Grass Pasture Kv= 7.0 fps
	0.1	10	0.1790	2.12		Shallow Concentrated Flow,
	0.3	4.4	0.1260	0.40		Woodland Kv= 5.0 fps
	0.3	41	0.1260	2.48		Shallow Concentrated Flow,
	1.5	125	0.0800	1.41		Short Grass Pasture Kv= 7.0 fps Shallow Concentrated Flow,
	1.5	123	0.0000	1.41		Woodland Kv= 5.0 fps
	0.1	6	0.0170	0.91		Shallow Concentrated Flow,
	0.1	U	0.0170	0.01		Short Grass Pasture Kv= 7.0 fps
	0.0	5	0.0210	2.94		Shallow Concentrated Flow,
	• • •		0.02.0			Paved Kv= 20.3 fps
	0.1	5	0.0190	0.96		Shallow Concentrated Flow,
						Short Grass Pasture Kv= 7.0 fps
1	6.2	364	Total			· · · · · · · · · · · · · · · · · · ·

Summary for Subcatchment 7S: Pre C.1

Runoff = 6.01 cfs @ 12.24 hrs, Volume= 0.661 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

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Area (sf) CN Description						
	CN Description					
78,314 39 >75% Grass cover, Good, HSG A						
147,609 61 >75% Grass cover, Good, HSG B						
2,514 98 Roofs, HSG B						
11,441 98 Paved parking, HSG B						
18,629 55 Woods, Good, HSG B						
258,507 56 Weighted Average						
244,552 94.60% Pervious Area						
13,955 5.40% Impervious Area						
14,444						
Tc Length Slope Velocity Capacity Description						
(min) (feet) (ft/ft) (ft/sec) (cfs)						
1.9 10 0.1000 0.09 Sheet Flow,						
Woods: Light underbrush n= 0.400 P2= 2.9	5"					
2.7 40 0.0900 0.25 Sheet Flow ,						
Grass: Short n= 0.150 P2= 2.95"						
1.1 120 0.0700 1.85 Shallow Concentrated Flow,						
Short Grass Pasture Kv= 7.0 fps						
0.5 36 0.0650 1.27 Shallow Concentrated Flow,						
Woodland Kv= 5.0 fps						
1.6 175 0.0650 1.78 Shallow Concentrated Flow,						
Short Grass Pasture Kv= 7.0 fps						
0.0 5 0.0190 2.80 Shallow Concentrated Flow,						
Paved Kv= 20.3 fps						
7.4 368 0.0140 0.83 Shallow Concentrated Flow,						
Short Grass Pasture Kv= 7.0 fps						
15.2 754 Total						

Summary for Subcatchment 8S: Roof Area A

Runoff = 8.74 cfs @ 12.09 hrs, Volume= 0.729 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Area (sf)	CN	Description		
71,756	98	Roofs, HSG	В	
71,756		100.00% Im	pervious A	Area
Tc Length (min) (feet)	Slope (ft/ft	,	Capacity (cfs)	Description
6.0				Direct Entry,

Summary for Subcatchment 13S: Roof Area B

Runoff = 3.63 cfs @ 12.09 hrs, Volume= 0.303 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

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	Α	rea (sf)	CN E	Description				
		29,814	98 F	Roofs, HSG B				
		29,814	1	00.00% In	npervious A	Area		
_	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
	6.0					Direct Entry,		

Summary for Subcatchment 14S: Pre A.4

Runoff = 0.01 cfs @ 15.03 hrs, Volume= 0.006 af, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

A	rea (sf)	CN	Description			
	10,963	39	>75% Gras	s cover, Go	ood, HSG A	
	20,431	30	Woods, Good, HSG A			
	31,394	33	Weighted A	verage		
	31,394		100.00% Pe	ervious Area	ea	
Tc	Length	Slope	e Velocity	Capacity	Description	
(min)	(feet)	(ft/ft) (ft/sec)	(cfs)		
6.0					Direct Entry,	

Summary for Pond 12P: Existing Wet Basin

Inflow Area = 7.392 ac, 55.84% Impervious, Inflow Depth = 3.94" for 25-yr event

Inflow = 19.29 cfs @ 12.29 hrs, Volume= 2.429 af

Outflow = 4.69 cfs @ 12.97 hrs, Volume= 2.429 af, Atten= 76%, Lag= 40.3 min

Primary = 4.69 cfs @ 12.97 hrs, Volume= 2.429 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.21' @ 12.97 hrs Surf.Area= 25,805 sf Storage= 34,261 cf

Plug-Flow detention time= 58.1 min calculated for 2.427 af (100% of inflow)

Center-of-Mass det. time= 58.0 min (861.6 - 803.6)

Volume Invert Avail.Storage Storage Description

VOIGITIO	1111011	, wan.otorago	Otorago Bocompt	1011		
#1	212.30'	64,778 cf	Custom Stage D)ata (Irregular) List	ted below (Recalc))
Elevation (feet)	Surf.Aı (sq	rea Perim _I -ft) (feet		Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
212.30 213.00 214.00		50 75.0 556 100.0 786 393.0	180	0 180 2,892	50 403 11,901	
215.00 216.00 217.00	13,9 19,9 53,5	757.0	16,887	12,479 29,366 64,778	26,388 45,232 165,106	

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Device Routing Invert Outlet Devices	
#1 Primary 212.37' 15.0" Round Culvert L= 517.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 212.37' / 211.80' S= 0.0011 '/' Cc= 0. n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.23	

Primary OutFlow Max=4.69 cfs @ 12.97 hrs HW=216.21' (Free Discharge) 1=Culvert (Barrel Controls 4.69 cfs @ 3.82 fps)

Summary for Pond 13P: Existing Infiltration Basin

Inflow Area = 1.161 ac, 37.95% Impervious, Inflow Depth = 2.08" for 25-yr event 2.34 cfs @ 12.09 hrs, Volume= Inflow 0.201 af Outflow 0.45 cfs @ 12.52 hrs, Volume= 0.201 af, Atten= 81%, Lag= 26.2 min 0.28 cfs @ 12.52 hrs, Volume= Discarded = 0.175 af Primary 0.16 cfs @ 12.52 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 213.31' @ 12.52 hrs Surf.Area= 3,811 sf Storage= 2,667 cf

Plug-Flow detention time= 53.0 min calculated for 0.201 af (100% of inflow)

Center-of-Mass det. time= 53.0 min (809.5 - 756.5)

Volume	Inve	ert Avai	l.Storage	Storage Description	า	
#1	212.5	i0'	11,128 cf	Custom Stage Dat	t a (Irregular) Lis	ted below (Recalc)
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
212.5	50	2,793	372.0	0	0	2,793
213.0	0	3,407	450.0	1,547	1,547	7,899
214.0	0	4,790	473.0	4,079	5,626	9,651
215.0	0	6,246	497.0	5,502	11,128	11,566
Device	Routing	Inv	vert Outle	et Devices		
#1	Primary	212	.83' 15.0 '	" Round Culvert		
	•		L= 9	0.0' CPP, projecting	g, no headwall,	Ke= 0.900
			Inlet	/ Outlet Invert= 212.	.83' / 210.39' S	= 0.0271 '/' Cc= 0.900
			n= 0	.013, Flow Area= 1.	23 sf	
#2	Discarde	d 212	.50' 2.41	0 in/hr Exfiltration of	over Surface ar	ea
			Cond	ductivity to Groundwa	ater Elevation =	210.40'
#3	Device 1	212	.63' 3.0"	Vert. Orifice/Grate	C= 0.600 Lim	nited to weir flow at low heads

Discarded OutFlow Max=0.28 cfs @ 12.52 hrs HW=213.31' (Free Discharge) **2=Exfiltration** (Controls 0.28 cfs)

Primary OutFlow Max=0.16 cfs @ 12.52 hrs HW=213.31' (Free Discharge)

-1=Culvert (Passes 0.16 cfs of 0.81 cfs potential flow)

3=Orifice/Grate (Orifice Controls 0.16 cfs @ 3.33 fps)

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Summary for Link 11L: DP-A

Inflow Area = 30.660 ac, 30.26% Impervious, Inflow Depth = 2.29" for 25-yr event

Inflow = 34.21 cfs @ 12.16 hrs, Volume= 5.853 af

Primary = 34.21 cfs @ 12.16 hrs, Volume= 5.853 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 11L: DP-A

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Inflow=60.31 cfs 9.955 af Primary=60.31 cfs 9.955 af

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre A.1	Runoff Area=242,230 sf 49.29% Impervious Runoff Depth=4.87" Flow Length=298' Tc=10.8 min CN=75 Runoff=26.77 cfs 2.257 af
Subcatchment 2S: Pre A.2	Runoff Area=289,668 sf 0.00% Impervious Runoff Depth=1.54" Flow Length=658' Tc=28.0 min CN=44 Runoff=5.67 cfs 0.854 af
Subcatchment 3S: Pre A.3	Runoff Area=19,199 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=3.30 cfs 0.278 af
Subcatchment 4S: Pre B.1	Runoff Area=220,300 sf 66.26% Impervious Runoff Depth=6.62" Flow Length=736' Tc=24.4 min CN=90 Runoff=22.98 cfs 2.789 af
Subcatchment 5S: Pre B.2 Flow Length	Runoff Area=71,871 sf 5.57% Impervious Runoff Depth=3.63" gth=416' Tc=12.4 min UI Adjusted CN=64 Runoff=5.59 cfs 0.499 af
Subcatchment 6S: Pre C.2	Runoff Area=100,825 sf 0.00% Impervious Runoff Depth=3.41" Flow Length=364' Tc=16.2 min CN=62 Runoff=6.65 cfs 0.658 af
Subcatchment 7S: Pre C.1	Runoff Area=258,507 sf 5.40% Impervious Runoff Depth=2.76" Flow Length=754' Tc=15.2 min CN=56 Runoff=13.79 cfs 1.365 af
Subcatchment 8S: Roof Area A	Runoff Area=71,756 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=12.33 cfs 1.039 af
Subcatchment 13S: Roof Area B	Runoff Area=29,814 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=5.12 cfs 0.432 af
Subcatchment 14S: Pre A.4	Runoff Area=31,394 sf 0.00% Impervious Runoff Depth=0.58" Tc=6.0 min CN=33 Runoff=0.17 cfs 0.035 af
Pond 12P: Existing Wet Basin 15.0" Rou	Peak Elev=216.92' Storage=60,808 cf Inflow=29.24 cfs 3.720 af and Culvert n=0.013 L=517.0' S=0.0011 '/' Outflow=5.19 cfs 3.720 af
Pond 13P: Existing Infiltration Basin Discarded=0.3	Peak Elev=213.72' Storage=4,349 cf Inflow=3.33 cfs 0.313 af 36 cfs 0.251 af Primary=0.22 cfs 0.062 af Outflow=0.58 cfs 0.313 af

Total Runoff Area = 30.660 ac Runoff Volume = 10.207 af Average Runoff Depth = 3.99" 69.74% Pervious = 21.383 ac 30.26% Impervious = 9.277 ac

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Summary for Subcatchment 1S: Pre A.1

Runoff = 26.77 cfs @ 12.15 hrs, Volume= 2.257 af, Depth= 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

	Α	rea (sf)	CN E	escription					
		71,903	98 F	aved park	ing, HSG A	<u> </u>			
		41,850	98 F	aved park	ing, HSG B				
		45,336	39 >	75% Gras	s cover, Go	ood, HSG A			
		77,493	61 >	75% Gras	s cover, Go	ood, HSG B			
		485			ed pavemer				
_		5,163	98 L	<u>Inconnecte</u>	ed pavemer	nt, HSG B			
	2	42,230	75 V	Veighted A	verage				
	1	22,829	5	0.71% Per	vious Area				
	1	19,401		49.29% Impervious Area					
		5,648	4	.73% Unco	onnected				
	_		٥.			–			
	Tc	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	7.7	50	0.0100	0.11		Sheet Flow,			
						Grass: Short n= 0.150 P2= 2.95"			
	2.9	223	0.0330	1.27		Shallow Concentrated Flow,			
	0.0	0.5	0.0004	4.00		Short Grass Pasture Kv= 7.0 fps			
	0.2	25	0.0081	1.83		Shallow Concentrated Flow,			
_						Paved Kv= 20.3 fps			
	10.8	298	Total						

Summary for Subcatchment 2S: Pre A.2

Runoff = 5.67 cfs @ 12.48 hrs, Volume= 0.854 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Area (s	sf) CN	Description			
78,93	30 30	Woods, Good, HSG A			
49,07	⁷ 4 55	Woods, Good, HSG B			
31,90	9 77	Woods, Good, HSG D			
116,37	73 39	>75% Grass cover, Good, HSG A			
13,26	88 61	>75% Grass cover, Good, HSG B			
11	14 80	>75% Grass cover, Good, HSG D			
289,66	8 44	Weighted Average			
289,66	88	100.00% Pervious Area			

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	3.8	50	0.0600	0.22		Sheet Flow,
						Grass: Short n= 0.150 P2= 2.95"
	21.0	536	0.0037	0.43		Shallow Concentrated Flow,
						Short Grass Pasture Kv= 7.0 fps
	3.2	72	0.0055	0.37		Shallow Concentrated Flow,
_						Woodland Kv= 5.0 fps
Ī	28.0	658	Total			

Summary for Subcatchment 3S: Pre A.3

Runoff = 3.30 cfs @ 12.09 hrs, Volume= 0.278 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

	Area (sf)	CN I	Description						
	19,199	98 I	Paved parking, HSG A						
	19,199	•	100.00% Impervious Area						
To (min	c Length) (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
6.0)				Direct Entry,				

Summary for Subcatchment 4S: Pre B.1

Runoff = 22.98 cfs @ 12.32 hrs, Volume= 2.789 af, Depth= 6.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Area (sf)	CN	Description				
59,394	98	Paved parking, HSG A				
49,116	98	Paved parking, HSG B				
36,430	98	Paved parking, HSG D				
3,947	39	>75% Grass cover, Good, HSG A				
9,665	61	>75% Grass cover, Good, HSG B				
556	80	>75% Grass cover, Good, HSG D				
1,032	98	Unconnected pavement, HSG B				
60,160	77	Woods, Good, HSG D				
220,300	90	Weighted Average				
74,328		33.74% Pervious Area				
145,972		66.26% Impervious Area				
1,032		0.71% Unconnected				

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	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	19.0	50	0.0300	0.04		Sheet Flow,
						Woods: Dense underbrush n= 0.800 P2= 2.95"
	3.0	100	0.0500	0.56		Shallow Concentrated Flow,
						Forest w/Heavy Litter Kv= 2.5 fps
	2.4	586	0.0410	4.11		Shallow Concentrated Flow,
_						Paved Kv= 20.3 fps
	24 4	736	Total			

Summary for Subcatchment 5S: Pre B.2

Runoff 5.59 cfs @ 12.18 hrs, Volume= 0.499 af, Depth= 3.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

A	rea (sf)	CN /	Adj Desc	ription	
	16,037	61	>75%	% Grass co	ver, Good, HSG B
	15,072	80			ver, Good, HSG D
	2,551	98			avement, HSG B
	1,451	98			avement, HSG D
	32,793	55		ds, Good, I	
	3,967	77		ds, Good, I	HSG D
	71,871	65			ige, UI Adjusted
	67,869		_	3% Perviou	
	4,002			% Impervio	
	4,002		100.0	00% Uncon	nected
-	1	01	17.1	0: 1	December
Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	01 (F)
7.5	50	0.0780	0.11		Sheet Flow,
0.1	10	0.1000	1.58		Woods: Light underbrush n= 0.400 P2= 2.95"
0.1	10	0.1000	1.30		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	39	0.3230	2.84		Shallow Concentrated Flow,
0.2	33	0.5250	2.04		Woodland Kv= 5.0 fps
2.8	165	0.0380	0.97		Shallow Concentrated Flow,
2.0	100	0.0000	0.01		Woodland Kv= 5.0 fps
0.2	10	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
0.8	55	0.0520	1.14		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.0	87	0.1430	1.89		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
12.4	416	Total			

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Summary for Subcatchment 6S: Pre C.2

Runoff = 6.65 cfs @ 12.23 hrs, Volume= 0.658 af, Depth= 3.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

A	rea (sf)	CN E	escription		
	26,537	55 V	Voods, Go	od, HSG B	
	2,127	77 V	Voods, Go	od, HSG D	
	62,399	61 >	75% Gras	s cover, Go	ood, HSG B
	9,762	80 >	75% Gras	s cover, Go	ood, HSG D
1	00,825	62 V	Veighted A	verage	
1	00,825	1	00.00% Pe	ervious Are	a
Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
10.8	18	0.0160	0.03		Sheet Flow,
					Woods: Dense underbrush n= 0.800 P2= 2.95"
2.5	33	0.0730	0.22		Sheet Flow,
					Grass: Short n= 0.150 P2= 2.95"
0.8	121	0.1440	2.66		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
0.1	10	0.1790	2.12		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
0.3	41	0.1260	2.48		Shallow Concentrated Flow,
	4.0-				Short Grass Pasture Kv= 7.0 fps
1.5	125	0.0800	1.41		Shallow Concentrated Flow,
0.4	•	0.0470	0.04		Woodland Kv= 5.0 fps
0.1	6	0.0170	0.91		Shallow Concentrated Flow,
0.0	_	0.0040	0.04		Short Grass Pasture Kv= 7.0 fps
0.0	5	0.0210	2.94		Shallow Concentrated Flow,
0.4	5	0.0100	0.06		Paved Kv= 20.3 fps
0.1	5	0.0190	0.96		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
40.0	201	Tatal			Short Grass Pasture NV- 1.0 Ips
16.2	364	Total			

Summary for Subcatchment 7S: Pre C.1

Runoff = 13.79 cfs @ 12.22 hrs, Volume= 1.365 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

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	Α	rea (sf)	CN E	Description		
		78,314	39 >	75% Gras	s cover, Go	ood, HSG A
	1	47,609	61 >	75% Gras	s cover, Go	ood, HSG B
		2,514	98 F	Roofs, HSG	ВВ	
		11,441	98 F	Paved park	ing, HSG B	
		18,629	55 V	Voods, Go	od, HSG B	
	2	58,507	56 V	Veighted A	verage	
	2	44,552	9	4.60% Per	vious Area	
		13,955	5	.40% Impe	ervious Area	a
	Tc	Length	Slope	Velocity		Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	1.9	10	0.1000	0.09		Sheet Flow,
						Woods: Light underbrush n= 0.400 P2= 2.95"
	2.7	40	0.0900	0.25		Sheet Flow,
						Grass: Short n= 0.150 P2= 2.95"
	1.1	120	0.0700	1.85		Shallow Concentrated Flow,
	۰		0.0050	4.07		Short Grass Pasture Kv= 7.0 fps
	0.5	36	0.0650	1.27		Shallow Concentrated Flow,
	4.0	475	0.0050	4.70		Woodland Kv= 5.0 fps
	1.6	175	0.0650	1.78		Shallow Concentrated Flow,
	0.0	F	0.0400	2.00		Short Grass Pasture Kv= 7.0 fps
	0.0	5	0.0190	2.80		Shallow Concentrated Flow,
	7.4	368	0.0140	0.83		Paved Kv= 20.3 fps
	1.4	300	0.0140	0.03		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
	15.0	751	Total			Short Grass Fasture TV-1.0 Ips
	15.2	754	Total			

Summary for Subcatchment 8S: Roof Area A

Runoff = 12.33 cfs @ 12.09 hrs, Volume= 1.039 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

A	rea (sf)	CN	Description		
	71,756	98	Roofs, HSG	βB	
	71,756		100.00% In	npervious A	\rea
Tc (min)	Length (feet)	Slope (ft/ft)	,	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 13S: Roof Area B

Runoff = 5.12 cfs @ 12.09 hrs, Volume= 0.432 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

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	Area (s	sf)	CN D	escription						
	29,81	14	98 R	Roofs, HSG B						
	29,81	14	10	100.00% Impervious Area						
(m	Tc Leng	gth eet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	•				
	6.0					Direct Entry,				

Summary for Subcatchment 14S: Pre A.4

Runoff 0.17 cfs @ 12.34 hrs, Volume= 0.035 af, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

A	rea (sf)	CN	Description					
	10,963	39	>75% Grass cover, Good, HSG A					
	20,431	30	Woods, Go	od, HSG A				
	31,394	33	Weighted Average					
	31,394		100.00% Pervious Area					
Tc	Length	Slope	e Velocity	Capacity	Description			
(min)	(feet)	(ft/ft) (ft/sec)	(cfs)				
6.0					Direct Entry,			

Summary for Pond 12P: Existing Wet Basin

7.392 ac, 55.84% Impervious, Inflow Depth = 6.04" for 100-yr event Inflow Area =

Inflow 29.24 cfs @ 12.28 hrs, Volume= 3.720 af

5.19 cfs @ 13.15 hrs, Volume= Outflow = 3.720 af, Atten= 82%, Lag= 51.9 min

Primary 5.19 cfs @ 13.15 hrs, Volume= 3.720 af =

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.92' @ 13.15 hrs Surf.Area= 50,422 sf Storage= 60,808 cf

Plug-Flow detention time= 98.6 min calculated for 3.720 af (100% of inflow)

Center-of-Mass det. time= 98.2 min (892.6 - 794.4)

Volume	Invert	Avail	l.Storage	Storage Description	on		
#1	212.30'	6	64,778 cf	Custom Stage D	ata (Irregular)Lis	ted below (Recalc	<u> </u>
Elevation (feet)		Area sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
212.30		50	75.0	0	0	50	
213.00		556	100.0	180	180	403	
214.00	5	5,786	393.0	2,712	2,892	11,901	
215.00	13	3,981	580.0	9,587	12,479	26,388	
216.00	19	9,970	757.0	16,887	29,366	45,232	
217.00	53	3,560	1,442.0	35,412	64,778	165,106	

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Device Routing Invert Outlet Devices	
#1 Primary 212.37' 15.0" Round Culvert L= 517.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 212.37' / 211.80' S= 0.0011 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.23 sf	

Primary OutFlow Max=5.19 cfs @ 13.15 hrs HW=216.92' (Free Discharge) 1=Culvert (Barrel Controls 5.19 cfs @ 4.23 fps)

Summary for Pond 13P: Existing Infiltration Basin

Inflow Area =	1.161 ac, 37.95% Impervious, Inflow De	epth = 3.24" for 100-yr event
Inflow =	3.33 cfs @ 12.09 hrs, Volume=	0.313 af
Outflow =	0.58 cfs @ 12.59 hrs, Volume=	0.313 af, Atten= 83%, Lag= 30.0 min
Discarded =	0.36 cfs @ 12.59 hrs, Volume=	0.251 af
Primary =	0.22 cfs @ 12.59 hrs, Volume=	0.062 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 213.72' @ 12.59 hrs Surf.Area= 4,381 sf Storage= 4,349 cf

Plug-Flow detention time= 71.0 min calculated for 0.313 af (100% of inflow)

Center-of-Mass det. time= 70.9 min (836.8 - 765.9)

Volume	Inve	ert Avai	l.Storage	Storage Description	า			
#1	212.5	i0'	11,128 cf	Custom Stage Dat	t a (Irregular) Lis	ted below (Recalc)		
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)		
212.5	50	2,793	372.0	0	0	2,793		
213.0	0	3,407	450.0	1,547	1,547	7,899		
214.0	0	4,790	473.0	4,079	5,626	9,651		
215.0	0	6,246	497.0	5,502	11,128	11,566		
Device	Routing	Inv	vert Outle	et Devices				
#1	Primary	212	.83' 15.0 '	" Round Culvert				
	L= 90.0' CPP, projecting, no headwall, Ke= 0.900				Ke= 0.900			
			Inlet	Inlet / Outlet Invert= 212.83' / 210.39' S= 0.0271 '/' Cc= 0.900				
			n= 0	.013, Flow Area= 1.	23 sf			
#2	Discarde	d 212	.50' 2.41	2.410 in/hr Exfiltration over Surface area				
			Cond	ductivity to Groundwa	ater Elevation =	: 210.40'		
#3	Device 1	212	.63' 3.0"	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads				

Discarded OutFlow Max=0.36 cfs @ 12.59 hrs HW=213.72' (Free Discharge) **2=Exfiltration** (Controls 0.36 cfs)

Primary OutFlow Max=0.22 cfs @ 12.59 hrs HW=213.72' (Free Discharge)

-1=Culvert (Passes 0.22 cfs of 2.37 cfs potential flow) 3=Orifice/Grate (Orifice Controls 0.22 cfs @ 4.55 fps) Prepared by {enter your company name here}

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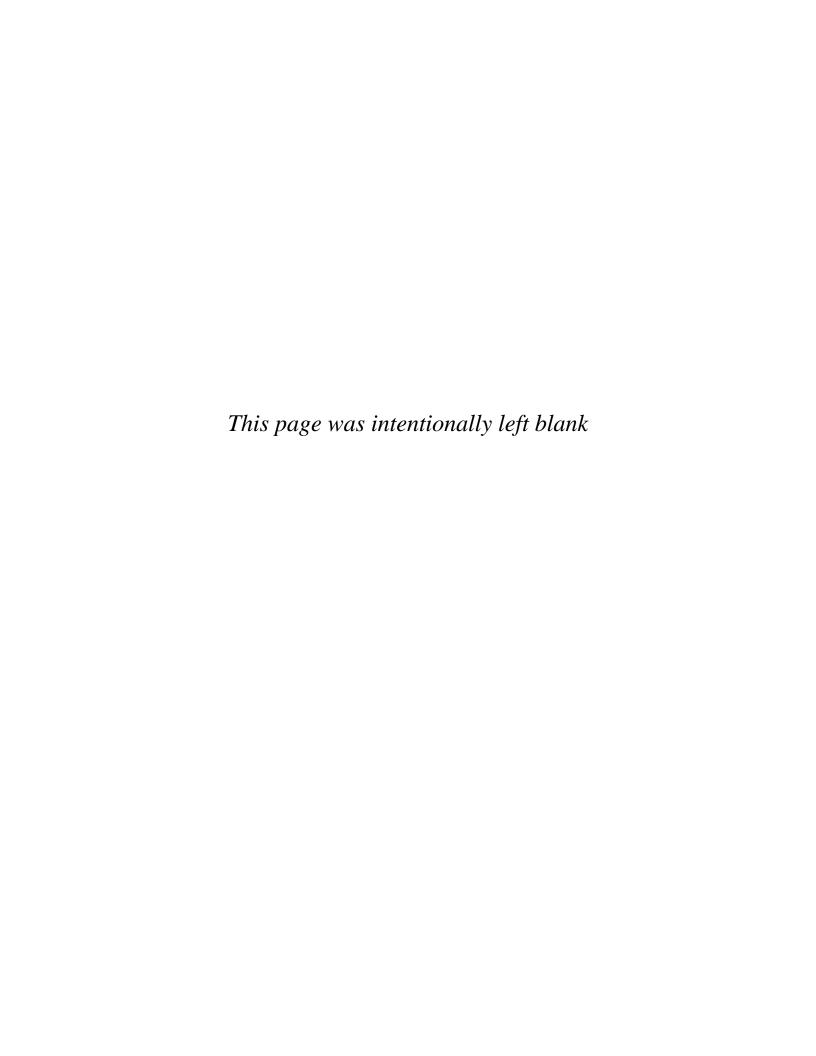
Summary for Link 11L: DP-A

Inflow Area = 30.660 ac, 30.26% Impervious, Inflow Depth = 3.90" for 100-yr event

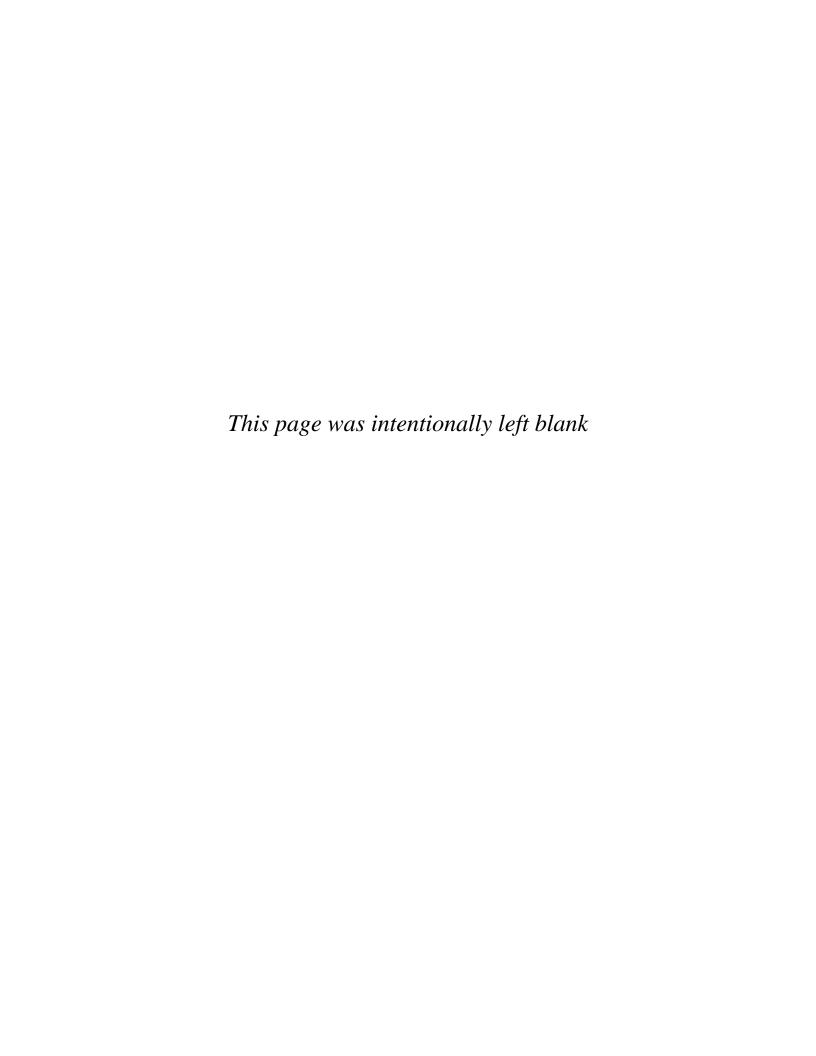
Inflow = 60.31 cfs @ 12.16 hrs, Volume= 9.955 af

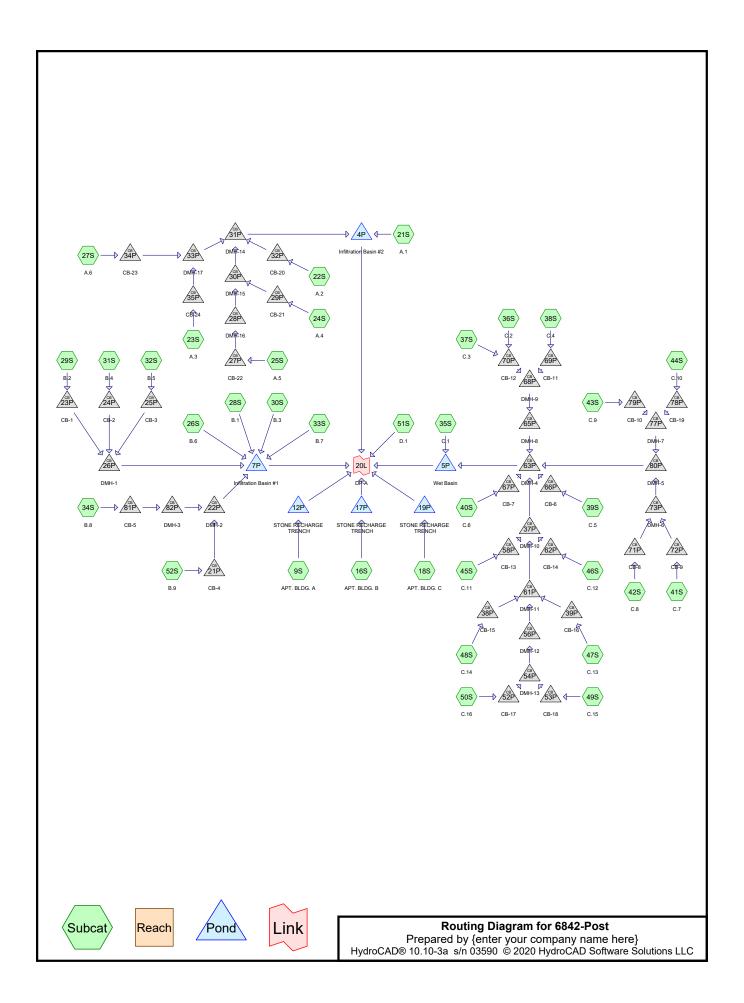
Primary = 60.31 cfs @ 12.16 hrs, Volume= 9.955 af, Atten= 0%, Lag= 0.0 min

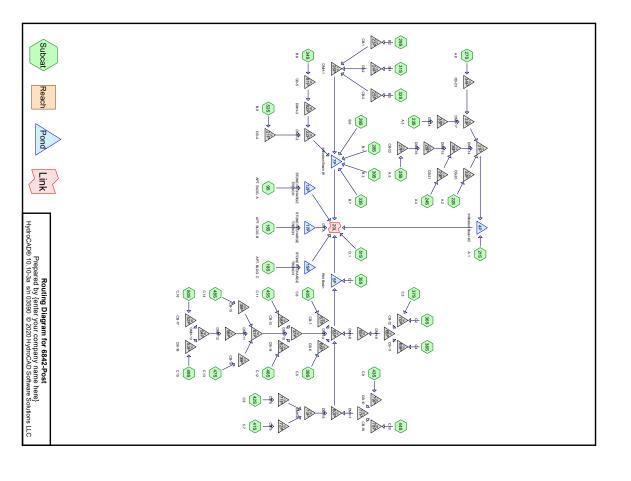
Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs



Appendix E - Proposed Conditions Hydrologic Calculations







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Type III 24-hr 2-yr Rainfall=3.00"

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 33S: B.7 Subcatchment31S: B.4 Subcatchment 32S: B.5 Subcatchment 30S: B.3 Subcatchment29S: B.2 Subcatchment 28S: B.1 Subcatchment27S: A.6 Subcatchment 26S: B.6 Subcatchment 25S: A.5 Subcatchment 24S: A.4 Subcatchment 23S: A.3 Subcatchment 22S: A.2 Subcatchment 21S: A.1 Subcatchment 18S: APT. BLDG. C Subcatchment 16S: APT. BLDG. B Subcatchment9S: APT. BLDG. A Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=2.77"
Tc=6.0 min CN=98 Runoff=1.16 cfs 0.094 af Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=2.77" Runoff Area=22,426 sf 100.00% Impervious Runoff Depth=2.77" Runoff Area=13,850 sf 100.00% Impervious Runoff Depth=2.77" Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=2.77" Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=2.45" Tc=6.0 min CN=95 Runoff=1.04 cfs 0.080 af Runoff Area=12,567 sf 87.12% Impervious Runoff Depth=1.98" Tc=6.0 min CN=90 Runoff=0.65 cfs 0.048 af Runoff Area=9,767 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.64 cfs 0.052 af Runoff Area=290,511 sf 2.55% Impervious Runoff Depth=0.19" Runoff Area=24,627 sf 67.38% Impervious Runoff Depth=1.19" Tc=6.0 min CN=79 Runoff=0.76 cfs 0.056 af Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=2.45" Tc=6.0 min CN=95 Runoff=1.04 cfs 0.080 af Runoff Area=13,381 sf 83.76% Impervious Runoff Depth=1.82" Tc=6.0 min CN=88 Runoff=0.64 cfs 0.047 af Runoff Area=40,090 sf 22.31% Impervious Runoff Depth=0.09" Runoff Area=5,341 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.35 cfs 0.028 af Runoff Area=30,829 sf 0.88% Impervious Runoff Depth=0.00" Tc=6.0 min UI Adjusted CN=39 Runoff=0.00 cfs 0.000 af Runoff Area=20,195 sf 5.87% Impervious Runoff Depth=0.00" Tc=10.0 min CN=42 Runoff=0.00 cfs 0.000 af Tc=6.0 min UI Adjusted CN=50 Runoff=0.01 cfs 0.007 af Tc=30.0 min CN=55 Runoff=0.33 cfs 0.108 af Tc=6.0 min CN=98 Runoff=0.90 cfs 0.073 af Tc=6.0 min CN=98 Runoff=1.46 cfs 0.119 af Tc=6.0 min CN=98 Runoff=1.16 cfs 0.094 af Tc=6.0 min CN=98 Runoff=1.16 cfs 0.094 af

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Type III 24-hr 2-yr Rainfall=3.00"

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Subcatchment 34S: B.8	Runoff Area=12,484 sf 88.82% Impervious Runoff Depth=2.07" Tc=6.0 min CN=91 Runoff=0.67 cfs 0.049 af
Subcatchment 35S: C.1	Runoff Area=236,308 sf 9.34% Impervious Runoff Depth=0.27" Tc=20.0 min UI Adjusted CN=58 Runoff=0.58 cfs 0.124 af
Subcatchment 36S: C.2	Runoff Area=22,516 sf 83.62% Impervious Runoff Depth=1.82" Tc=6.0 min CN=88 Runoff=1.08 cfs 0.078 af
Subcatchment 37S: C.3	Runoff Area=12,429 sf 61.75% Impervious Runoff Depth=0.96" Tc=6.0 min CN=75 Runoff=0.30 cfs 0.023 af
Subcatchment 38S: C.4	Runoff Area=4,655 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.30 cfs 0.025 af
Subcatchment 39S: C.5	Runoff Area=5,857 sf 100.00% Impervious Runoff Depth=2,77" Tc=6.0 min CN=98 Runoff=0.38 cfs 0.031 af
Subcatchment 40S: C.6	Runoff Area=4,047 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af
Subcatchment 41S: C.7	Runoff Area=7,188 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.47 cfs 0.038 af
Subcatchment 42S: C.8	Runoff Area=7,639 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.50 cfs 0.040 af
Subcatchment 43S: C.9	Runoff Area=8,732 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.57 cfs 0.046 af
Subcatchment 44S: C.10	Runoff Area=5,326 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.35 cfs 0.028 af
Subcatchment 45S: C.11	Runoff Area=2,631 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.17 cfs 0.014 af
Subcatchment 46S: C.12	Runoff Area=5,910 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.39 cfs 0.031 af
Subcatchment 47S: C.13	Runoff Area=1,987 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.13 cfs 0.011 af
Subcatchment 48S: C.14	Runoff Area=1,885 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.12 cfs 0.010 af
Subcatchment 49S: C.15	Runoff Area=3,487 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.23 cfs 0.018 af
Subcatchment 50S: C.16	Runoff Area=3,508 sf 100.00% Impervious Runoff Depth=2.77" Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af
Subcatchment 51S: D.1	Runoff Area=402,771 sf 0.38% Impervious Runoff Depth=0.00" Tc=20.0 min CN=41 Runoff=0.00 cfs 0.001 af

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HydroCAD® 10.10-3a s/n 03580 © 2020 HydroCAD Software Solutions LLC Pond 4P: Infiltration Basin #2 Subcatchment 52S: B.9 6842-Post Runoff Area=15,018 sf 80.72% Impervious Runoff Depth=1.74" Tc=6.0 min CN=87 Runoff=0.69 cfs 0.050 af Type III 24-hr 2-yr Rainfall=3.00" Page 4

Pond 30P: DMH-15 Pond 19P: STONE RECHARGE TRENCH Peak Elev=220.30' Storage=1,261 cf Inflow=1.16 cfs 0.094 af Primary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.094 af Pond 28P: DMH-16 Pond 27P: CB-22 Pond 26P: DMH-1 Pond 25P: CB-3 Pond 24P: CB-2 Pond 23P: CB-1 Pond 22P: DMH-2 Pond 17P: STONE RECHARGE TRENCH Peak Elev=220.30' Storage=1,261 cf Inflow=1.16 cfs 0.094 af Discarded=0.15 cfs 0.094 af Primary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.094 af Pond 12P: STONE RECHARGE TRENCH Peak Elev=220.30' Storage=1,261 cf Inflow=1.16 cfs 0.094 af Discarded=0.15 cfs 0.094 af Primary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.094 af Pond 7P: Infiltration Basin #1 Peak Elev=215.24' Storage=5,097 cf Inflow=4.84 cfs 0.477 af Primary=0.00 cfs 0.000 af Outflow=0.83 cfs 0.477 af Pond 5P: Wet Basin Pond 29P: CB-21 Pond 21P: CB-4 Peak Elev=213.15' Storage=4,645 cf Inflow=4.00 cfs 0.320 af Discarded=0.55 cfs 0.320 af Primary=0.00 cfs 0.000 af Outflow=0.55 cfs 0.320 af Peak Elev=216.04' Inflow=1.36 cfs 0.099 af 12.0" Round Culvert n=0.013 L=101.0' S=0.0050 '/' Outflow=1.36 cfs 0.099 af Peak Elev=215.32' Inflow=1.81 cfs 0.147 af 15.0" Round Culvert n=0.013 L=250.0' S=0.0036'/' Outflow=1.81 cfs 0.147 af Peak Elev=216.02' Inflow=1.46 cfs 0.119 af 12.0" Round Culvert n=0.013 L=160.0' S=0.0037'/' Outflow=1.46 cfs 0.119 af Peak Elev=216.07' Inflow=0.64 cfs 12.0" Round Culvert n=0.013 L=27.0' S=0.0074 '/' Outflow=0.64 cfs Peak Elev=216.33' Inflow=1.46 cfs 0.119 af 12.0" Round Culvert n=0.013 L=51.0' S=0.0039'/' Outflow=1.46 cfs 0.119 af Peak Elev=216.13' Inflow=2.44 cfs 0.182 af 18.0" Round Culvert n=0.013 L=48.0' S=0.0104'/' Outflow=2.44 cfs 0.182 af 12.0" Peak Elev=216.81' Inflow=1.04 cfs 0.080 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0400 '/' Outflow=1.04 cfs 0.080 af Peak Elev=216.01' Inflow=0.69 cfs 0.050 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054'/' Outflow=0.69 cfs 0.050 af Peak Elev=216.53' Inflow=0.35 cfs 0.028 af Round Culvert n=0.013 L=26.0' S=0.0192'/' Outflow=0.35 cfs 0.028 af Peak Elev=217.00' Inflow=0.76 cfs 0.056 af Round Culvert n=0.013 L=38.0' S=0.0289 '/' Outflow=0.76 cfs 0.056 af Peak Elev=214.39' Storage=3,778 cf Inflow=5.48 cfs 0.558 af s 0.047 af s 0.047 af

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HydroCAD® 10.10-3a s/n 03590 © 2020 HydroCAD Software Solutions LLC 6842-Post Type III 24-hr 2-yr Rainfall=3.00"

A Total Runoff Area = 30.660 ac Runoff Volume = 1.639 af 75.28% Pervious = 23.079 ac
Peak Elev=216.54' Inflow=0.67 cfs 12.0" Round Culvert n=0.013 L=31.0' S=0.0032 // Outflow=0.67 cfs
Peak Elev=216.54' Inflow=0.67 cfs 12.0" Round Culvert n=0.013 L=31.0' S=0.0032'/' Outflow=0.67 cfs
Peak Elev=215.4: 15.0" Round Culvert n=0.013 L=78.0' S=0.0064 '/'
Peak Elev=216.44' Inflow=0.57 cfs 12.0" Round Culvert n=0.013 L=29.0' S=0.0069'/' Outflow=0.57 cfs
Peak Elev=216.36' Inflow=0.35 cfs 12.0" Round Culvert n=0.013 L=49.0' S=0.0041'/' Outflow=0.35 cfs
Peak Elev=216.22' Inflow=0.92 cfs 15.0" Round Culvert n=0.013 L=181.0' S=0.0050'/' Outflow=0.92 cfs
Peak Elev=215.83' Inflow=0.97 cfs 12.0" Round Culvert n=0.013 L=96.0' S=0.0042'/' Outflow=0.97 cfs
Peak Elev=215.91' Inflow=0.47 cfs 12.0" Round Culvert n=0.013 L=37.0' S=0.0054 '/' Outflow=0.47 cfs
Peak Elev=215.92' Inflow=0.50 cfs 12.0" Round Culvert n=0.013 L=32.0' S=0.0062'/' Outflow=0.50 cfs
Pea 12.0" Round Culvert n=0.013 L=15.0'
Peak Elev=215.93' Inflow=0.30 cfs 12.0" Round Culvert n=0.013 L=15.0' S=0.0067'/' Outflow=0.30 cfs
Peak Elev=216.24' Inflow=1.68 cfs 15.0" Round Culvert n=0.013 L=190.0' S=0.0026'/' Outflow=1.68 cfs
Peak Elev=216.28' Inflow=0.26 cfs 0.021 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208 // Outflow=0.26 cfs 0.021 af

Pond 58P: CB-13

Pond 61P: DMH-11

Peak Elev=232.09' Inflow=0.71 cfs 0.058 af 12.0" Round Culvert n=0.013 L=198.0' S=0.0677 // Outflow=0.71 cfs 0.058 af

Peak Elev=219.25' Inflow=0.39 cfs 0.031 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467 '/' Outflow=0.39 cfs 0.031 af

Pond 54P: DMH-13

Pond 56P: DMH-12

Peak Elev=240.28' Inflow=0.46 cfs 0.037 af 12.0" Round Culvert n=0.013 L=110.0' S=0.0745 '/' Outflow=0.46 cfs 0.037 af

Peak Elev=246.78' Inflow=0.46 cfs 0.037 af 12.0" Round Culvert n=0.013 L=85.0' S=0.0753 '/' Outflow=0.46 cfs 0.037 af

Peak Elev=247.66' Inflow=0.23 cfs 0.018 af 12.0" Round Culvert n=0.013 L=19.0' S=0.0474 '/' Outflow=0.23 cfs 0.018 af

Peak Elev=247.66' Inflow=0.23 cfs 0.019 af 12.0" Round Culvert n=0.013 L=18.0' S=0.0500 '/' Outflow=0.23 cfs 0.019 af

Peak Elev=232.40' Inflow=0.13 cfs 0.011 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333 '/' Outflow=0.13 cfs 0.011 af

Peak Elev=219.13' Inflow=0.17 cfs 0.014 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467 '/' Outflow=0.17 cfs 0.014 af

Pond 53P: CB-18

Pond 52P: CB-17

Pond 38P: CB-15

Pond 39P: CB-16

Pond 37P: DMH-10

Peak Elev=218.71' Inflow=1.26 cfs 0.103 af 15.0" Round Culvert n=0.013 L=122.0' S=0.0295 '/' Outflow=1.26 cfs 0.103 af

Peak Elev=215.96' Inflow=0.64 cfs 0.052 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0150'/' Outflow=0.64 cfs 0.052 af

Peak Elev=215.96' Inflow=0.65 cfs 0.048 af 12.0" Round Culvert n=0.013 L=28.0' S=0.0107 '/' Outflow=0.65 cfs 0.048 af

Peak Elev=232.39' Inflow=0.12 cfs 0.010 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/' Outflow=0.12 cfs 0.010 af

Pond 35P: CB-24

Pond 33P: DMH-17

Peak Elev=215.79' Inflow=1.29 cfs 0.099 af 12.0" Round Culvert n=0.013 L=180.0' S=0.0083'/' Outflow=1.29 cfs 0.099 af

Peak Elev=216.06' Inflow=0.90 cfs 0.073 af 12.0'' Round Culvert n=0.013 L=12.0' S=0.0167 '/' Outflow=0.90 cfs 0.073 af

Peak Elev=214.62' Inflow=4.00 cfs 0.320 af 18.0" Round Culvert n=0.013 L=61.0' S=0.0164'/' Outflow=4.00 cfs 0.320 af

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Type III 24-hr 2-yr Rainfall=3.00"

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Pond 34P: CB-23

Pond 32P: CB-20

Pond 31P: DMH-14

Pond 62P: CB-14

Pond 63P: DMH-4

Peak Elev=219.26' Inflow=5.47 cfs 0.434 af 24.0" Round Culvert n=0.013 L=122.0' S=0.0295'/' Outflow=5.47 cfs 0.434 af

Peak Elev=215.63' Inflow=1.68 cfs 0.126 af 15.0" Round Culvert n=0.013 L=215.0' S=0.0028 '/' Outflow=1.68 cfs 0.126 af

Peak Elev=216.35' Inflow=0.38 cfs 0.031 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208 '/' Outflow=0.38 cfs 0.031 af

Pond 66P: CB-6

Pond 65P: DMH-8

Type III 24-hr 2-yr Rainfall=3.00"

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Type III 24-hr 2-yr Rainfall=3.00"

Summary for Subcatchment 9S: APT. BLDG. A

Runoff 1.16 cfs @ 12.09 hrs, Volume= 0.094 af, Depth= 2.77

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Summary for Subcatchment 16S: APT. BLDG. B

1.16 cfs @ 12.09 hrs, Volume= 0.094 af, Depth= 2.77"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

6	m.			
6.0	Tc Length	17,818	17,818	Area (sf)
		8	18 98	sf) CN
	Slope V (ft/ft) (100.	Roo	
	Velocity (ft/sec)	00% lm	98 Roofs, HSG A	Description
	Capacity (cfs)	100.00% Impervious Area	Α	
Direct Entry,	Description	Area		

Summary for Subcatchment 18S: APT. BLDG. C

Runoff 1.16 cfs @ 12.09 hrs, Volume= 0.094 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

L			
min T			≱
Length (feet)	17,818	17,818	Area (sf)
Slope (ft/ft)		98 F	S
Velocity (ft/sec)	100.00% lm	Roofs, HSG	CN Description
Capacity (cfs)	pervious A	À	
Description	4rea		
	Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	100.00% Impervious Ar Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	98 Roofs, HSG A 100.00% Impervious Ar Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)

Summary for Subcatchment 21S: A.1

0.00 cfs @ 23.51 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry,					10.0
			(ft/ft	(feet)	(min)
ity Description	ity Capacity	e Velocity	Slope	Length	Tc
۵	8.01% Unconnected	8.01% ر		95	
Area	5.87% Impervious Area	5.87% l		1,186	
rea	94.13% Pervious Area	94.13%		19,009	
	Weighted Average	Weighte	42	20,195	
	ISG A	Roofs, HSG A	98	1,091	
nent, HSG A	Unconnected pavement, HSG A	Unconn	98	95	
3 A	Woods, Good, HSG A	Woods,	30	291	
>75% Grass cover, Good, HSG A	irass cover, (>75% G		18,718	
	tion	CN Description	CN	Area (sf)	

Summary for Subcatchment 22S: A.2

П 0.90 cfs @ 12.09 hrs, Volume= 0.073 af, Depth= 2.77"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

	1			
6.0	Tc (min)			A
	Length (feet)	13,850 13,850	12,935 915	rea (sf)
	Slope (ft/ft	98	98 98	CN
	Slope Velocity (ft/ft) (ft/sec)	Weighted Average 100.00% Impervious Area	98 Paved parking, HSG A 98 Roofs, HSG A	Area (sf) CN Description
	Capacity (cfs)	verage ıpervious Ar	ing, HSG A A	
Direct Entry,	Description	rea		

Summary for Subcatchment 23S: A.3

Runoff 0.64 cfs @ 12.09 hrs, Volume= 0.052 af, Depth= 2.77"

		ı
9,767	9,767	Area (sf)
	98	S
100.00% Impervious Area	Paved parking, HSG A	Description

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6.0	nin)	Тс
	(feet)	Length
	(ft/ft)	Slope
	(ft/sec)	Velocity
	(cfs)	Capacity
Direct Entry,		Description

Summary for Subcatchment 24S: A.4

Runoff 0.35 cfs @ 12.09 hrs, Volume= 0.028 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry,					6.0
(cfs)	(C:	(ft/sec)	(ft/ft)	(feet)	(min)
city Description	/ Capacity	Velocity (Slope	Length	Tc
us Area	nperviou	100.00% Impervious Area		5,341	
	∖verage	Weighted Average	98	5,341	
	S A	Roofs, HSG A		5,114	
SG A	king, HS	Paved park	98	227	
		Description		Area (sf) CN	

Summary for Subcatchment 25S: A.5

Runoff 1.46 cfs @ 12.09 hrs, Volume= 0.119 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

	l		l	l
6.0	(min)			≥
	Tc Length (min) (feet)	22,426	22,426	Area (sf)
	Slope (ft/ft)		98 F	CN
	Velocity (ft/sec)	100.00% lm	98 Paved parking, HSG /	Description
	Capacity (cfs)	100.00% Impervious Area	ing, HSG A	
Direct Entry,	Description	\rea		

Summary for Subcatchment 26S: B.6

Runoff 0.01 cfs @ 13.77 hrs, Volume= 0.007 af, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Type III 24-hr 2-yr Rainfall=3.00"

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Type III 24-hr 2-yr Rainfall=3.00"

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6.0	Tc Length Slope (min) (feet) (ft/ft)	40,090 52 31,146 8,944 3,467		Area (sf) CN
		50		Adi
	Velocity (ft/sec)			CN Adj Description
	Capacity (cfs)	Weighted Average, UI Ac 77.69% Pervious Area 22.31% Impervious Area 38.76% Unconnected	>75% Grass cov Unconnected pa Roofs, HSG A	iption
Direct Entry,	Description	Weighted Average, Ul Adjusted 77.69% Pervious Area 22.31% Impervious Area 38.76% Unconnected	>75% Grass cover, Good, HSG A Unconnected pavement, HSG A Roofs, HSG A	

Summary for Subcatchment 27S: A.6

0.65 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 1.98"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

	6.0	Tc Length (min) (feet	9	10,948	1,6	12,5	1,117	9	1,6	8,8	Area (sf)
			48	48	19						l
		Slope (ft/ft)	œ	8	_	90 V	98 R			98 P	Ż
1		Velocity (ft/sec)	8.66% Unconnected	7.12% Imp	12.88% Pervious Area	Weighted Average	Roofs, HSG A	Inconnected	75% Grass	Paved parking, HSG A	CN Description
		Capacity (cfs)	nnected	87.12% Impervious Area	ious Area	/erage	A	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	າg, HSG A	
	Direct Entry,	Description		а				t, HSG A	od, HSG A		

Summary for Subcatchment 28S: B.1

Runoff 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

270	30,559 370	40	270 98	30,559 39	Area (sf) CN /
		39			<u>A</u>
100.00% Unconnected	99.12% Pervious Area	Weighted Average, UI Adjusted	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Description

Type III 24-hr 2-yr Rainfall=3.00"

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

Summary for Subcatchment 29S: B.2

Runoff 0.64 cfs @ 12.09 hrs, Volume= 0.047 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Capacity Description (cfs) Direct Entry,	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min) 6.0
nnected	17.82% Unconnected	<u> </u>	1,997	
83.76% Impervious Area	3.76% Imp	œ	11,208	
ous Area	16.24% Pervious Area	<u>-</u>	2,173	
erage	Weighted Average	88 W	13,381	
g, HSG A	Paved parking, HSG A	98 P	9,211	
Unconnected pavement, HSG A	Inconnecte	98 U	1,997	
>75% Grass cover, Good, HSG A	75% Grass	39 >	2,173	
	CN Description	CN D	Area (sf)	P

Summary for Subcatchment 30S: B.3

Runoff 1.04 cfs @ 12.09 hrs, Volume=

0.080 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

6.0 Direct Entry,	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	16,329 95.72% Impervious Area 2,575 15.77% Unconnected	95	98	731 39 >75% Grass cover, Good, HSG A 2,575 98 Unconnected pavement, HSG A	Area (st) CN Description
Direct Entry,		pervious Area nonnected	Average vious Area	king, HSG A	ss cover, Good, HSG A ed pavement, HSG A	

Summary for Subcatchment 31S: B.4

Runoff 1.04 cfs @ 12.09 hrs, Volume=

0.080 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

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Direct Entry,					6.0	
3)	(cfs	(ft/sec)		(feet)	(min)	
y Description	Capacit	Velocity Capacity	Slope	Length	Tc	
0.	connected	15.77% Unconnected	_	2,575		
Area	pervious A	95.72% Impervious Area	9	16,329		
	ious Area	4.28% Pervious Area	4	731		
	verage	Weighted Average	95 V	17,060		
A	ing, HSG	Paved parking, HSG A	98 F	13,754		
Unconnected pavement, HSG A	ed pavem	Jnconnecte	98 ر	2,575		
>75% Grass cover, Good, HSG A	s cover, C	·75% Gras		731		
		CN Description	CN	Area (sf)	Þ	

Summary for Subcatchment 32S: B.5

Runoff 0.76 cfs @ 12.10 hrs, Volume= 0.056 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

_	(m									
6.0	Tc Length	1,32	16,59	8,03	24,627	6,653	1,32	8,03	8,61	Area (sf)
		24	33	4						ı
	Slope (ft/ft)	7.9	67	32	79 W	98 Rc	98 Ur		98 Pa	CN De
	Velocity (ft/sec)	7.98% Unconnected	.38% Impe	32.62% Pervious Area	Weighted Average	Roofs, HSG A	connected	5% Grass	Paved parking, HSG A	Description
	Capacity (cfs)	nected	67.38% Impervious Area	ious Area	erage	Þ	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	g, HSG A	
Direct Entry,	Description		D				; HSG A	od, HSG A		

Summary for Subcatchment 33S: B.7

Runoff 0.33 cfs @ 12.74 hrs, Volume= 0.108 af, Depth= 0.19"

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Area (sf) CN Description 129,407 39 >75% Grass cover, Good, HSG A 97,286 74 >75% Grass cover, Good, HSG C 9,046 80 >75% Grass cover, Good, HSG D 27,194 30 Woods, Good, HSG D 27,194 30 Woods, Good, HSG D 15,779 70 Woods, Good, HSG D 4,399 77 Woods, Good, HSG D 1,606 98 Unconnected pavement, HSG A 319 98 Unconnected pavement, HSG C 5,475 98 Roofs, HSG A 290,511 55 Weighted Average 283,111 97,45% Pervious Area	2.55% Impervious Area 26.01% Unconnected Velocity Capacity Description (ft/sec) (cfs) Direct Entry,	2.55% 26.01° 2e Vel ft) (ft/	Slope (ft/ft)	7,400 1,925 Length (feet)	Tc (min) 30.0
CN 39 74 80 70 77 77 98 98	ted Average % Pervious Area	Weigh 97.45	55	290,511 283,111	
CN 74 39 80 77 70 98	, HSG A	Roofs	98	5,475	
CN 74 80 70 77 77 98	inected pavement, HSG C	Uncor	98	319	
CN 74 80 70 77	inected pavement, HSG A	Uncor	98	1,606	
74 39 70	s, Good, HSG D	Wood	77	4,399	
CN 39 74 80 30	s, Good, HSG C	Wood	70	15,779	
CN 39 74 80	s, Good, HSG A	Wood	30	27,194	
CN 39 74	Grass cover, Good, HSG D	>75%	80	9,046	
39 CN	Grass cover, Good, HSG C	>75%	74	97,286	
S	Grass cover, Good, HSG A	>75%	39	129,407	
	ption	Descr	CN	\rea (sf)	

Summary for Subcatchment 34S: B.8

Runoff 0.67 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry,				6.0
acity Description (cfs)	Velocity Cap (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
cted	12.30% Unconnected		1,364	
us Area	88.82% Impervious Area		11,088	
Area	11.18% Pervious Area		1,396	
Φ	Weighted Average	91	12,484	
ement, HSG A	Unconnected pavement, HSG A	98	1,364	
yr, Good, HSG A	>75% Grass cover, Good, HSG A	39	1,396	
SGA	Paved parking, HSG A	98	9,724	
	Description	CN	Area (sf)	Þ

Summary for Subcatchment 35S: C.1

Runoff 0.58 cfs @ 12.51 hrs, Volume= 0.124 af, Depth= 0.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Type III 24-hr 2-yr Rainfall=3.00"

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20.0	Tc Length (min) (feet)	14,141	22,067	214,241				16,469			Area (sf) (
	Slope (ft/ft)				59	98	98	77	80	39	CN /
	Velocity (ft/sec)				58		_	_			Adj
		64.089	9.34%	90.669	Weigh	Roofs,	Uncon	Woods	>75%	>75%	Description
	Capacity (cfs)	64.08% Unconnected	9.34% Impervious Area	90.66% Pervious Area	ted Averaç	Roofs, HSG A	nected par	Woods, Good, HSG D	Grass cov	Grass cov	ption
Direct Entry,	Description	cted	s Area	Area	Weighted Average, UI Adjusted		Jnconnected pavement, HSG A	SGD	>75% Grass cover, Good, HSG D	>75% Grass cover, Good, HSG A	

Summary for Subcatchment 36S: C.2

Runoff II 1.08 cfs @ 12.09 hrs, Volume= 0.078 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Origination for Originate Amount 270: O 2	6.0 Direct Entry,	(min) (feet) (ft/ft) (ft/sec) (cfs)	Slope Velocity Capacity	2,989 15.87% Unconnected	18,829 83.62% Impervious Area	3,687 16.38% Pervious Area	22,516 88 Weighted Average	2,851 98 Roofs, HSG A	39	12,989 98 Paved parking, HSG A	Area (sf) CN Description

Summary for Subcatchment 37S: C.3

Runoff П 0.30 cfs @ 12.10 hrs, Volume= 0.023 af, Depth= 0.96"

12,429 4,754 7,675	1,900	509	4,754	5,266	Area (sf)
75	98	98	39	98	S
Weighted Average 38.25% Pervious Area 61.75% Impervious Area	Roofs, HSG A	Roofs, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	Description

Type III 24-hr 2-yr Rainfall=3.00"

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Type III 24-hr 2-yr Rainfall=3.00"

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

Summary for Subcatchment 41S: C.7

Runoff П 0.47 cfs @ 12.09 hrs, Volume= 0.038 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Tc (min)			Are
Length (feet)	7,188 7,188	6,072 1,116	Area (sf)
Slope (ft/ft)	98 V	98 F	S
Velocity (ft/sec)	Veighted Av 00.00% Im	⁹ aved parki Roofs, HSG	Description
Capacity (cfs)	verage pervious Ar	ng, HSG A A	
Description	\rea		
	w 2	98 Weighted Average 100.00% Impervious Arr Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	98 Paved parking, HSG A 98 Roofs, HSG A 98 Weighted Average 98 Weighted Average 100.00% Impervious Ar Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)

Summary for Subcatchment 42S: C.8

0.50 cfs @ 12.09 hrs, Volume= 0.040 af, Depth= 2.77"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

6.0	(min) (feet) (ft/ft) (ft/sec)	Slope Veloci	7,639 100.00% Impervious Area	7,639 98 Paved parking, HSG A	Area (sf) CN Description
Direct Entry,	c) (cfs)	apacity Description	rvious Area	, HSG A	

Summary for Subcatchment 43S: C.9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00" 0.57 cfs @ 12.09 hrs, Volume= 0.046 af, Depth= 2.77"

Runoff

П

Area (sf) 8,732 8,732 98 S Paved parking, HSG A Description 100.00% Impervious Area

T_C (min) 6.0 Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Direct Entry,

Summary for Subcatchment 38S: C.4

Runoff 0.30 cfs @ 12.09 hrs, Volume= 0.025 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

6.0 Direct Entry,	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	4,655 100.00% Impervious Area	4,655 98 Paved parking, HSG A	Area (sf) CN Description
y,				

Summary for Subcatchment 39S: C.5

0.38 cfs @ 12.09 hrs, Volume= 0.031 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry,	(18000)	(1916)	1000	6.0
lpacity Description	Slope Velocity Capacity	Slope (#/ft)	Length (feet)	(min)
nected	30.34% Unconnected	(2)	1,777	
vious Area	100.00% Impervious Area		5,857	
age	Weighted Average	98 \	5,857	
Unconnected pavement, HSG A	Jnconnected p		1,777	
HSG A	Paved parking, HSG A	98 F	4,080	
	CN Description	CN	Area (sf)	Þ

Summary for Subcatchment 40S: C.6

Runoff 0.26 cfs @ 12.09 hrs, Volume=

0.021 af, Depth= 2.77"

	l	l
4,047	4,047	Area (sf)
	98	S
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 2-yr Rainfall=3.00"

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

Summary for Subcatchment 44S: C.10

Runoff 0.35 cfs @ 12.09 hrs, Volume= 0.028 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry,					6.0
/ Description)	Capacity (cfs)	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
Area	pervious /	100.00% Impervious Area		5,326	
A	ing, HSG /	Paved parking, HSG A	98 F	5,326	
		Description	SN E	Area (sf)	_

Summary for Subcatchment 45S: C.11

0.17 cfs @ 12.09 hrs, Volume= 0.014 af, Depth= 2.77"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry,				6.0
Capacity Description (cfs)	Velocity(ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
7.68% Unconnected	7.68% Un		202	
mpervious Area	100.00%		2,631	
Weighted Average	Weighted	98	2,631	
Unconnected pavement, HSG D	Unconnec	98	76	
Unconnected pavement, HSG A	Unconnec	98	126	
Paved parking, HSG D	Paved par	98	946	
Paved parking, HSG A	Paved par	98	1,483	
7	Description	S	Area (sf)	_

Summary for Subcatchment 46S: C.12

Runoff 0.39 cfs @ 12.09 hrs, Volume= 0.031 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Type III 24-hr 2-yr Rainfall=3.00"

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Direct Entry,				6.0
Capacity Description (cfs)	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
nected	26.21% Unconnected		1,549	
rvious Area	100.00% Impervious Area		5,910	
rage	Weighted Average	98	5,910	
	Roofs, HSG A	98	96	
Jnconnected pavement, HSG D	Unconnected	98	696	
Unconnected pavement, HSG A	Unconnected		853	
I, HSG D	Paved parking, HSG D	98	2,121	
, HSG A	Paved parking, HSG A	98	2,144	
	Description	S	Area (sf)	\

Summary for Subcatchment 47S: C.13

0.13 cfs @ 12.09 hrs, Volume= 0.011 af, Depth= 2.77"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

רוים לי				ć
Direct Entry				n 0
(ft/sec) (cfs)	Γ	(ft/ft)	(feet)	(min)
ocity Capacity Description	pe Velocity	Slope	Length	Тc
7.80% Unconnected	7.80%		155	
100.00% Impervious Area	100.00		1,987	
Weighted Average	Weigh	98	1,987	
98 Unconnected pavement, HSG D	Uncor	98	155	
Paved parking, HSG D		98	1,832	
ption	CN Description	S	Area (sf)	

Summary for Subcatchment 48S: C.14

Runoff 0.12 cfs @ 12.09 hrs, Volume= 0.010 af, Depth= 2.77"

141	1,885 98 1,885	141 98	1,744 98	Area (sf) CN
7.48% Unconnected	Weighted Average 100 00% Impervious Area	Unconnected pavement, HSG D	Paved parking, HSG D	Description

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

Summary for Subcatchment 49S: C.15

Runoff 0.23 cfs @ 12.09 hrs, Volume= 0.018 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry				ი ი
l	(ft/sec)	(ft/ft)	(feet)	(min)
apacity Description	Velocity Capacity	Slope	Length	Tc
ected	7.66% Unconnected	7	267	
rvious Area	100.00% Impervious Area	_	3,487	
age	Weighted Average	98 W	3,487	
Unconnected pavement, HSG D	Inconnected	98 U	267	
, HSG D	Paved parking, HSG D	98 P	3,220	
	CN Description	CN D	Area (sf)	

Summary for Subcatchment 50S: C.16

0.23 cfs @ 12.09 hrs, Volume= 0.019 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

Direct Entry.	D:				6.0
Description		Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	Slope (ft/ft)	Length t (feet)	Tc (min)
	nected	7.70% Unconnected	7.	270	
	100.00% Impervious Area	00.00% Imp	⇉	3,508	
	rage	Weighted Average	98 W	3,508 (
ISG D	98 Unconnected pavement, HSG D	nconnected)8 U	270 9	
	g, HSG D	Paved parking, HSG D	98 P		
		escription	N D	Area (sf) CN Description	Ar

Summary for Subcatchment 51S: D.1

0.00 cfs @ 24.03 hrs, Volume= 0.001 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

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Type III 24-hr 2-yr Rainfall=3.00"

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Type III 24-hr 2-yr Rainfall=3.00"

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Direct Entry,	Direct					20.0
iption	Descr	Velocity Capacity Description (ft/sec) (cfs)	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
		100.00% Unconnected	00.00% U	_	1,527	
	à	0.38% Impervious Area	.38% Impe	0	1,527	
	_	99.62% Pervious Area	9.62% Per	0	101,244	4
		verage	Weighted Average	41 V	402,771	4
		od, HSG D	Woods, Good, HSG D	77 V	450	
		od, HSG B	Voods, Go	55 V	5,106	
		Woods, Good, HSG A	Voods, Go	30 V	60,796	_
ĞD	ood, HS	>75% Grass cover, Good, HSG D	·75% Gras	80 >	51,440	
ĞB	ood, HS	>75% Grass cover, Good, HSG B	·75% Gras	61	518	
ĞA	ood, HS	>75% Grass cover, Good, HSG A	·75% Gras	39 >	82,934	_
i A	nt, HSG	Unconnected pavement, HSG A	Inconnecte	98 ر	1,527	
			CN Description	CN	Area (sf)	Þ
			o orintion	2		>

Summary for Subcatchment 52S: B.9

Runoff П 0.69 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 2-yr Rainfall=3.00"

	6.0	Tc Length (min) (feet)	1,150	12,123	2,895	15,018	1,150	2,895	10,973	Area (sf)	
		Slope (ft/ft)				87	98	39	98	S	
)		l	9.49	80.7	19.2	Wei	Unc	>75	Pave	Des	
		/elocity (ft/sec)	% Unco	2% Imp	8% Per	Weighted Average	onnecte	% Grass	ed parki	Description	
,		Capacity (cfs)	9.49% Unconnected	80.72% Impervious Area	19.28% Pervious Area	verage	Unconnected pavement, HSG A	s cover, Go	Paved parking, HSG A		
: :	Direct Entry,	Velocity Capacity Description (ft/sec) (cfs)		ea			nt, HSG A	>75% Grass cover, Good, HSG A			
:											
;											
		ı					ı			ı	

Summary for Pond 4P: Infiltration Basin #2

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 213.15' @ 12.62 hrs Surf.Area= 7,596 sf Storage= 4,645 cf

Plug-Flow detention time= 65.3 min calculated for 0.320 af (100% of inflow) Center-of-Mass det. time= 65.3 min (831.0 - 765.7)

Type III 24-hr 2-yr Rainfall=3.00"

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Type III 24-hr 2-yr Rainfall=3.00"

Device Rou	216.00	214.00	212.50	(feet)	Elevation	#1	Volume
ting	_				Surl	212.50'	Invert
Inve	1,559	8,926	6,645	(sq-ft)	.Area	32	Avail.S
rt Outle	453.0	397.0	342.0	(feet)	Perim.	,065 cf	torage
t Devices	20,428	11,636	0	(cubic-feet)	Inc.Store	Custom Stage Data	Avail.Storage Storage Description
	32,065	11,636	0	(cubic-feet)	Cum.Store	(Irregular)Listed be	
	13,809	9,927	6,645	(sq-ft)	Wet.Area	elow (Recalc)	
	Device Routing Invert Outlet Devices	11,559 453.0 20,428 32,065 Invert Outlet Devices	8,926 397 0 11,636 11,636 11,559 453.0 20,428 32,065 Invert Outlet Devices	6,645 342.0 0 0 8,926 397.0 11,636 11,636 11,559 453.0 20,428 32,065 Invert Outlet Devices	(sq-ft) (feet) (cubic-feet) (cubic-feet) 6,645 342.0 0 0 8,926 397.0 11,636 11,636 11,559 453.0 20,428 32,065 Invert Outlet Devices	Surf.Area Perim. Inc.Store Cum.Store W (sq-ft) (feet) (cubic-feet) (cubic-feet) W 6,645 342.0 0 0 0 0 8,926 397.0 11,636 11,636 11,636 11,636 32,065 11,559 453.0 20,428 32,065 32,065 1	50' 32,065 cf

Discarded OutFlow Max=0.55 cfs @ 12.62 hrs HW=213.15' (Free Discharge) =Exfiltration (Controls 0.55 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=212.50' (Free Discharge) —2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 5P: Wet Basin

Inflow Primary Outflow Inflow Area = п п п 7.670 ac, 33.35% Impervious, Inflow Depth = 0.87" for 2-yr event 5.48 cfs @ 12.09 hrs, Volume= 0.558 af 3.17 cfs @ 12.22 hrs, Volume= 0.558 af, Atten= 42%, Lag= 3.17 cfs @ 12.22 hrs, Volume= 0.558 af 0.558 af 0.558 af, Atten= 42%, Lag= 8.0 min 0.558 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 214.39' @ 12.22 hrs Surf.Area= 10,391 sf Storage= 3,778 cf

Plug-Flow detention time= 33.8 min calculated for 0.557 af (100% of inflow) Center-of-Mass det. time= 33.9 min (848.6 - 814.7)

η Weir	p-Crested Vee/Tra	45.0 deg x 4.0' long Sharp-Crested Vee/Trap Weir		214.00'	Device 1	#2 [
0.900	4 sf	n= 0.013, Flow Area= 3.14 sf	n= 0			
= 0.900	y, no headwall, Ke	L= 580.0' CPP, projecting, no headwall, Ke= 0.900	L= 5			
		24.0" Round Culvert		213.43'	Primary	#1 F
		Invert Outlet Devices	rt Outle	Inve	Routing	Device F
16,550	103,930	42,506	390.0	22,316		220.00
15,359	61,425	36,350	375.0	20,207		218.00
10,927	25,075	25,075	442.0	16,216		216.00
9,189	0	0	420.0	9,189		214.00
(sq-ft)	(cubic-feet)	(cubic-feet)	(feet)	(sq-ft)		(feet)
Wet.Area	Cum.Store	Inc.Store	Perim.	Surf.Area	S	Elevation
elow (Recalc)	(Irregular)Listed b	103,930 cf Custom Stage Data (Irregular)Listed below (Recalc)	,930 cf		214.00'	#1
		Avail.Storage Storage Description	torage		Invert	Volume
		Cellel-01-Mass det. tille- 33.9 Hill (048.0 - 614.7)	11111 (04	เแล- จจ.ซ	viass det.	Celliel-Ol-

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#3

Device 1

215.50' Cv= 2.56 (C= 3.20)
4.2' long x 4.2' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.37 2.53 2.69 2.68 2.67 2.67 2.65 2.66 2.66
2.67 2.71 2.72 2.74 2.77 2.85 3.01 3.23

Primary OutFlow Max=3.15 cfs @ 12.22 hrs HW=214.38' (Free Discharge)
1=Culvert (Passes 3.15 cfs of 3.36 cfs potential flow)
2=Sharp-Crested Vee/Trap Weir (Weir Controls 3.15 cfs @ 1.97 fps)
3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 7P: Infiltration Basin #1

Inflow =
Outflow =
Discarded =
Primary = Inflow Area = 4.84 cfs @ 0.83 cfs @ 0.83 cfs @ 0.00 cfs @ 10.584 ac, 21.75% Impervious, Inflow Depth = 0.54" for 2-yr event 4.84 cfs @ 12.09 hrs, Volume= 0.477 af 12.09 hrs, Volume= 12.89 hrs, Volume= 12.89 hrs, Volume= 0.00 hrs, Volume= 0.477 af, Atten= 83%, Lag= 48.1 min 0.477 af 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.24' @ 12.89 hrs Surf.Area= 12,406 sf Storage= 5,097 cf

Plug-Flow detention time= 48.8 min calculated for 0.477 af (100% of inflow) Center-of-Mass det. time= 48.8 min (900.5 - 851.7)

Volume	Invert	Avail	Storage	Volume Invert Avail.Storage Storage Description		
#1	214.80'	_	5,542 cf	15,542 cf Custom Stage Data (Irregular)Listed below (Recalc)	(Irregular)Listed b	elow (Recalc)
Elevation	Su	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(feet)		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
214.80		10,430	800.0	0	0	10,430
215.00		11,580	1,000.0	2,200	2,200	39,078
216.00		15,185	1,210.0	13,342	15,542	76,027
Device Routing	outing	lnv	ert Outl	Invert Outlet Devices		
#1 Primary	rimary	215.30'		40.0' long x 10.0' breadth Broad-Crested Rectangular Weir	h Broad-Crested F	Rectangular Weir
			Hea Coe	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2	2.70 2.69 2.68 3) 1.40 1.60 2.69 2.67 2.64
			Coe	Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64	2.70 2.69 2.68	2.69 2.67 2.64

Discarded OutFlow Max=0.83 cfs @ 12.89 hrs HW=215.24'
-2=Exfiltration (Controls 0.83 cfs) (Free Discharge)

#2

Discarded

214.80'

2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 212.80'

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=214.80' (Free Discharge)
—1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Summary for Pond 12P: STONE RECHARGE TRENCH

Device

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Type III 24-hr 2-yr Rainfall=3.00"

Inflow Outflow Primary Discarded = nflow Area = п 1.16 cfs @ 0.15 cfs @ 0.15 cfs @ 0.00 cfs @ 0.409 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event
1.16 cfs @ 12.09 hrs, Volume= 0.094 af
0.15 cfs @ 12.62 hrs, Volume= 0.94 af, Atten=87%, Lag=31.9 min
0.15 cfs @ 12.62 hrs, Volume= 0.094 af
0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by S Peak Elev= 2 Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs = 220.30' @ 12.62 hrs Surf.Area= 2,427 sf Storage= 1,261 cf

Plug-Flow detention time= 52.7 min calculated for 0.094 af (100% of inflow) Center-of-Mass det. time= 52.6 min (810.4 - 757.8)

Volume # 219.00' Invert Avail.Storage 1,942 cf 3.00'W x 809.00'L x 2.00'H Prismatoid 4,854 cf Overall x 40.0% Voids Storage Description

#2 Routing Discarded Primary 221.00' 219.00' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.30 3.31 3.32 Outlet Devices 3.20 3.28 3.31 2.00

Discarded OutFlow Max=0.15 cfs @ 12.62 hrs HW=220.30' —2=Exfiltration (Controls 0.15 cfs) (Free Discharge)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=219.00' (Free Discharge) —1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 17P: STONE RECHARGE TRENCH

Inflow Outflow Discarded Inflow Area = н н П 0.409 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event
1.16 cfs @ 12.09 hrs, Volume= 0.094 af
0.15 cfs @ 12.62 hrs, Volume= 0.94 af, Atten=87%, Lag=31.9 min
0.15 cfs @ 12.62 hrs, Volume= 0.094 af
0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 220.30' @ 12.62 hrs Surf.Area= 2,427 sf Storage= 1,261 cf

Plug-Flow detention time= 52.7 min calculated for 0.094 af (100% of inflow) Center-of-Mass det. time= 52.6 min (810.4 - 757.8)

Volume # 219.00' Invert Avail.Storage 1,942 cf **3.00'W x 809.00'L x 2.00'H Prismatoid 4,854** cf Overall x 40.0% Voids Storage Description

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Routing Primary 221.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 Outlet Devices 2.50 3.00

2.00

Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded 219.00 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00'

#2

Discarded OutFlow Max=0.15 cfs @ 12.62 hrs HW=220.30' —2=Exfiltration (Controls 0.15 cfs) (Free Discharge)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=219.00' —1=Broad-Crested Rectangular Weir (Controls 0.00 cfs) (Free Discharge)

Summary for Pond 19P: STONE RECHARGE TRENCH

Primary Inflow Discarded = Outflow Inflow Area = 1.16 cfs @ 0.15 cfs @ 0.15 cfs @ 0.00 cfs @ 0.409 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event
1.16 cfs @ 12.09 hrs, Volume= 0.094 af, Outs af 0.15 cfs @ 12.62 hrs, Volume= 0.094 af, Atten=87%, Lag=31.9 min
0.15 cfs @ 12.62 hrs, Volume= 0.094 af
0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 220.30' @ 12.62 hrs Surf.Area= 2,427 sf Storage= 1,26 Storage= 1,261 cf

Plug-Flow detention time= 52.7 min calculated for 0.094 af (100% of inflow) Center-of-Mass det. time= 52.6 min (810.4 - 757.8)

Volume Invert Avail.Storage Storage Description

#2			#1	Device	#1
Discarded			#1 Primary	Device Routing	219.00'
219.00'			221.00'	Invert	1,92
219.00' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00'	Coef (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00	221.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir	Invert Outlet Devices	1,942 cf 3.00'W × 809.00'L × 2.00'H Prismatoid 4,854 cf Overall × 40.0% Voids

Discarded OutFlow Max=0.15 cfs @ 12.62 hrs HW=220.30' —2=Exfiltration (Controls 0.15 cfs) (Free Discharge)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=219.00' —1=Broad-Crested Rectangular Weir (Controls 0.00 cfs) (Free Discharge)

Type III 24-hr 2-yr Rainfall=3.00"

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0.345 ac, 8 0.69 cfs @ 0.69 cfs @ 0.69 cfs @ 80.72% Impervious, Inflow Depth = 1.74" 2 12.09 hrs, Volume = 0.050 af 2 12.09 hrs, Volume = 0.050 af, Atta 3 12.09 hrs, Volume = 0.050 af Atten= 0%, Lag= 0.0 min for 2-yr event

Summary for Pond 21P: CB-4

Outflow

П п п Inflow Area =

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.01 @ 12.09 hrs Flood Elev= 218.50'

Primary Routing 215.50 12.0" Round Culvert
L= 37.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/'
n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=0.68 cfs @ 12.09 hrs HW=216.00' —1=Culvert (Barrel Controls 0.68 cfs @ 2.48 fps) (Free Discharge)

Summary for Pond 22P: DMH-2

Outflow Primary Inflow Area = 11 11 П 0.631 ac, 8 1.36 cfs @ 1.36 cfs @ 1.36 cfs @ 84.40% Impervious, Inflow Depth = 1.89" § 12.09 hrs, Volume= 0.099 af § 12.09 hrs, Volume= 0.099 af, Atta § 12.09 hrs, Volume= 0.099 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.04' @ 12.09 hrs Flood Elev= 218.90'

			#1	Device
			#1 Primary	Device Routing
			215.30'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0050 '/' Cc= 0.900	L= 101.0' CPP, projecting, no headwall, Ke= 0.900	215.30' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.33 cfs @ 12.09 hrs HW=216.03'
—1=Culvert (Barrel Controls 1.33 cfs @ 3.01 fps) (Free Discharge)

Summary for Pond 23P: CB-1

Primary =	Outflow =	Inflow =	Inflow Area =
0.64 cfs @ 12.09 hrs, Volume= 0.047 af	0.64 cfs @ 12.09 hrs, Volume=	0.64 cfs @ 12.09 hrs, Volume=	0.307 ac, 83.76% Impervious, Inflow
0.047 af	0.047 af, Atten= 0%, Lag= 0.0 min	0.047 af	Depth = 1.82" for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.07' @ 12.09 hrs Flood Elev= 218.60'

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Type III 24-hr 2-yr Rainfall=3.00"

Device Routing Primary 215.60' 12.0" Round Culvert
L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' / 215.40' S= 0.0074 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.63 cfs @ 12.09 hrs HW=216.07 —1=Culvert (Barrel Controls 0.63 cfs @ 2.57 fps) (Free Discharge)

Summary for Pond 24P: CB-2

Inflow Outflow Primary Inflow Area = H H H 0.392 ac, 95.72% Impervious, Inflow Depth = 2.45" for 2-yr event 1.04 cfs @ 12.09 hrs, Volume= 0.080 af 1.04 cfs @ 12.09 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min 1.04 cfs @ 12.09 hrs, Volume= 0.080 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.81' @ 12.09 hrs Flood Elev= 219.20'

	#1	Device
	#1 Primary	Device Routing
	216.20'	Invert
L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.40' S= 0.0400 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	216.20' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.02 cfs @ 12.09 hrs HW=216.80'
—1=Culvert (Inlet Controls 1.02 cfs @ 2.08 fps) (Free Discharge)

Summary for Pond 25P: CB-3

Inflow Primary Outflow Inflow Area = 0.565 ac, 67.38% Impervious, Inflow Depth = 1.19" for 2-yr event 0.76 cfs @ 12.10 hrs, Volume= 0.056 af 0.76 cfs @ 12.10 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min 0.76 cfs @ 12.10 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.00' @ 12.10 hrs Flood Elev= 219.50'

Routing Invert Outlet Devices

		#1 Primary	Device Routing
		216.50'	Invert
Inlet / Outlet Invert= 216.50' / 215.40' S= 0.0289 '/ Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	L= 38.0' CPP, projecting, no headwall, Ke= 0.900	216.50' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.75 cfs @ 12.10 hrs HW=217.00'
—1=Culvert (Inlet Controls 0.75 cfs @ 1.90 fps) (Free Discharge)

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Cc = 0.900

Type III 24-hr 2-yr Rainfall=3.00"

Device Routing Primary 215.20' **12.0" Round Culvert**L= 160.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.20' / 214.60' S= 0.0037 '/' Outlet Devices n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.42 cfs @ 12.09 hrs HW=216.00'
—1=Culvert (Barrel Controls 1.42 cfs @ 2.87 fps) (Free Discharge)

Summary for Pond 29P: CB-21

Inflow Outflow Primary Inflow Area = 11 11 11 0.123 ac,100.00% Impervious, Inflow Depth = 0.35 cfs @ 12.09 hrs, Volume= 0.028 0.35 cfs @ 12.09 hrs, Volume= 0.028 0.35 cfs @ 12.09 hrs, Volume= 0.028 pth = 2.77" for 2-yr event 0.028 af 0.028 af, Atten= 0%, Lag= 0.0 min 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.53' @ 12.09 hrs Flood Elev= 219.20'

Routing 216.20' Invert 12.0" Round Culvert
L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.70' S= 0.0192 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=0.34 cfs @ 12.09 hrs HW=216.52'
—1=Culvert (Inlet Controls 0.34 cfs @ 1.53 fps) (Free Discharge)

Summary for Pond 30P: DMH-15

Outflow Primary Inflow Inflow Area = 0.637 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event
1.81 cfs @ 12.09 hrs, Volume= 0.147 af
1.81 cfs @ 12.09 hrs, Volume= 0.147 af, Atten= 0%, Lag= 0.0 min
1.81 cfs @ 12.09 hrs, Volume= 0.147 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.32' @ 12.09 hrs Flood Elev= 219.80'

	*	ice
	Primary	ice Routing
	214.50'	Invert
L= 250.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.50' / 213.60' S= 0.0036 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf	214.50' 15.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.76 cfs @ 12.09 hrs HW=215.31 —1=Culvert (Barrel Controls 1.76 cfs @ 3.00 fps) (Free Discharge)

Summary for Pond 26P: DMH-1

Outflow Inflow Area = п 1.264 ac, 8 2.44 cfs @ 2.44 cfs @ 2.44 cfs @ 2.44 cfs @

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.13' @ 12.09 hrs Flood Elev= 218.90'

Routing Primary 215.30 **18.0" Round Culvert**L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0104 '/' n= 0.013, Flow Area= 1.77 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=2.39 cfs @ 12.09 hrs HW=216.12'
—1=Culvert (Inlet Controls 2.39 cfs @ 2.43 fps) (Free Discharge)

Summary for Pond 27P: CB-22

Outflow Primary Inflow Area = П 11 11 0.515 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 1.46 cfs @ 12.09 hrs, Volume= 0.119 af 1.46 cfs @ 12.09 hrs, Volume= 0.119 af, Atten=0%, Lag= 0.0 min 1.46 cfs @ 12.09 hrs, Volume= 0.119 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.33' @ 12.09 hrs Flood Elev= 218.50'

Invert Outlet Devices

Primary 215.50 **12.0" Round Culvert**L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' 215.30' S= 0.0039 / n= 0.013, Flow Area= 0.79 sf Cc= 0.900

Primary OutFlow Max=1.42 cfs @ 12.09 hrs HW=216.32'
—1=Culvert (Barrel Controls 1.42 cfs @ 2.82 fps) (Free Discharge)

Summary for Pond 28P: DMH-16

Outflow Inflow Area = 1.46 cfs @ 1.46 cfs @ 1.46 cfs @ 0.515 ac,100.00% Impervious, Inflow Depth = 2.77" 12.09 hrs, Volume= 12.09 hrs, Volume= 12.09 hrs, Volume= 0.119 af 0.119 af, 0.119 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.02' @ 12.09 hrs Flood Elev= 218.70'

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Type III 24-hr 2-yr Rainfall=3.00"

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Outlet Devices

Routing Primary 215.10'

Device

12.0" Round Culvert

L= 180.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.10 / 213.60' S= 0.0083 // n= 0.013, Flow Area= 0.79 sf

Cc= 0.900

Primary OutFlow Max=1.26 cfs @ 12.09 hrs HW=215.78'
—1=Culvert (Inlet Controls 1.26 cfs @ 2.21 fps) (Free Discharge)

Summary for Pond 34P: CB-23

Inflow Primary Outflow Inflow Area = 11 11 п 0.288 ac, 87.12% Impervious, Inflow Depth = 0.65 cfs @ 12.09 hrs, Volume= 0.048
0.65 cfs @ 12.09 hrs, Volume= 0.048
0.65 cfs @ 12.09 hrs, Volume= 0.048 0.048 af, Atten= 0%, Lag= 0.0 min 0.048 af 1.98" for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.96' @ 12.09 hrs Flood Elev= 218.50'

Device

Routing 215.50' Invert 12.0" Round Culvert
L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0107 '/' Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.64 cfs @ 12.09 hrs HW=215.96'
—1=Culvert (Inlet Controls 0.64 cfs @ 1.82 fps) (Free Discharge)

Summary for Pond 35P: CB-24

Outflow Primary Inflow Inflow Area 0.224 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 0.64 cfs @ 12.09 hrs, Volume= 0.052 af 0.64 cfs @ 12.09 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min 0.64 cfs @ 12.09 hrs, Volume= 0.052 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.96' @ 12.09 hrs Flood Elev= 218.50'

Device Routing Primary 215.50 Invert **12.0" Round Culvert**L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0150 '/ n= 0.013, Flow Area= 0.79 sf Outlet Devices S= 0.0150 '/' Cc = 0.900

Primary OutFlow Max=0.62 cfs @ 12.09 hrs HW=215.95'
—1=Culvert (Inlet Controls 0.62 cfs @ 1.80 fps) (Free Discharge)

Summary for Pond 31P: DMH-14

Outflow Inflow Area = п п п 4.00 cfs @ 4.00 cfs @ 4.00 cfs @ 1.468 ac, 12.09 hrs, Volume= 12.09 hrs, Volume= 12.09 hrs, Volume= 97.47% Impervious, Inflow Depth = 2.61" 12.09 hrs, Volume= 0.320 af, Att 12.09 hrs, Volume= 0.320 af, Otto 12.09 hrs, Volume= 0.320 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 214.62' @ 12.09 hrs Flood Elev= 218.60'

Routing Primary 213.50 **18.0" Round Culvert**L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 213.50' /212.50' S= 0.0164 '/' n= 0.013, Flow Area= 1.77 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=3.90 cfs @ 12.09 hrs HW=214.60'
—1=Culvert (Inlet Controls 3.90 cfs @ 2.81 fps) (Free Discharge)

Summary for Pond 32P: CB-20

Outflow Primary Inflow Area = П 11 11 0.318 ac,100.00% Impervious, Inflow Depth = 2.77"
0.90 cfs @ 12.09 hrs, Volume= 0.073 af
0.90 cfs @ 12.09 hrs, Volume= 0.073 af, Att
0.90 cfs @ 12.09 hrs, Volume= 0.073 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.06' @ 12.09 hrs Flood Elev= 218.50'

Primary Routing 215.50 Invert Outlet Devices

Primary OutFlow Max=0.88 cfs @ 12.09 hrs HW=216.05'
—1=Culvert (Inlet Controls 0.88 cfs @ 1.99 fps) **12.0" Round Culvert**L= 12.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' 215.30' S= 0.0167 // n= 0.013, Flow Area= 0.79 sf

Summary for Pond 33P: DMH-17

(Free Discharge)

Cc= 0.900

Outflow Inflow Area = 0.513 ac, 1.29 cfs @ 1.29 cfs @ 1.29 cfs @ 888 92.75% Impervious, Inflow Depth = 2.33" § 12.09 hrs, Volume= 0.099 af § 12.09 hrs, Volume= 0.099 af, Atta § 12.09 hrs, Volume= 0.099 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.79' @ 12.09 hrs Flood Elev= 218.80'

Type III 24-hr 2-yr Rainfall=3.00"

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Primary

232.20'

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Type III 24-hr 2-yr Rainfall=3.00"

Outflow Inflow Area = 1.26 cfs @ 1.26 cfs @ 1.26 cfs @ 0.446 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 1.26 cfs @ 12.09 hrs, Volume= 0.103 af 1.26 cfs @ 12.09 hrs, Volume= 0.103 af, Atten=0%, Lag=0.0 min 1.26 cfs @ 12.09 hrs, Volume= 0.103 af

Summary for Pond 37P: DMH-10

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.71' @ 12.09 hrs Flood Elev= 222.20'

Primary Routing 218.10' **15.0" Round Culvert**L= 122.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.10' / 214.50' S= 0.0295 '/' n= 0.013, Flow Area= 1.23 sf Outlet Devices

Cc= 0.900

Primary OutFlow Max=1.23 cfs @ 12.09 hrs HW=218.70'
—1=Culvert (Inlet Controls 1.23 cfs @ 2.09 fps) (Free Discharge)

Summary for Pond 38P: CB-15

Outflow Primary Inflow Area = П 11 11 0.043 ac,100.00% Impervious, Inflow Depth = 2.77"
0.12 cfs @ 12.09 hrs, Volume= 0.010 af
0.12 cfs @ 12.09 hrs, Volume= 0.010 af, Atto
0.12 cfs @ 12.09 hrs, Volume= 0.010 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.39' @ 12.09 hrs Flood Elev= 236.20'

			#1	Device
			#1 Primary	Routing
			232.20'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/' Cc= 0.900	L= 15.0' CPP, projecting, no headwall, Ke= 0.900	232.20' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.12 cfs @ 12.09 hrs HW=232.39'
—1=Culvert (Inlet Controls 0.12 cfs @ 1.16 fps) (Free Discharge)

Summary for Pond 39P: CB-16

Outflow Inflow Area = 0.046 ac, 100.00% Impervious, Inflow Depth = 2.77" 0.13 cfs @ 12.09 hrs, Volume= 0.011 af 0.13 cfs @ 12.09 hrs, Volume= 0.011 af, Atto 0.13 cfs @ 12.09 hrs, Volume= 0.011 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.40' @ 12.09 hrs Flood Elev= 236.20'

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Device Routing Outlet Devices

12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.13 cfs @ 12.09 hrs HW=232.39'
—1=Culvert (Inlet Controls 0.13 cfs @ 1.18 fps) (Free Discharge)

Summary for Pond 52P: CB-17

Inflow Outflow Primary Inflow Area = 11 11 11 0.081 ac,100.00% Impervious, Inflow Depth = 0.23 cfs @ 12.09 hrs, Volume= 0.019 0.23 cfs @ 12.09 hrs, Volume= 0.019 0.23 cfs @ 12.09 hrs, Volume= 0.019 pth = 2.77" for 2-yr event 0.019 af 0.019 af, Atten= 0%, Lag= 0.0 min 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.66' @ 12.09 hrs Flood Elev= 251.40'

		#1	Device
		#1 Primary	Device Routing
		247.40'	Invert
n= 0.013, Flow Area= 0.79 sf	L= 18.0' CPP, projecting, no headwall, Ke= 0.900	247.40' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.22 cfs @ 12.09 hrs HW=247.66'
—1=Culvert (Inlet Controls 0.22 cfs @ 1.37 fps) (Free Discharge)

Summary for Pond 53P: CB-18

Outflow Inflow Primary Inflow Area = 0.080 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 0.23 cfs @ 12.09 hrs, Volume= 0.018 af 0.23 cfs @ 12.09 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min 0.23 cfs @ 12.09 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.66' @ 12.09 hrs Flood Elev= 251.40'

Routing Primary 247.40' Invert **12.0" Round Culvert**L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 247.40' / 246.50' S= 0.0474 / n= 0.013, Flow Area= 0.79 sf Outlet Devices

S= 0.0474 '/'

Cc= 0.900

Primary OutFlow Max=0.22 cfs @ 12.09 hrs HW=247.66'
—1=Culvert (Inlet Controls 0.22 cfs @ 1.37 fps) (Free Discharge)

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Cc = 0.900

Type III 24-hr 2-yr Rainfall=3.00"

Device Routing Primary 218.90' 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/ n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary OutFlow Max=0.17 cfs @ 12.09 hrs HW=219.12'
—1=Culvert (Inlet Controls 0.17 cfs @ 1.27 fps) (Free Discharge)

Summary for Pond 61P: DMH-11

Inflow Outflow Primary Inflow Area = п 0.249 ac,100.00% Impervious, Inflow Depth = 0.71 cfs @ 12.09 hrs, Volume= 0.058 pth = 2.77" for 2-yr event 0.058 af 0.058 af, Atten= 0%, Lag= 0.0 min 0.058 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.09 @ 12.09 hrs

Flood Elev= 235.70' Routing 231.60' Invert Outlet Devices

Device **12.0" Round Culvert**L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.60' / 218.20' S= 0.0677 '/' n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.69 cfs @ 12.09 hrs HW=232.08'
—1=Culvert (Inlet Controls 0.69 cfs @ 1.86 fps) (Free Discharge)

Summary for Pond 62P: CB-14

Outflow Primary Inflow Inflow Area 0.136 ac,100.00% Impervious, Inflow Depth = 2.77"
0.39 cfs @ 12.09 hrs, Volume= 0.031 af
0.39 cfs @ 12.09 hrs, Volume= 0.031 af, Atto
0.39 cfs @ 12.09 hrs, Volume= 0.031 af Atten= 0%, Lag= 0.0 min ο̈́ 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.25' @ 12.09 hrs Flood Elev= 221.90'

Routing Primary 218.90' Invert 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=0.37 cfs @ 12.09 hrs HW=219.24'
—1=Culvert (Inlet Controls 0.37 cfs @ 1.57 fps) (Free Discharge)

Summary for Pond 54P: DMH-13

Outflow Inflow Area = п п 0.161 ac,100.00% Impervious, Inflow Depth = 2.77" 0.46 cfs @ 12.09 hrs, Volume= 0.037 af 0.46 cfs @ 12.09 hrs, Volume= 0.037 af, Att 0.46 cfs @ 12.09 hrs, Volume= 0.037 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 246.78' @ 12.09 hrs Flood Elev= 250.20'

Routing Primary 246.40 12.0" Outlet Devices 12.0" Round Culvert
L= 85.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 246.40' / 240.00' S= 0.0753 /' n= 0.013, Flow Area= 0.79 sf

Cc= 0.900

Primary OutFlow Max=0.44 cfs @ 12.09 hrs HW=246.78'
—1=Culvert (Inlet Controls 0.44 cfs @ 1.65 fps) (Free Discharge)

Summary for Pond 56P: DMH-12

Outflow Primary Inflow Area = п п 0.161 ac,100.00% Impervious, Inflow Depth = 2.77" 0.46 cfs @ 12.09 hrs, Volume= 0.037 af 0.46 cfs @ 12.09 hrs, Volume= 0.037 af, Atto 0.46 cfs @ 12.09 hrs, Volume= 0.037 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 240.28' @ 12.09 hrs Flood Elev= 244.00'

Primary 239.90' Invert 12.0" Round Culvert L= 110.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.90' / 231.70' S= 0.0745 '/ Outlet Devices

Primary OutFlow Max=0.44 cfs @ 12.09 hrs HW=240.28'
—1=Culvert (Inlet Controls 0.44 cfs @ 1.65 fps) (Free Discharge)

n= 0.013, Flow Area= 0.79 sf

Cc = 0.900

Summary for Pond 58P: CB-13

Outflow Inflow Area = 0.060 ac, 100.00% Impervious, Inflow Depth = 2.77" 0.17 cfs @ 12.09 hrs, Volume= 0.014 af 0.17 cfs @ 12.09 hrs, Volume= 0.014 af, Atto 0.17 cfs @ 12.09 hrs, Volume= 0.014 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.13' @ 12.09 hrs Flood Elev= 221.90'

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Summary for Pond 63P: DMH-4

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Cc = 0.900

Type III 24-hr 2-yr Rainfall=3.00"

Atten= 0%, Lag= 0.0 min for 2-yr event Device Routing Primary 216.00' 12.0" Round Culvert
L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.50' S= 0.0208 '/ n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary OutFlow Max=0.37 cfs @ 12.09 hrs HW=216.34'
—1=Culvert (Inlet Controls 0.37 cfs @ 1.57 fps) (Free Discharge)

Summary for Pond 67P: CB-7

Inflow Outflow Primary Inflow Area = 11 11 11 0.093 ac,100.00% Impervious, Inflow Depth = 0.26 cfs @ 12.09 hrs, Volume= 0.021 o.021 af 0.021 af, Atte 0.021 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.28' @ 12.09 hrs Flood Elev= 219.00'

Device Routing 216.00' Invert 12.0" Round Culvert
L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.50' S= 0.0208 '/' Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.26 cfs @ 12.09 hrs HW=216.28'
—1=Culvert (Inlet Controls 0.26 cfs @ 1.42 fps) (Free Discharge)

Summary for Pond 68P: DMH-9

Outflow Primary Inflow Inflow Area = 0.909 ac, 7 1.68 cfs @ 1.68 cfs @ 1.68 cfs @ 78.68% Impervious, Inflow Depth = 1.66"

12.09 hrs, Volume= 0.126 af

12.09 hrs, Volume= 0.126 af, Att

12.09 hrs, Volume= 0.126 af 0.126 af 0.126 af, Atten= 0%, Lag= 0.0 min 0.126 af ο̈́ 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.24' @ 12.09 hrs Flood Elev= 218.70'

Routing Primary 215.40' Invert 15.0" Round Culvert
L= 190.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.40' / 214.90' S= 0.0026'/
n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=1.65 cfs @ 12.09 hrs HW=216.23'
—1=Culvert (Barrel Controls 1.65 cfs @ 2.68 fps) (Free Discharge)

2.245 ac, 5.47 cfs @ 5.47 cfs @ 5.47 cfs @ 888 91.37% Impervious, Inflow Depth = 2.32" § 12.09 hrs, Volume = 0.434 af § 12.09 hrs, Volume = 0.434 af, Att § 12.09 hrs, Volume = 0.434 af) 12.09 hrs, Volume=) 12.09 hrs, Volume=) 12.09 hrs, Volume=

Outflow

п

Inflow Area =

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.26' @ 12.09 hrs Flood Elev= 222.20'

Routing Primary 218.10' Outlet Devices **24.0" Round Culvert**L= 122.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.10' / 214.50' S= 0.0295 '/ n= 0.013, Flow Area= 3.14 sf Cc= 0.900

Primary OutFlow Max=5.33 cfs @ 12.09 hrs HW=219.24'
—1=Culvert (Inlet Controls 5.33 cfs @ 2.87 fps) (Free Discharge)

Summary for Pond 65P: DMH-8

Outflow Primary Inflow Area = П 11 11 0.909 ac, 7 1.68 cfs @ 1.68 cfs @ 1.68 cfs @ 78.68% Impervious, Inflow Depth = 1.66" 2 12.09 hrs, Volume = 0.126 af 2 12.09 hrs, Volume = 0.126 af, Atta 3 12.09 hrs, Volume = 0.126 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Peak Elev= 215.63' @ 12.09 hrs Flood Elev= 220.40' Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Primary 214.80 Invert 15.0" Round Culvert L= 215.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.80' / 214.20' S= 0.0028 '/' n= 0.013, Flow Area= 1.23 sf Outlet Devices

Cc = 0.900

Primary OutFlow Max=1.65 cfs @ 12.09 hrs HW=215.62'
—1=Culvert (Barrel Controls 1.65 cfs @ 2.73 fps) (Free Discharge)

Summary for Pond 66P: CB-6

Outflow Inflow Area = 0.134 ac,100.00% Impervious, Inflow Depth = 2.77" 0.38 cfs @ 12.09 hrs, Volume= 0.031 af 0.38 cfs @ 12.09 hrs, Volume= 0.031 af, Atto 0.38 cfs @ 12.09 hrs, Volume= 0.031 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.35 @ 12.09 hrs

Flood Elev= 219.00'

Type III 24-hr 2-yr Rainfall=3.00"

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Outflow Inflow Area = 0.107 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 0.30 cfs @ 12.09 hrs, Volume= 0.025 af 0.30 cfs @ 12.09 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min 0.30 cfs @ 12.09 hrs, Volume= 0.025 af

Summary for Pond 69P: CB-11

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.93' @ 12.09 hrs Flood Elev= 218.60'

	#1	Device
	#1 Primary	Device Routing
	215.60'	Invert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' / 215.50' S= 0.0067 /' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.60' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.29 cfs @ 12.09 hrs HW=215.92'
—1=Culvert (Barrel Controls 0.29 cfs @ 2.01 fps) (Free Discharge)

Summary for Pond 70P: CB-12

Outflow Primary Inflow Area = 0 0 0 0.802 ac, 7 1.38 cfs @ 1.38 cfs @ 1.38 cfs @ 1.38 cfs @ 75.84% Impervious, Inflow Depth = 1.51" 0 12.09 hrs, Volume= 0.101 af 0 12.09 hrs, Volume= 0.101 af, Atte 0 12.09 hrs, Volume= 0.101 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.38' @ 12.09 hrs Flood Elev= 218.60'

			#1	Device
			#1 Primary	Device Routing
			215.60'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.60' / 215.50' S= 0.0067 '/' Cc= 0.900	L= 15.0' CPP, projecting, no headwall, Ke= 0.900	215.60' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.35 cfs @ 12.09 hrs HW=216.38' —1=Culvert (Barrel Controls 1.35 cfs @ 2.86 fps) (Free Discharge)

Summary for Pond 71P: CB-8

Inflow Area =	0.175 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr ev
Inflow =	0.50 cfs @ 12.09 hrs, Volume= 0.040 af
Outflow =	0.50 cfs @ 12.09 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min
Primary =	0.50 cfs @ 12.09 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.92' @ 12.09 hrs Flood Elev= 218.50'

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Type III 24-hr 2-yr Rainfall=3.00"

Device Routing Primary 215.50' **12.0" Round Culvert**L= 32.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0062 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.48 cfs @ 12.09 hrs HW=215.91' (Free Discharge) —1=Culvert (Barrel Controls 0.48 cfs @ 2.35 fps)

Summary for Pond 72P: CB-9

Inflow Outflow Primary Inflow Area = 0.165 ac,100.00% Impervious, Inflow Depth = 0.47 cfs @ 12.09 hrs, Volume= 0.038 : 0.47 cfs @ 12.09 hrs, Volume= 0.038 : 0.47 cfs @ 12.09 hrs, Volume= 0.038 : epth = 2.77" for 2-yr event 0.038 af 0.038 af, Atten= 0%, Lag= 0.0 min 0.038 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.91' @ 12.09 hrs Flood Elev= 218.50'

	#1	Device
	Primary	Routing
	215.50'	Invert
L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.46 cfs @ 12.09 hrs HW=215.91' (Free Discharge) —1=Culvert (Barrel Controls 0.46 cfs @ 2.26 fps)

Summary for Pond 73P: DMH-6

Inflow Primary Outflow Inflow Area = 0.340 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 0.97 cfs @ 12.09 hrs, Volume= 0.079 af 0.97 cfs @ 12.09 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min 0.97 cfs @ 12.09 hrs, Volume= 0.079 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.83' @ 12.09 hrs Flood Elev= 219.10'

Routing Primary 215.20' Invert 12.0" Round Culvert
L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.20' / 214.80' S= 0.0042 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Cc= 0.900

Primary OutFlow Max=0.94 cfs @ 12.09 hrs HW=215.82'
—1=Culvert (Barrel Controls 0.94 cfs @ 2.64 fps) (Free Discharge)

Type III 24-hr 2-yr Rainfall=3.00"

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Summary for Pond 77P: DMH-7

Outflow Inflow Area = п п 0.323 ac,100.00% Impervious, Inflow Depth = 2.77" for 2-yr event 0.92 cfs @ 12.09 hrs, Volume= 0.074 af 0.92 cfs @ 12.09 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min 0.92 cfs @ 12.09 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.22' @ 12.09 hrs Flood Elev= 220.20'

Routing Primary 215.70 **15.0" Round Culvert**L= 181.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.70' / 214.80' S= 0.0050 '/' n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=0.89 cfs @ 12.09 hrs HW=216.21'
—1=Culvert (Barrel Controls 0.89 cfs @ 2.76 fps) (Free Discharge)

Summary for Pond 78P: CB-19

Outflow Primary Inflow Area = П 11 11 0.122 ac,100.00% Impervious, Inflow Depth = 2.77"
0.35 cfs @ 12.09 hrs, Volume= 0.028 af
0.35 cfs @ 12.09 hrs, Volume= 0.028 af, Atto
0.35 cfs @ 12.09 hrs, Volume= 0.028 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.36' @ 12.09 hrs Flood Elev= 219.00'

Primary 216.00' Invert 12.0" Round Culvert n= 0.013, Flow Area= 0.79 sf L= 49.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0041 '/' Outlet Devices Cc = 0.900

Primary OutFlow Max=0.34 cfs @ 12.09 hrs HW=216.36' —1=Culvert (Barrel Controls 0.34 cfs @ 1.98 fps) (Free Discharge)

Summary for Pond 79P: CB-10

Outflow Inflow Area = 0.200 ac,100.00% Impervious, Inflow Depth = 2.77" 0.57 cfs @ 12.09 hrs, Volume= 0.046 af 0.57 cfs @ 12.09 hrs, Volume= 0.046 af, Atto 0.57 cfs @ 12.09 hrs, Volume= 0.046 af Atten= 0%, Lag= 0.0 min for 2-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.44° @ 12.09 hrs Flood Elev= 219.00'

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Type III 24-hr 2-yr Rainfall=3.00"

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Device Routing Primary 216.00' **12.0" Round Culvert**L= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0069 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.55 cfs @ 12.09 hrs HW=216.44'
—1=Culvert (Barrel Controls 0.55 cfs @ 2.47 fps) (Free Discharge)

Summary for Pond 80P: DMH-5

Inflow Outflow Primary Inflow Area = 11 11 11 0.663 ac, 100.00% Impervious, Inflow Depth = 1.88 cfs @ 12.09 hrs, Volume= 0.153 and 1 epth = 2.77" for 2-yr event 0.153 af 0.153 af, Atten= 0%, Lag= 0.0 min 0.153 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.47 @ 12.09 hrs

Flood Elev= 219.10'

	#1	Device
	#1 Primary	Routing
	214.70'	Invert
L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.70' / 214.20' S= 0.0064 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf	214.70' 15.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.83 cfs @ 12.09 hrs HW=215.46'
—1=Culvert (Inlet Controls 1.83 cfs @ 2.34 fps) (Free Discharge)

Summary for Pond 81P: CB-5

Primary Outflow Inflow Inflow Area = 0.287 ac, 8 0.67 cfs @ 0.67 cfs @ 0.67 cfs @ . 88.82% Impervious, Inflow Depth = 2.07" for 2-yr event
② 12.09 hrs, Volume= 0.049 af
③ 12.09 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min
③ 12.09 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.54' @ 12.09 hrs Flood Elev= 219.00'

Routing Primary 216.00' Invert **12.0" Round Culvert**L= 31.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 / n= 0.013, Flow Area= 0.79 sf Outlet Devices

S= 0.0032 '/'

Cc = 0.900

Primary OutFlow Max=0.66 cfs @ 12.09 hrs HW=216.54'
—1=Culvert (Barrel Controls 0.66 cfs @ 2.21 fps) (Free Discharge)

Inflow Outflow

0.287 ac, 8 0.67 cfs @ 0.67 cfs @ 0.67 cfs @

Inflow Area =

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.54' @ 12.09 hrs Flood Elev= 218.90'

Routing Primary

Type III 24-hr 2-yr Rainfall=3.00"

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Summary for Pond 82P: DMH-3

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment9S: APT. BLDG. A Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=1.73 cfs 0.143 af

Subcatchment 16S: APT. BLDG. B Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=1.73 cfs 0.143 af

Subcatchment 18S: APT. BLDG. C Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=1.73 cfs 0.143 af

Subcatchment 23S: A.3 Subcatchment 22S: A.2 Subcatchment 21S: A.1 Runoff Area=13,850 sf 100.00% Impervious Runoff Depth=4.20" Runoff Area=9,767 sf 100.00% Impervious Runoff Depth=4.20" Runoff Area=20,195 sf 5.87% Impervious Runoff Depth=0.18" Tc=10.0 min CN=42 Runoff=0.02 cfs 0.007 af Tc=6.0 min CN=98 Runoff=1.35 cfs 0.111 af

Subcatchment 24S: A.4 Runoff Area=5,341 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.52 cfs 0.043 af Tc=6.0 min CN=98 Runoff=0.95 cfs 0.079 af

Subcatchment 25S: A.5 Runoff Area=22,426 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=2.18 cfs 0.180 af

Subcatchment 27S: A.6 Subcatchment 26S: B.6 Runoff Area=40,090 sf 22.31% Impervious Runoff Depth=0.48" Tc=6.0 min UI Adjusted CN=50 Runoff=0.24 cfs 0.037 af

Subcatchment 28S: B.1 Runoff Area=12,567 sf 87.12% Impervious Runoff Depth=3.34" Tc=6.0 min CN=90 Runoff=1.07 cfs 0.080 af Runoff Area=30,829 sf 0.88% Impervious Runoff Depth=0.10" Tc=6.0 min UI Adjusted CN=39 Runoff=0.01 cfs 0.006 af

Subcatchment 29S: B.2 Runoff Area=13,381 sf 83.76% Impervious Runoff Depth=3.14" Tc=6.0 min CN=88 Runoff=1.09 cfs 0.080 af

Subcatchment31S: B.4 Subcatchment 30S: B.3 Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=3.87" Tc=6.0 min CN=95 Runoff=1.60 cfs 0.126 af

Subcatchment 33S: B.7 Subcatchment32S: B.5 Runoff Area=290,511 sf 2.55% Impervious Runoff Depth=0.72" Runoff Area=24,627 sf 67.38% Impervious Runoff Depth=2.33" Tc=6.0 min CN=79 Runoff=1.51 cfs 0.110 af Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=3.87" Tc=6.0 min CN=95 Runoff=1.60 cfs 0.126 af Tc=30.0 min CN=55 Runoff=2.34 cfs 0.398 af

216.00' 12.0" Round Culvert
L= 31.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=0.66 cfs @ 12.09 hrs HW=216.54' (Free Discharge) L1=Culvert (Barrel Controls 0.66 cfs @ 2.21 fps)

Summary for Link 20L: DP-A

Inflow Area = 11 11 30.660 ac, 24.72% Impervious, Inflow Depth = 0.22" 3.17 cfs @ 12.22 hrs, Volume= 0.559 af, Atto 3.17 cfs @ 12.22 hrs, Volume= 0.559 af, Atto 0.559 af, Atten= 0%, Lag= 0.0 min for 2-yr event

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Type III 24-hr 10-yr Rainfall=4.44"

6842-Post	Type III 24-hr 10-yr Rainfall=4.44"
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Subcatchment 34S: B.8	Runoff Area=12,484 sf 88.82% Impervious Runoff Depth=3.44" Tc=6.0 min CN=91 Runoff=1.09 cfs 0.082 af
Subcatchment 35S: C.1	Runoff Area=236,308 sf 9.34% Impervious Runoff Depth=0.87" Tc=20.0 min UI Adjusted CN=58 Runoff=2.99 cfs 0.395 af
Subcatchment 36S: C.2	Runoff Area=22,516 sf 83.62% Impervious Runoff Depth=3.14" Tc=6.0 min CN=88 Runoff=1.83 cfs 0.135 af
Subcatchment 37S: C.3	Runoff Area=12,429 sf 61.75% Impervious Runoff Depth=2.00" Tc=6.0 min CN=75 Runoff=0.65 cfs 0.048 af
Subcatchment 38S: C.4	Runoff Area=4,655 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.45 cfs 0.037 af
Subcatchment 39S: C.5	Runoff Area=5,857 sf 100.00% Impervious Runoff Depth=4,20" Tc=6.0 min CN=98 Runoff=0.57 cfs 0.047 af
Subcatchment 40S: C.6	Runoff Area=4,047 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.39 cfs 0.033 af
Subcatchment 41S: C.7	Runoff Area=7,188 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.70 cfs 0.058 af
Subcatchment 42S: C.8	Runoff Area=7,639 sf 100.00% Impervious Runoff Depth=4,20" Tc=6.0 min CN=98 Runoff=0.74 cfs 0.061 af
Subcatchment 43S: C.9	Runoff Area=8,732 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.85 cfs 0.070 af
Subcatchment 44S: C.10	Runoff Area=5,326 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.52 cfs 0.043 af
Subcatchment 45S: C.11	Runoff Area=2,631 sf 100.00% Impervious Runoff Depth=4,20" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af
Subcatchment 46S: C.12	Runoff Area=5,910 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.57 cfs 0.048 af
Subcatchment 47S: C.13	Runoff Area=1,987 sf 100.00% Impervious Runoff Depth=4,20" Tc=6.0 min CN=98 Runoff=0.19 cfs 0.016 af
Subcatchment 48S: C.14	Runoff Area=1,885 sf 100.00% Impervious Runoff Depth=4,20" Tc=6.0 min CN=98 Runoff=0.18 cfs 0.015 af
Subcatchment 49S: C.15	Runoff Area=3,487 sf 100.00% Impervious Runoff Depth=4,20" Tc=6.0 min CN=98 Runoff=0.34 cfs 0.028 af
Subcatchment 50S: C.16	Runoff Area=3,508 sf 100.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=98 Runoff=0.34 cfs 0.028 af
Subcatchment 51S: D.1	Runoff Area=402,771 sf

6842-Post Type III 24-hr 10-yr Rainfall=4.44"

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Pond 19P: STONE RECHARGE TRENCH Peak Elev=221.00' Storage=1,942 cf Inflow=1.73 cfs 0.143 af Primary=0.69 cfs 0.006 af Outflow=0.85 cfs 0.143 af Pond 30P: DMH-15 Pond 29P: CB-21 Pond 28P: DMH-16 Pond 27P: CB-22 Pond 26P: DMH-1 Pond 25P: CB-3 Pond 24P: CB-2 Pond 23P: CB-1 Pond 22P: DMH-2 Pond 21P: CB-4 Pond 17P: STONE RECHARGE TRENCH Peak Elev=221.00' Storage=1,942 cf Inflow=1.73 cfs 0.143 af Discarded=0.17 cfs 0.137 af Primary=0.69 cfs 0.006 af Outflow=0.85 cfs 0.143 af Pond 12P: STONE RECHARGE TRENCH Peak Elev=221.00' Storage=1,942 cf Inflow=1.73 cfs 0.143 af Discarded=0.17 cfs 0.137 af Primary=0.69 cfs 0.006 af Outflow=0.85 cfs 0.143 af Pond 7P: Infiltration Basin #1 Peak Elev=215.42' Storage=7,333 cf Inflow=8.44 cfs 1.052 af Discarded=0.93 cfs 0.774 af Primary=4.01 cfs 0.278 af Outflow=4.94 cfs 1.052 af Pond 5P: Wet Basin Pond 4P: Infiltration Basin #2 Subcatchment 52S: B.9 Peak Elev=213.57' Storage=7,982 cf Inflow=6.07 cfs 0.501 af Discarded=0.67 cfs 0.501 af Primary=0.00 cfs 0.000 af Outflow=0.67 cfs 0.501 af Peak Elev=216.38' Inflow=2.28 cfs $\,$ 0.170 af 12.0" Round Culvert $\,$ n=0.013 $\,$ L=101.0' S=0.0050 $\,$ /' Outflow=2.28 cfs $\,$ 0.170 af 15.0" Round Culvert n=0.013 L=250.0' S=0.0036'/' Outflow=2.70 cfs 0.223 af Peak Elev=216.30' Inflow=2.18 cfs 0.180 af 12.0" Round Culvert n=0.013 L=160.0' S=0.0037'/' Outflow=2.18 cfs 0.180 af Peak Elev=216.99' Inflow=1.60 cfs 0.126 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0400 '/' Outflow=1.60 cfs 0.126 af 12.0" Round Culvert n=0.013 L=27.0' S=0.0074 '/' Outflow=1.09 cfs 0.080 af Peak Elev=216.61' Inflow=0.52 cfs 0.043 af 12.0" Round Culvert n=0.013 L=26.0' S=0.0192 '/' Outflow=0.52 cfs 0.043 af Peak Elev=216.61' Inflow=2.18 cfs 0.180 af 12.0" Round Culvert n=0.013 L=51.0' S=0.0039'/' Outflow=2.18 cfs 0.180 af Peak Elev=216.45' Inflow=4.20 cfs 0.316 af 18.0" Round Culvert n=0.013 L=48.0' S=0.0104'/' Outflow=4.20 cfs 0.316 af Peak Elev=217.26' Inflow=1.51 cfs 0.110 af 12.0" Round Culvert n=0.013 L=38.0' S=0.0289 '/' Outflow=1.51 cfs 0.110 af Peak Elev=216.20' Inflow=1.19 cfs 0.087 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054 '/' Outflow=1.19 cfs 0.087 af Runoff Area=15,018 sf 80.72% Impervious Runoff Depth=3.04" Tc=6.0 min CN=87 Runoff=1.19 cfs 0.087 af Peak Elev=214.69' Storage=7,103 cf Inflow=9.52 cfs 1.084 af Peak Elev=215.55' Inflow=2.70 cfs 0.223 af

6842-Post
Type III 24-hr 10-yr Rainfall=4.44"
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Pond 31P: DMH-14	Peak Elev=215.06' Inflow=6.07 cfs 0.494 af 18.0" Round Culvert n=0.013 L=61.0' S=0.0164 '/' Outflow=6.07 cfs 0.494 af
Pond 32P: CB-20	Peak Elev=216.21' Inflow=1.35 cfs 0.111 af 12.0" Round Culvert n=0.013 L=12.0' S=0.0167 // Outflow=1.35 cfs 0.111 af
Pond 33P: DMH-17	Peak Elev=216.05' Inflow=2.02 cfs 0.159 af 12.0" Round Culvert n=0.013 L=180.0' S=0.0083 // Outflow=2.02 cfs 0.159 af
Pond 34P: CB-23	Peak Elev=216.12' Inflow=1.07 cfs 0.080 af 12.0" Round Culvert n=0.013 L=28.0' S=0.0107 '/' Outflow=1.07 cfs 0.080 af
Pond 35P: CB-24	Peak Elev=216.07' Inflow=0.95 cfs 0.079 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0150 '/' Outflow=0.95 cfs 0.079 af
Pond 37P: DMH-10	Peak Elev=218.87 Inflow=1.89 cfs 0.156 af 15.0" Round Culvert n=0.013 L=122.0' S=0.0295 // Outflow=1.89 cfs 0.156 af
Pond 38P: CB-15	Peak Elev=232.43' Inflow=0.18 cfs 0.015 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/ Outflow=0.18 cfs 0.015 af
Pond 39P: CB-16	Peak Elev=232.44' Inflow=0.19 cfs 0.016 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/ Outflow=0.19 cfs 0.016 af
Pond 52P: CB-17	Peak Elev=247.73' Inflow=0.34 cfs 0.028 af 12.0" Round Culvert n=0.013 L=18.0' S=0.0500'/' Outflow=0.34 cfs 0.028 af
Pond 53P: CB-18	Peak Elev=247.72' Inflow=0.34 cfs 0.028 af 12.0" Round Culvert n=0.013 L=19.0' S=0.0474 '/' Outflow=0.34 cfs 0.028 af
Pond 54P: DMH-13	Peak Elev=246.87' Inflow=0.68 cfs 0.056 af 12.0" Round Culvert n=0.013 L=85.0' S=0.0753 '/' Outflow=0.68 cfs 0.056 af
Pond 56P: DMH-12	Peak Elev=240.37' Inflow=0.68 cfs 0.056 af 12.0" Round Culvert n=0.013 L=110.0' S=0.0745 '/' Outflow=0.68 cfs 0.056 af
Pond 58P: CB-13	Peak Elev=219.18' Inflow=0.26 cfs 0.021 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467 '/' Outflow=0.26 cfs 0.021 af
Pond 61P: DMH-11	Peak Elev=232.21' Inflow=1.06 cfs 0.087 af 12.0" Round Culvert n=0.013 L=198.0' S=0.0677 // Outflow=1.06 cfs 0.087 af
Pond 62P: CB-14	Peak Elev=219.33' Inflow=0.57 cfs 0.048 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467 // Outflow=0.57 cfs 0.048 af
Pond 63P: DMH-4	Peak Elev=219.63' Inflow=8.59 cfs 0.688 af 24.0" Round Culvert n=0.013 L=122.0' S=0.0295 '/' Outflow=8.59 cfs 0.688 af
Pond 65P: DMH-8	Peak Elev=215.99' Inflow=2.93 cfs 0.220 af 15.0" Round Culvert n=0.013 L=215.0' S=0.0028 // Outflow=2.93 cfs 0.220 af
Pond 66P: CB-6	Peak Elev=216.43' Inflow=0.57 cfs 0.047 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208'/' Outflow=0.57 cfs 0.047 af

Pond 73P: DMH-6

Pond 72P: CB-9

Pond 71P: CB-8

Pond 70P: CB-12

Pond 69P: CB-11

Pond 68P: DMH-9

Peak Elev=216.60' Inflow=2.93 cfs 0.220 af 15.0" Round Culvert n=0.013 L=190.0' S=0.0026 /' Outflow=2.93 cfs 0.220 af

Peak Elev=216.35' Inflow=0.39 cfs 0.033 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208'/' Outflow=0.39 cfs 0.033 af

Peak Elev=216.01' Inflow=0.45 cfs 0.037 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0067 // Outflow=0.45 cfs 0.037 af

Pond 67P: CB-7

Pond 77P: DMH-7

Peak Elev=216.35' Inflow=1.37 cfs 0.113 af 15.0" Round Culvert n=0.013 L=181.0' S=0.0050 '/' Outflow=1.37 cfs 0.113 af

Peak Elev=216.00' Inflow=1.44 cfs 0.119 af 12.0" Round Culvert n=0.013 L=96.0' S=0.0042'/' Outflow=1.44 cfs 0.119 af

Peak Elev=216.01' Inflow=0.70 cfs 0.058 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054 // Outflow=0.70 cfs 0.058 af

Peak Elev=216.02' Inflow=0.74 cfs 0.061 af 12.0" Round Culvert n=0.013 L=32.0' S=0.0062'/' Outflow=0.74 cfs 0.061 af

Peak Elev=216.79' Inflow=2.48 cfs 0.183 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0067 '/' Outflow=2.48 cfs 0.183 af

Link 20L: DP-A

Total Runoff Area = 30.660 ac Runoff Volume = 3.184 af Average Runoff Depth = 1.25" 75.28% Pervious = 23.079 ac 24.72% Impervious = 7.580 ac Pond 82P: DMH-3

Peak Elev=216.72' Inflow=1.09 cfs 0.082 af 12.0" Round Culvert n=0.013 L=31.0' S=0.0032 '/' Outflow=1.09 cfs 0.082 af

Inflow=11.61 cfs 1.498 af Primary=11.61 cfs 1.498 af

Peak Elev=216.72' Inflow=1.09 cfs 0.082 af 12.0" Round Culvert n=0.013 L=31.0' S=0.0032 '/' Outflow=1.09 cfs 0.082 af

Pond 81P: CB-5

Pond 80P: DMH-5

Peak Elev=215.69' Inflow=2.81 cfs 0.232 af 15.0" Round Culvert n=0.013 L=78.0' S=0.0064 // Outflow=2.81 cfs 0.232 af

Peak Elev=216.56' Inflow=0.85 cfs 0.070 af 12.0" Round Culvert n=0.013 L=29.0' S=0.0069 // Outflow=0.85 cfs 0.070 af

Peak Elev=216.45' Inflow=0.52 cfs 0.043 af 12.0" Round Culvert n=0.013 L=49.0' S=0.0041'/' Outflow=0.52 cfs 0.043 af

Pond 79P: CB-10

Pond 78P: CB-19

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Type III 24-hr 10-yr Rainfall=4.44"

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Type III 24-hr 10-yr Rainfall=4.44"

Summary for Subcatchment 9S: APT. BLDG. A

0.143 af, Depth= 4.20'

Runoff

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Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44" 1.73 cfs @ 12.09 hrs, Volume=

Summary for Subcatchment 16S: APT. BLDG. B

1.73 cfs @ 12.09 hrs, Volume= 0.143 af, Depth= 4.20"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

	 -			
6.0	Tc (min)			₽
	Length (feet)	17,818	17,818	Area (sf)
	Slope (ft/ft)	<u>~</u>	98 R	CN
	Velocity (ft/sec)	00.00% lm	98 Roofs, HSG A	Description
	Capacity (cfs)	100.00% Impervious Area	Þ	
Direct Entry,	Description	Area		

Summary for Subcatchment 18S: APT. BLDG. C

Runoff 1.73 cfs @ 12.09 hrs, Volume= 0.143 af, Depth= 4.20'

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Î			
Tc Length in) (feet)	17,818	17,818	Area (sf) CN
Slop (ft/fi		98	S
e Velocity t) (ft/sec)	100.00% In	Roofs, HSC	Description
Capacity (cfs)	pervious A	βA	
Description	Area		
	Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	17,818 100.00% Impervious Ar Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)	17,818 98 Roofs, HSG A 17,818 100.00% Impervious Ar Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)

Summary for Subcatchment 21S: A.1

Runoff Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44" 0.02 cfs @ 12.54 hrs, Volume= 0.007 af, Depth= 0.18"

	10.0
	Tc Le (min) (
95	
186	<u>,</u>
009	19,
	20,
091 98	1,
95 98	
	18,
l	Area (sf)

Summary for Subcatchment 22S: A.2

1.35 cfs @ 12.09 hrs, Volume= 0.111 af, Depth= 4.20"

Runoff

П

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

	1		ı	
6.0	Tc (min)			A
	Length (feet)	13,850 13,850	12,935 915	rea (sf)
	Slope (ft/ft	98	98	S
	Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	Weighted Average 100.00% Impervious Area	98 Paved parking, HSG A 98 Roofs, HSG A	Area (sf) CN Description
	Capacity (cfs)	verage ıpervious Ar	ing, HSG A A	
Direct Entry,	Description	rea		

Summary for Subcatchment 23S: A.3

Runoff 0.95 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 4.20"

		ı
9,767	9,767	Area (sf)
	98	S
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 10-yr Rainfall=4.44"

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Direct Entr					60
	(cfs)	(ft/sec)	(ft/ft)	(feet)	(min)
Description	Capacity	Velocity	Slope	Length	굯

Summary for Subcatchment 24S: A.4

Runoff 0.52 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

6.0 Direct Entry,	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	5,341 98 Weighted Average 5,341 100.00% Impervious Area	227 98 Paved parking, HSG A 5,114 98 Roofs, HSG A	Area (sf) CN Description

Summary for Subcatchment 25S: A.5

Runoff 2.18 cfs @ 12.09 hrs, Volume= 0.180 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Area (sf) 22,426 22,426
98 F
Description Paved park 100.00% In
CN Description 98 Paved parking, HSG A 100.00% Impervious Area
Area

Summary for Subcatchment 26S: B.6

Runoff 0.24 cfs @ 12.16 hrs, Volume= 0.037 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Type III 24-hr 10-yr Rainfall=4.44"

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6.0	_ (mii								
.0	īc Length n) (feet)	3,467	8,944	31,146	40,090	5,477	3,467	31,146	Area (sf)
	Slope (ft/ft)				52	98	98	39	CN Adj Description
					50				<u>Ad</u>
	Velocity (ft/sec)	38.76	22.31	77.69		Roofs	Unco	>75%	Desc
	Capacity (cfs)	38.76% Unconnected	22.31% Impervious Area	77.69% Pervious Area	hted Avera	Roofs, HSG A	nnected pa	Grass cov	ription
Direct Entry,	Description	nected	ious Area	us Area	Weighted Average, UI Adjusted		Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	

Summary for Subcatchment 27S: A.6

1.07 cfs @ 12.09 hrs, Volume= 0.080 af, Depth= 3.34"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

6.0 Direct Entry,	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	948 8.66% Unconnected	10,948 87.12% Impervious Area	1,619 12.88% Pervious Area	12,567 90 Weighted Average	98		1,619 39 >75% Grass cover, Good, HSG A		Alea (si) CN Description
-------------------	---	-----------------------	-------------------------------	----------------------------	----------------------------	----	--	--	--	--------------------------

Summary for Subcatchment 28S: B.1

Runoff II 0.01 cfs @ 14.79 hrs, Volume= 0.006 af, Depth= 0.10"

Type III 24-hr 10-yr Rainfall=4.44"

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Type III 24-hr 10-yr Rainfall=4.44"

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

Summary for Subcatchment 29S: B.2

Runoff П 1.09 cfs @ 12.09 hrs, Volume= 0.080 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

				6.0
		(ft/ft)	(feet)	(min)
ocity Capacity		Slope	Length	T.
% Unconn	17.829		1,997	
% Impervic	83.769		11,208	
% Pervious	16.24%		2,173	
ted Avera	Weigh:	88	13,381	
parking, h	Paved	98	9,211	
nected pa	Uncon		1,997	
Grass cov	>75%		2,173	
ption	Descri	CN	\rea (sf)	
	ption Grass cov nected pa parking, I ted Avera % Pervious % Impervious % Unconno city Car sec)	Description >75% Grass cov \text{Unconnected pa} Paved parking. I Paved parking. I Weighted Averau 16.24% Pervious 83.76% Impervious 17.82% Unconne Velocity Cap (ft/sec)	Description >75% Gras >75% Gras Unconnect Paved panet Paved panet Heighted / 16.24% Pe 83.76% Im 17.82% Ur 17.82% Ur (ft/sec)) CN 39 98 98 88 88 (ft/ft

Summary for Subcatchment 30S: B.3

1.60 cfs @ 12.09 hrs, Volume= 0.126 af, Depth= 3.87"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Direct Entry,					6.0
(cfs)			(ft/ft)	(feet)	(min)
city Description	city Capacity	Velocity	Slope	Length	Tc
ted	15.77% Unconnected	15.77%		2,575	
s Area	95.72% Impervious Area	95.72%		16,329	
rea	4.28% Pervious Area	4.28% F		731	
	Weighted Average	Weighte	95	17,060	
SG A	Paved parking, HSG A	Paved p	98	13,754	
Unconnected pavement, HSG A	ected pave	Unconn	98	2,575	
>75% Grass cover, Good, HSG A	irass cover,	>75% G	39	731	
	tion	CN Description	CN	Area (sf)	_

Summary for Subcatchment 31S: B.4

Runoff

1.60 cfs @ 12.09 hrs, Volume= 0.126 af, Depth= 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

6.0	Tc (min)								Þ
	Length (feet)	2,575	16,329	731	17,060	13,754	2,575	731	Area (sf)
	Slope (ft/ft)				95	98	98		S
	Velocity (ft/sec)	15.77% Unconnected	95.72% Impervious Area	4.28% Pervious Area	Weighted Average	Paved parking, HSG A	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	CN Description
	Capacity (cfs)	connected	pervious Are	ious Area	verage	ing, HSG A	ed pavemer	s cover, Go	
Direct Entry,	Capacity Description (cfs)		ea				nt, HSG A	od, HSG A	

Summary for Subcatchment 32S: B.5

1.51 cfs @ 12.09 hrs, Volume= 0.110 af, Depth= 2.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

ļ	-									
6.0	di Z		_							ΑŢ
(1001)	Length	1,324	16,593	8,034	24,627	6,653	1,324	8,034	8,616	Area (sf)
(1016)	Slope (ft/ft)	7	6	ω	79 V	98 F		39 >		CN
(18,900)	Velocity	7.98% Unconnected	7.38% lmp	32.62% Pervious Area	Weighted Average	Roofs, HSG A	Inconnecte	·75% Grass	Paved parking, HSG A	CN Description
(0.0)	Capacity (cfs)	nnected	67.38% Impervious Area	vious Area	/erage	A	Unconnected pavement, HSG A	cover, Go	ng, HSG A	
Direct Entry,	Description		ea				nt, HSG A	>75% Grass cover, Good, HSG A		

Summary for Subcatchment 33S: B.7

Runoff 2.34 cfs @ 12.54 hrs, Volume= 0.398 af, Depth= 0.72"

Type III 24-hr 10-yr Rainfall=4.44"

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7,400	283,111	290,511	5,475	319	1,606	4,399	15,779	27,194	9,046	97,286	129,407	Area (sf)
		55	98	98	98	77	70	30	80	74	39	S
2.55% Impervious Area	97.45% Pervious Area	Weighted Average	Roofs, HSG A	Unconnected pavement, HSG C	Unconnected pavement, HSG A	Woods, Good, HSG D	Woods, Good, HSG C	Woods, Good, HSG A	>75% Grass cover, Good, HSG D	>75% Grass cover, Good, HSG C	>75% Grass cover, Good, HSG A	Description

Direct Entry,					30.0
	(cfs)	(ft/sec)	(ft/ft)	(feet)	(min)
Description	Capacity	Velocity	Slope	Length	Тc
				1	
				2/2	

Summary for Subcatchment 34S: B.8

Runoff 1.09 cfs @ 12.09 hrs, Volume= 0.082 af, Depth= 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

6.0 Direct Entry,) (ft/ft) (ft/sec) (cfs)	Tc Length Slope Velocity Capacity Description	11,088 88.82% Impervious Area	12,484 91 Weighted Average	98	1,396 39 >75% Grass cover, Good, HSG A	Area (sf) CN Description
Direct Entry,	-	Description	ea		nt, HSG A	ood, HSG A	

Summary for Subcatchment 35S: C.1

2.99 cfs @ 12.34 hrs, Volume= 0.395 af, Depth= 0.87"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Type III 24-hr 10-yr Rainfall=4.44"

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Summary for Subcatchment 36S: C.2

Runoff II 1.83 cfs @ 12.09 hrs, Volume= 0.135 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 Direct Entry,	22,516 88 Weighted Average 3,687 16.38% Pervious Area 18,829 83.62% Impervious Area 2,989 15.87% Unconnected	Area (st) CN Description 12,989 98 Paved parking, HSG A 3,687 39 >75% Grass cover, Good, HSG A 2,989 98 Unconnected pavement, HSG A 2,851 98 Roofs, HSG A
--	---	---

Summary for Subcatchment 37S: C.3

Runoff П 0.65 cfs @ 12.10 hrs, Volume= 0.048 af, Depth= 2.00"

4,754 7,675	1,900	509	4,754	5,266	Area (sf)
2	75	98	39	98	S
38.25% Pervious Area 61.75% Impervious Area	Weighted Average	Roofs, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	Description

Type III 24-hr 10-yr Rainfall=4.44"

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6.0	(min)	Тc
	(feet)	Length
	(ft/ft)	Slope
	(ft/sec)	Velocity
	(cfs)	Capacity
Direct Entry		y Description
•		

Summary for Subcatchment 38S: C.4

Runoff 0.45 cfs @ 12.09 hrs, Volume= 0.037 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

	1		l	l
6.0	Tc (min)			≱
	Length (feet)	4,655	4,655	Area (sf)
	Slope (ft/ft)		98	CN
	Velocity (ft/sec)	100.00% Irr	98 Paved parking, HSG	Description
	Capacity (cfs)	100.00% Impervious Area	ing, HSG A	
Direct Entry,	Description	rea		

Summary for Subcatchment 39S: C.5

Runoff 0.57 cfs @ 12.09 hrs, Volume= 0.047 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Direct Entry,		6.0
Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)	Length S (feet) (Tc (min)
30.34% Unconnected	1,777	
100.00% Impervious Area	5,857	
Weighted Average	5,857 98	
	1,777 98	
Paved parking, HSG A	4,080 98	
CN Description	Area (sf) Ct	Are

Summary for Subcatchment 40S: C.6

Runoff
П
0.39 cfs @
12.09 hrs,
Volume=
0.033 af,
Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

4,047	4,047	Area (sf)
	98	S
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 10-yr Rainfall=4.44"

Tc (min) Length (feet) Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Page 56

Summary for Subcatchment 41S: C.7

Direct Entry,

Runoff П 0.70 cfs @ 12.09 hrs, Volume= 0.058 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

6.0	Tc (min)			A
	Length (feet)	7,188 7,188	6,072 1,116	Area (sf)
	Slope (ft/ft)	98	98 -	S
	Velocity (ft/sec)	Weighted Average 100.00% Impervious Area	98 Paved parking, HSG A 98 Roofs, HSG A	Description
	Capacity (cfs)	verage pervious Aı	ng, HSG A A	
Direct Entry,	Description	rea		
				l

Summary for Subcatchment 42S: C.8

Runoff 0.74 cfs @ 12.09 hrs, Volume= 0.061 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

6.0 Direct Entry,	(min) (feet) (ft/ft) (ft/sec) (cfs)	Slope	7,639 100.00% Impervious Area	7,639 98 Paved parking, HSG A	Area (sf) CN Description

Summary for Subcatchment 43S: C.9

0.85 cfs @ 12.09 hrs, Volume= 0.070 af, Depth= 4.20"

Runoff

	ı	ı
8,732	8,732	Area (sf)
	98	CN
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 10-yr Rainfall=4.44"

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Area (sf)

2,144 2,121 853 696 96

98 8 8 8 S

Paved parking, HSG A
Paved parking, HSG D
Unconnected pavement, HSG A
Unconnected pavement, HSG D
Roofs, HSG A

5,910 5,910 1,549

Weighted Average 100.00% Impervious Area 26.21% Unconnected

98

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Type III 24-hr 10-yr Rainfall=4.44"

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Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)

6.0 Direct Entry,

Summar
y for S
ubcatchn
nent 44
S: C.10

Runoff = 0.52 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Direct Entry,					6.0
y Description	Capacity (cfs)	Velocity (ft/sec)	Slope \ (ft/ft)	Length (feet)	Tc (min)
Area	pervious .	100.00% Impervious Area		5,326	
Α	ing, HSG	5,326 98 Paved parking, HSG A	98 F	5,326	
		Description	CN	Area (sf)	Þ

Summary for Subcatchment 45S: C.11

0.26 cfs @ 12.09 hrs, Volume= 0.021 af, Depth= 4.20"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Direct Entry,					6.0
ity Description (s)	Velocity Capacity (ft/sec) (cfs)	Slope (ft/ft)	Signal Signal	Length (feet)	Tc (min)
d	7.68% Unconnected	7.6		202	
s Area	100.00% Impervious Area	100		2,631	
	Weighted Average		98	2,631	
ment, HSG D	Unconnected pavement, HSG D		98	76	
ment, HSG A	Unconnected pavement, HSG	Cn	98	126	
3 D	Paved parking, HSG D	Pa	98	946	
GA	Paved parking, HSG A	Pa	98	1,483	
	Description		S	Area (sf)	_

Summary for Subcatchment 46S: C.12

Runoff = 0.57 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Direct Entry,
Summary for Subcatchment 47S: C.13

Tc (min) 6.0

> Slope (ft/ft)

Velocity Capacity Description (ft/sec) (cfs)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

0.19 cfs @ 12.09 hrs, Volume=

0.016 af, Depth= 4.20"

l				l		l
Tc (min)						Ą
Length (feet)	155	1,987	1,987	155	1,832	ea (sf)
Slope (ft/ft)			98 1	98	98	S
Velocity (ft/sec)	7.80% Uncc	100.00% Im	Weighted A	Unconnecte	Paved parki	Area (sf) CN Description
Capacity (cfs)	nnected	pervious Aı	verage	d pavemen	ng, HSG D	
Description		rea		nt, HSG D		
	Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)	155 7.80% Unconnected Length Slope Velocity Capacity (feet) (fu'ft) (fu'sec) (cfs)	1,987 100.00% Impervious Ar 155 7.80% Unconnected Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)	1,987 98 Weighted Average 1,987 100.00% Impervious Ar 155 7.80% Unconnected Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)	155 98 Unconnected pavement 1,987 98 Weighted Average 1,987 100,00% Impervious Ar 155 7.80% Unconnected Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)	1,832 98 Paved parking, HSG D 1,55 98 Unconnected pavement 1,987 98 Weighted Average 1,987 1,987 1,000% impervious Ar 1,55 7.80% Unconnected Length Slope Velocity Capacity (feet) (ft/ft) (ft/sec) (cfs)

Summary for Subcatchment 48S: C.14

Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.015 af, Depth= 4.20"

141	1,885	1,885 98	141 98	1,744 98	Area (sf) CN
7.48% Unconnected	100.00% Impervious Area	Weighted Average	Unconnected pavement, HSG D	Paved parking, HSG D	Description

Type III 24-hr 10-yr Rainfall=4.44"

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Type III 24-hr 10-yr Rainfall=4.44"

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T_C Length (feet) Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Direct Entry

Summary	
ary for Sub	
ry for Subcatchment 49S: C.15	;
49S: C.15	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Runoff

п

0.34 cfs @ 12.09 hrs, Volume=

0.028 af, Depth= 4.20"

Direct Entry				S O
(cfs)	(ft/sec)	(ft/ft)	(feet)	(min)
Velocity Capacity Description	Velocity Ca	Slope	Length	Тc
ected	7.66% Unconnected	7.	267	
vious Area	100.00% Impervious Area	=	3,487	
age	Weighted Average	98 W	3,487	
Unconnected pavement, HSG D	nconnected p	98 U	267	
HSG D	Paved parking, HSG D	98 P	3,220	
	Area (sf) CN Description	CN D	rea (sf)	

Summary for Subcatchment 50S: C.16

Runoff 0.34 cfs @ 12.09 hrs, Volume= 0.028 af, Depth= 4.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Direct Entry.	D:				6.0
Description		Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	Slope (ft/ft)	Length t (feet)	Tc (min)
	nected	7.70% Unconnected	7.	270	
	100.00% Impervious Area	00.00% Imp	⇉	3,508	
	rage	Weighted Average	98 W	3,508 (
ISG D	98 Unconnected pavement, HSG D	nconnected)8 U	270 9	
	g, HSG D	Paved parking, HSG D	98 P		
		escription	N D	Area (sf) CN Description	Ar

Summary for Subcatchment 51S: D.1

0.20 cfs @ 13.87 hrs, Volume=

0.118 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

	20.0	Tc Length (min) (feet)	1,527	1,527	401,244	402,771	450	5,106	160,796	51,440	518	182,934	1,527	Area (sf)
		Slope (ft/ft)				41	77	55	30	80	61	39	98	S
Sumn			100.00% Unconnected	0.38% Impervious Area	99.62% Pervious Area	Weighted Average	Woods, Good, HSG D	Woods, Good, HSG B	Woods, Good, HSG A	>75% Grass	>75% Grass	>75% Grass cover, Good, HSG A	Unconnected pavement, HSG A	Description
nary for S		Capacity (cfs)	nconnected	rvious Area	vious Area	verage	od, HSG D	od, HSG B	od, HSG A	>75% Grass cover, Good, HSG D	>75% Grass cover, Good, HSG B	s cover, Goo	ed pavement	
Summary for Subcatchment 52S: B.9	Direct Entry,	Velocity Capacity Description (ft/sec) (cfs)		۵						ood, HSG D	ood, HSG B	ood, HSG A	nt, HSG A	

Runoff П 1.19 cfs @ 12.09 hrs, Volume= 0.087 af, Depth= 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 10-yr Rainfall=4.44"

Summary for Pond 4P: Infiltration Basin #2

Primary =	Discarded =	Outflow =	Inflow =	Inflow Area =
0.00 cfs @ 0.00 hrs,	12.78 hrs,	12.78 hrs,	12.09 hrs,	1.932 ac, 75.49% Impervious,
Volume=	Volume=	Volume=	Volume=	Inflow
0.000 af	0.501 af	0.501 af, Atten= 89%, Lag= 41.9 min	0.501 af	Depth = 3.11" for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 213.57' @ 12.78 hrs Surf.Area= 8,244 sf Storage= 7,982 cf

Plug-Flow detention time= 101.9 min calculated for 0.500 af (100% of inflow) Center-of-Mass det. time= 101.9 min (862.8 - 760.9)

Type III 24-hr 10-yr Rainfall=4.44"

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Type III 24-hr 10-yr Rainfall=4.44"

# #	Device	216.00	214.0C	212.50	(feet	Elevation	Volume #1
Discarded Primary	Device Routing	00	8	50	et)	on	Invert 212.50'
	_	11,559	8,926	6,645	(sq-ft)	Surf.Area	
212.50' 2.4 Co Co 215.50' 20. He Co	nvert Ou	453.0	397.0	342.0	(feet)	Perim	ail.Storage 32,065 cf
10 in/hr E: nductivity t nductivity t 0' long x ad (feet) C ef. (English	Invert Outlet Devices	J	J	_		· _	Avail.Storage Storage Description 32,065 cf Custom Stage Date
xfiltration of Grounds of Grounds of Grounds of Carolina of Caroli	S	20,428	11,636	0	(cubic-feet)	Inc.Store	Description Stage Da
212.50' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.40' Conductivity to Groundwater = 210.40' Conductivity to Groun		32,065	11,636	0	(cubic-feet)	Cum.Store	ill.Storage Storage Description 32,065 cf Custom Stage Data (Irregular)Listed below (Recalc
2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.40' Conductivity to Groundwater Elevation = 210.40' Cong. x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64		13,809	9,927	6,645	(sq-ft)	Wet.Area	d below (Recalc)
7							

Discarded OutFlow Max=0.67 cfs @ 12.78 hrs HW=213.57' (Free Discharge) 12-7=Exfiltration (Controls 0.67 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=212.50' (Free Discharge) —2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 5P: Wet Basin

Primary =	Outflow =	Inflow =	Inflow Area =
5.55 cfs @ 12.40 hrs, Volume= 1.084 af	5.55 cfs @ 12.40 hrs, Volume= 1.084 af,	Ĭ	nflow Depth = 1
	Atten= 42%, Lag= 18.3 min		.70" for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 214.69' @ 12.40 hrs Surf.Area= 11,394 sf Storage= 7,103 cf

Plug-Flow detention time= 29.0 min calculated for 1.083 af (100% of inflow) Center-of-Mass det. time= 29.1 min (846.3 - 817.2)

p Weir	rp-Crested Vee/Tra	45.0 deg x 4.0' long Sharp-Crested Vee/Trap Weir		214.00'	Device 1	#2
031 '/' Cc= 0.900	4 sf	Inlet / Outlet Invert= 213.43' /211.63' S= 0.0031'/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf				
= 0.900	g no headwall Ke-	213.43' 24.0" Round Culvert	24.0	213.43	Primary	#1
		Invert Outlet Devices	Outle	Inver	Routing	Device
16,550	103,930	42,506	390.0	22,316		220.00
15,359	61,425	36,350	375.0	20,207		218.00
10,927	25,075	25,075	442.0	16,216		216.00
9,189	0	0	420.0	9,189		214.00
(sq-ft)	(cubic-feet)	(cubic-feet)	(feet)	(sq-ft)		(feet)
Wet.Area	Cum.Store	Inc.Store	Perim.	Surf.Area	S	Elevation
elow (Recalc)	(Irregular)Listed b	103,930 cf Custom Stage Data (Irregular)Listed below (Recalc)	930 cf		214.00'	#1
		Avail.Storage Storage Description	orage		Invert	Volume
		Cellel-01-Mass det. tille- 29.1 (646.3 - 617.2)	1111 (04	(1116- 29.11	Mass det.	Certier-oi-

#3 Device 1 215.50'

Cv= 2.56 (C= 3.20)
4.2' long x 4.2' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.37 2.53 2.69 2.68 2.67 2.67 2.65 2.66 2.66
2.67 2.71 2.72 2.74 2.77 2.85 3.01 3.23

Primary OutFlow Max=5.54 cfs @ 12.40 hrs HW=214.69' (Free Discharge)

1=Culvert (Barrel Controls 5.54 cfs @ 3.79 fps)

2=Sharp-Crested Vee/Trap Weir (Passes 5.54 cfs of 7.78 cfs potential flow)

3=Broad-Crested Rectangular Weir (Controls 0.00 cfs) Summary for Pond 7P: Infiltration Basin #1

Inflow =
Outflow =
Discarded =
Primary = Inflow Area = 10.584 ac, 21.75% Impervious, Inflow Depth = 1.19" for 10-yr event 8.44 cfs @ 12.09 hrs, Volume= 1.052 af, Atten= 41%, Lag= 1 0.93 cfs @ 12.37 hrs, Volume= 0.774 af 4.01 cfs @ 12.37 hrs, Volume= 0.774 af 0.278 af 1.052 af 1.052 af, Atten= 41%, Lag= 16.2 min 0.774 af 0.278 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.42' @ 12.37 hrs Surf.Area= 13,026 sf Storage= 7,333 cf

Plug-Flow detention time= 51.7 min calculated for 1.051 af (100% of inflow) Center-of-Mass det. time= 51.7 min (902.0 - 850.4)

#2	#1	Device Routing	216.00	215.00	214.8	(feet)	Elevatior	#1	Volume	
Discarded	Primary	Routing	0	0	0	ť	_	214.8	Inve	
	21	_	15,185	11,580	10,430	(sq-ft)	Surf.Area	Ö		
		nvert Ou	1,210.0	1,000.0	800.0	(feet	Perim	15,542 d	ail.Storage	
ad (teet) 0.20 0.40 0. ef. (English) 2.49 2.56 I 10 in/hr Exfiltration o nductivity to Groundwa	0' long x 10.0' breadt	tlet Devices	13,342	_	0) (cubic-feet)	. Inc.Store	Custom Stage Data	Storage Description	
60 0.80 1.00 1.20 3 2.70 2.69 2.68 ver Surface area ter Elevation = 212	h Broad-Crested		15,542	2,200	0	(cubic-feet)	Cum.Store	(Irregular)Listed k		
) 1.40 1.60 2.69 2.67 2.64 .80'	Rectangular Weir		76,027	39,078	10,430	(sq-ft)	Wet.Area	pelow (Recalc)		
Head (feet) 0.20 0.40 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64 iscarded 214.80' 2.410 in/in Exfiltration over Surface area Conductivity to Groundwater Elevation = 212.80'	215.30'	outing Invert Outlet Devices	1,210.0 13,342 15,542	1,000.0 2,200 2,200	800.0 0 0) (feet) (cubic-feet) (cubic-feet)	lnc.Store Cum.Store	214.80' 15,542 cf Custom Stage Data (Irregular)Listed below (Recalc)	Invert Avail.Storage Storage Description	

Primary OutFlow Max=4.00 cfs @ 12.37 hrs HW=215.42' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 4.00 cfs @ 0.85 fps)

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Summary for Pond 12P: STONE RECHARGE TRENCH

Inflow Outflow Discarded = nflow Area = 1.73 cfs @ 0.85 cfs @ 0.17 cfs @ 0.69 cfs @ 0.409 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event
1.73 cfs @ 12.09 hrs, Volume= 0.143 af
0.85 cfs @ 12.40 hrs, Volume= 0.143 af, Atten=51%, Lag=18.7 min
0.17 cfs @ 12.40 hrs, Volume= 0.137 af
0.69 cfs @ 12.40 hrs, Volume= 0.006 af

Routing by S Peak Elev= 2 Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs = 221.00' @ 12.40 hrs Surf.Area= 2,427 sf Storage= 1,942 cf

Primary

Plug-Flow detention time= 81.2 min calculated for 0.143 af (100% of inflow) Center-of-Mass det. time= 81.2 min (831.2 - 750.1)

	#1	Volume
	219.00'	Invert
	1,942 cf	Avail.Storage
4,854 cf Overall x 40.0% Voids	1,942 cf 3.00'W x 809.00'L x 2.00'H Prismatoid	Storage Description

#2 Routing Discarded Primary 221.00' 219.00' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32 Outlet Devices 2.00

Discarded OutFlow Max=0.17 cfs @ 12.40 hrs HW=221.00' (Free Discharge)
—2=Exfiltration (Controls 0.17 cfs)

Primary OutFlow Max=0.22 cfs @ 12.40 hrs HW=221.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.22 cfs @ 0.12 fps)

Summary for Pond 17P: STONE RECHARGE TRENCH

Inflow Discarded = Primary = Outflow Inflow Area = П 0.409 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 1.73 cfs @ 12.09 hrs, Volume= 0.143 af 0.85 cfs @ 12.40 hrs, Volume= 0.143 af, Atten=51%, Lag=18.7 min 0.17 cfs @ 12.40 hrs, Volume= 0.137 af 0.69 cfs @ 12.40 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 221.00' @ 12.40 hrs Surf.Area= 2,427 sf Storage= 1,942 cf

Plug-Flow detention time= 81.2 min calculated for 0.143 af (100% of inflow) Center-of-Mass det. time= 81.2 min (831.2 - 750.1)

	#1	Volume
	219.00'	Invert
	1,942 cf	Avail.Storage
4 854 cf Overall x 40 0% Voids	3.00'W x 809.00'L x 2.00'H Prismatoid	Storage Description

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		#1	vice
		#1 Primary	vice Routing
		221.00'	Invert
Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00	809.0' long x 1.0' breadth Broad-Crested Rectangular Weir	Outlet Devices

Discarded 219.00' Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.09 3.31 3.32 2.40 in/hr Explitration over Surface area Conductivity to Groundwater Elevation = 210.00'

#2

Discarded OutFlow Max=0.17 cfs @ 12.40 hrs HW=221.00'
-2=Exfiltration (Controls 0.17 cfs) (Free Discharge)

Primary OutFlow Max=0.22 cfs @ 12.40 hrs HW=221.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.22 cfs @ 0.12 fps)

Summary for Pond 19P: STONE RECHARGE TRENCH

Inflow Primary Discarded = Outflow Inflow Area = 0.409 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 1.73 cfs @ 12.09 hrs, Volume= 0.143 af 0.85 cfs @ 12.40 hrs, Volume= 0.143 af, Atten= 51%, Lag= 18.7 min 0.17 cfs @ 12.40 hrs, Volume= 0.137 af 0.69 cfs @ 12.40 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 221.00' @ 12.40 hrs Surf.Area= 2,427 sf Storage= 1,94 Storage= 1,942 cf

Plug-Flow detention time= 81.2 min calculated for 0.143 af (100% of inflow) Center-of-Mass det. time= 81.2 min (831.2 - 750.1)

	#_	Volume
	219.00'	Invert
	1,942 cf	Avail.Storage
4,854 cf Overall x 40.0% Voids	1,942 cf 3.00'W x 809.00'L x 2.00'H Prismatoid	Storage Description

#2		#1	Device
Discarded		#1 Primary	Device Routing
219.00'		221.00'	Invert
	2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32	221.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00	Invert Outlet Devices

(Free Discharge)

Primary OutFlow Max=0.22 cfs @ 12.40 hrs HW=221.00' (Free Discharge)
—1=Broad-Crested Rectangular Weir (Weir Controls 0.22 cfs @ 0.12 fps)

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Summary for Pond 21P: CB-4

Outflow Inflow Area = 0.345 ac, 8 1.19 cfs @ 1.19 cfs @ 1.19 cfs @ 1.19 cfs @ 80.72% Impervious, Inflow Depth = 3.04" 2 12.09 hrs, Volume= 0.087 af 2 12.09 hrs, Volume= 0.087 af, Att. 3 12.09 hrs, Volume= 0.087 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.20' @ 12.09 hrs Flood Elev= 218.50'

Routing Primary 215.50 12.0" Round Culvert
L= 37.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/'
n= 0.013, Flow Area= 0.79 sf Outlet Devices

Cc= 0.900

Primary OutFlow Max=1.16 cfs @ 12.09 hrs HW=216.19'
L1=Culvert (Barrel Controls 1.16 cfs @ 2.82 fps) (Free Discharge)

Summary for Pond 22P: DMH-2

Outflow Primary Inflow Area = П 11 11 0.631 ac, 8 2.28 cfs @ 2.28 cfs @ 2.28 cfs @ 2.28 cfs @ 84.40% Impervious, Inflow Depth = 3.22" for 10-yr event 12.09 hrs, Volume= 0.170 af 12.09 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min 12.09 hrs, Volume= 0.170 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.38' @ 12.09 hrs Flood Elev= 218.90'

Primary 215.30 Invert L= 101.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0050 '/' n= 0.013, Flow Area= 0.79 sf 12.0" Round Culvert Outlet Devices Cc = 0.900

Primary OutFlow Max=2.23 cfs @ 12.09 hrs HW=216.36'
—1=Culvert (Inlet Controls 2.23 cfs @ 2.84 fps) (Free Discharge)

Summary for Pond 23P: CB-1

Outflow Inflow Area = 0.307 ac, 1.09 cfs @ 1.09 cfs @ 1.09 cfs @ 888 83.76% Impervious, Inflow Depth = 3.14" § 12.09 hrs, Volume= 0.080 af § 12.09 hrs, Volume= 0.080 af, Atta § 12.09 hrs, Volume= 0.080 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.24' @ 12.09 hrs Flood Elev= 218.60'

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Device Routing Primary 215.60' 12.0" Round Culvert
L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' / 215.40' S= 0.0074 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=1.06 cfs @ 12.09 hrs HW=216.23'
—1=Culvert (Barrel Controls 1.06 cfs @ 2.88 fps) (Free Discharge)

Summary for Pond 24P: CB-2

Inflow Outflow Primary Inflow Area = 11 11 11 0.392 ac, 95.72% Impervious, Inflow Depth = 3.87" for 10-160 cfs @ 12.09 hrs, Volume= 0.126 af 1.60 cfs @ 12.09 hrs, Volume= 0.126 af, Atten= 0%, 1.60 cfs @ 12.09 hrs, Volume= 0.126 af for 10-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.99' @ 12.09 hrs Flood Elev= 219.20'

	#1	Device
	#1 Primary	Device Routing
	216.20'	Invert
L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.40' S= 0.0400 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	216.20' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.56 cfs @ 12.09 hrs HW=216.98'
—1=Culvert (Inlet Controls 1.56 cfs @ 2.37 fps) (Free Discharge)

Summary for Pond 25P: CB-3

Primary Outflow Inflow Inflow Area = 0.565 ac, 67.38% Impervious, Inflow Depth = 2.33" for 10-yr event 1.51 cfs @ 12.09 hrs, Volume= 0.110 af 1.51 cfs @ 12.09 hrs, Volume= 0.110 af, Atten= 0%, Lag= 0.0 min 1.51 cfs @ 12.09 hrs, Volume= 0.110 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.26' @ 12.09 hrs Flood Elev= 219.50'

Device

Invert

Outlet Devices

		#1
		Primary
		216.50'
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 216.50' / 215.40' S= 0.0289 '/' Cc= 0.900	216.50' 12.0" Round Culvert

Primary OutFlow Max=1.49 cfs @ 12.09 hrs HW=217.26' —1=Culvert (Inlet Controls 1.49 cfs @ 2.34 fps) (Free Discharge)

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Inflow Outflow Inflow Area = 1.264 ac, 8 4.20 cfs @ 4.20 cfs @ 4.20 cfs @ 4.20 cfs @ 80.14% Impervious, Inflow Depth = 3.00" 12.09 hrs, Volume= 0.316 af 12.09 hrs, Volume= 0.316 af, Att 12.09 hrs, Volume= 0.316 af Atten= 0%, Lag= 0.0 min for 10-yr event

Summary for Pond 26P: DMH-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.45' @ 12.09 hrs Flood Elev= 218.90'

Routing Primary 215.30' **18.0" Round Culvert**L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0104 '/' n= 0.013, Flow Area= 1.77 sf Outlet Devices

Cc= 0.900

Primary OutFlow Max=4.11 cfs @ 12.09 hrs HW=216.43'
—1=Culvert (Inlet Controls 4.11 cfs @ 2.86 fps) (Free Discharge)

Summary for Pond 27P: CB-22

Outflow Primary Inflow Area = 11 11 п 0.515 ac,100.00% Impervious, Inflow Depth = 4.20" 2.18 cfs @ 12.09 hrs, Volume= 0.180 af 2.18 cfs @ 12.09 hrs, Volume= 0.180 af, Atto 2.18 cfs @ 12.09 hrs, Volume= 0.180 af, Output Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.61' @ 12.09 hrs Flood Elev= 218.50'

Primary 215.50 Invert 12.0" Round Culvert
L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0039 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=2.12 cfs @ 12.09 hrs HW=216.58'
—1=Culvert (Barrel Controls 2.12 cfs @ 3.11 fps) (Free Discharge)

Summary for Pond 28P: DMH-16

Outflow Inflow Area = 0.515 ac,100.00% Impervious, Inflow Depth = 4.20"
2.18 cfs @ 12.09 hrs, Volume= 0.180 af
2.18 cfs @ 12.09 hrs, Volume= 0.180 af, Att
2.18 cfs @ 12.09 hrs, Volume= 0.180 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.30' @ 12.09 hrs Flood Elev= 218.70'

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Device Routing Primary 215.20' 12.0" Round Culvert
L= 160.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.20' / 214.60' S= 0.0037 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=2.12 cfs @ 12.09 hrs HW=216.28'
—1=Culvert (Barrel Controls 2.12 cfs @ 3.12 fps) (Free Discharge)

Summary for Pond 29P: CB-21

Inflow Outflow Primary Inflow Area = 11 11 11 0.123 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-0.52 cfs @ 12.09 hrs, Volume= 0.043 af 0.52 cfs @ 12.09 hrs, Volume= 0.043 af, Atten= 0%, 0.52 cfs @ 12.09 hrs, Volume= 0.043 af for 10-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.61 @ 12.09 hrs

Flood Elev= 219.20'

	#1	Device
	Primary	Routing
	216.20'	Invert
L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.70' S= 0.0192 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.50 cfs @ 12.09 hrs HW=216.60'
—1=Culvert (Inlet Controls 0.50 cfs @ 1.71 fps) (Free Discharge)

Summary for Pond 30P: DMH-15

Inflow Primary Outflow Inflow Area 0.637 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 2.70 cfs @ 12.09 hrs, Volume= 0.223 af 2.70 cfs @ 12.09 hrs, Volume= 0.223 af, Atten= 0%, Lag= 0.0 min 2.70 cfs @ 12.09 hrs, Volume= 0.223 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.55' @ 12.09 hrs Flood Elev= 219.80'

			#1	Device
			#1 Primary	Device Routing
			214.50'	Invert
n= 0.013, Flow Area= 1.23 sf	Inlet / Outlet Invert= 214.50' / 213.60' S= 0.0036 '/' Cc= 0.900	L= 250.0' CPP, projecting, no headwall, Ke= 0.900	214.50' 15.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=2.63 cfs @ 12.09 hrs HW=215.53' —1=Culvert (Barrel Controls 2.63 cfs @ 3.29 fps) (Free Discharge)

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Summary for Pond 31P: DMH-14

Outflow Inflow Area = п 1.468 ac, 9 6.07 cfs @ 6.07 cfs @ 6.07 cfs @ 97.47% Impervious, Inflow Depth = 4.03" for 10-yr event
12.09 hrs, Volume = 0.494 af
12.09 hrs, Volume = 0.494 af, Atten=0%, Lag= 0.0 min
12.09 hrs, Volume = 0.494 af) 12.09 hrs, Volume=) 12.09 hrs, Volume=) 12.09 hrs, Volume=

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.06' @ 12.09 hrs Flood Elev= 218.60'

Routing Primary 213.50 **18.0" Round Culvert**L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 213.50' /212.50' S= 0.0164 '/' n= 0.013, Flow Area= 1.77 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=5.90 cfs @ 12.09 hrs HW=215.02'
—1=Culvert (Inlet Controls 5.90 cfs @ 3.34 fps) (Free Discharge)

Summary for Pond 32P: CB-20

Outflow Primary Inflow Area = П 11 11 0.318 ac,100.00% Impervious, Inflow Depth = 4.20" 1.35 cfs @ 12.09 hrs, Volume= 0.111 af 1.35 cfs @ 12.09 hrs, Volume= 0.111 af, Att 1.35 cfs @ 12.09 hrs, Volume= 0.111 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.21' @ 12.09 hrs Flood Elev= 218.50'

Primary 215.50 Invert **12.0" Round Culvert**L= 12.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' 215.30' S= 0.0167 // n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=1.31 cfs @ 12.09 hrs HW=216.20'
—1=Culvert (Inlet Controls 1.31 cfs @ 2.24 fps) (Free Discharge)

Summary for Pond 33P: DMH-17

Outflow Inflow Area = 0.513 ac, § 2.02 cfs @ 2.02 cfs @ 2.02 cfs @ 2.02 cfs @ 92.75% Impervious, Inflow Depth = 3.72" § 12.09 hrs, Volume= 0.159 af § 12.09 hrs, Volume= 0.159 af, Atta § 12.09 hrs, Volume= 0.159 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.05' @ 12.09 hrs Flood Elev= 218.80'

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Outlet Devices

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Device Routing Primary 215.10' 12.0" Round Culvert

L= 180.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.10 / 213.60' S= 0.0083 // n= 0.013, Flow Area= 0.79 sf Cc= 0.900

Primary OutFlow Max=1.97 cfs @ 12.09 hrs HW=216.03'
—1=Culvert (Inlet Controls 1.97 cfs @ 2.59 fps) (Free Discharge)

Summary for Pond 34P: CB-23

Inflow Primary Outflow Inflow Area = 11 11 11 0.288 ac, 87.12% Impervious, Inflow Depth = 3.34" for 10-7 cfs @ 12.09 hrs, Volume= 0.080 af 1.07 cfs @ 12.09 hrs, Volume= 0.080 af, Atten= 0%, 1.07 cfs @ 12.09 hrs, Volume= 0.080 af for 10-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.12' @ 12.09 hrs Flood Elev= 218.50'

	#1 Primary	Device Routing
	215.50'	Invert
L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0107 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.05 cfs @ 12.09 hrs HW=216.11' (Free Discharge) —1=Culvert (Inlet Controls 1.05 cfs @ 2.10 fps)

Summary for Pond 35P: CB-24

Primary Outflow Inflow Inflow Area 0.224 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 0.95 cfs @ 12.09 hrs, Volume= 0.079 af 0.95 cfs @ 12.09 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min 0.95 cfs @ 12.09 hrs, Volume= 0.079 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.07' @ 12.09 hrs Flood Elev= 218.50'

Routing Primary 215.50 Invert **12.0" Round Culvert**L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0150 '/ n= 0.013, Flow Area= 0.79 sf Outlet Devices S= 0.0150 '/'

Cc = 0.900

Primary OutFlow Max=0.92 cfs @ 12.09 hrs HW=216.06' —1=Culvert (Inlet Controls 0.92 cfs @ 2.02 fps) (Free Discharge)

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Summary for Pond 37P: DMH-10

Outflow Inflow Area = 1.89 cfs 1.89 cfs 1.89 cfs 0.446 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event
1.89 cfs @ 12.09 hrs, Volume= 0.156 af
1.89 cfs @ 12.09 hrs, Volume= 0.156 af, Atten=0%, Lag=0.0 min
1.89 cfs @ 12.09 hrs, Volume= 0.156 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.87 @ 12.09 hrs Flood Elev= 222.20'

Routing Primary 218.10' **15.0" Round Culvert**L= 122.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.10' / 214.50' S= 0.0295 '/' n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=1.84 cfs @ 12.09 hrs HW=218.86'
—1=Culvert (Inlet Controls 1.84 cfs @ 2.35 fps) (Free Discharge)

Summary for Pond 38P: CB-15

Outflow Primary Inflow Area = п п 0.043 ac,100.00% Impervious, Inflow Depth = 4.20" 0.18 cfs @ 12.09 hrs, Volume= 0.015 af 0.18 cfs @ 12.09 hrs, Volume= 0.015 af, Atto 0.18 cfs @ 12.09 hrs, Volume= 0.015 af 0.015 af 0.015 af, Atten= 0%, Lag= 0.0 min 0.015 af for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.43' @ 12.09 hrs Flood Elev= 236.20'

Primary 232.20 Invert L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/' n= 0.013, Flow Area= 0.79 sf 12.0" Round Culvert Outlet Devices Cc= 0.900

Primary OutFlow Max=0.18 cfs @ 12.09 hrs HW=232.43'
—1=Culvert (Inlet Controls 0.18 cfs @ 1.29 fps) (Free Discharge)

Summary for Pond 39P: CB-16

Outflow Inflow Area = 0.046 ac,100.00% Impervious, Inflow Depth = 4.20" 0.19 cfs @ 12.09 hrs, Volume= 0.016 af 0.19 cfs @ 12.09 hrs, Volume= 0.016 af, Att 0.19 cfs @ 12.09 hrs, Volume= 0.016 af 000 Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.44' @ 12.09 hrs Flood Elev= 236.20'

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Device Routing Primary 232.20' 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.19 cfs @ 12.09 hrs HW=232.44'
—1=Culvert (Inlet Controls 0.19 cfs @ 1.31 fps) (Free Discharge)

Summary for Pond 52P: CB-17

Inflow Outflow Primary Inflow Area = 11 11 11 0.081 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-0.34 cfs @ 12.09 hrs, Volume= 0.028 af 0.34 cfs @ 12.09 hrs, Volume= 0.028 af, Atten= 0%, 0.34 cfs @ 12.09 hrs, Volume= 0.028 af for 10-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.73' @ 12.09 hrs Flood Elev= 251.40'

	#1	Device
	Primary	Routing
	247.40'	Invert
L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 247.40' / 246.50' S= 0.0500 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	247.40' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.33 cfs @ 12.09 hrs HW=247.72'
—1=Culvert (Inlet Controls 0.33 cfs @ 1.52 fps) (Free Discharge)

Summary for Pond 53P: CB-18

Outflow Primary Inflow Inflow Area 0.080 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 0.34 cfs @ 12.09 hrs, Volume= 0.028 af 0.34 cfs @ 12.09 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min 0.34 cfs @ 12.09 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.72' @ 12.09 hrs Flood Elev= 251.40'

Routing Primary 247.40' Invert **12.0" Round Culvert**L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 247.40' / 246.50' S= 0.0474 / n= 0.013, Flow Area= 0.79 sf Outlet Devices S= 0.0474 '/' Cc = 0.900

Primary OutFlow Max=0.33 cfs @ 12.09 hrs HW=247.72'
—1=Culvert (Inlet Controls 0.33 cfs @ 1.52 fps) (Free Discharge)

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Cc = 0.900

for 10-yr event Device Routing Primary 218.90' 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary OutFlow Max=0.25 cfs @ 12.09 hrs HW=219.18' (Free Discharge) —1=Culvert (Inlet Controls 0.25 cfs @ 1.41 fps)

Summary for Pond 61P: DMH-11

Inflow Primary Outflow Inflow Area = 11 11 11 0.249 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-106 cfs @ 12.09 hrs, Volume= 0.087 af 1.06 cfs @ 12.09 hrs, Volume= 0.087 af, Atten= 0%, 1.06 cfs @ 12.09 hrs, Volume= 0.087 af for 10-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.21 @ 12.09 hrs Flood Elev= 235.70'

Device Routing 231.60' Invert **12.0" Round Culvert**L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.60' / 218.20' S= 0.0677 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=1.03 cfs @ 12.09 hrs HW=232.20'
—1=Culvert (Inlet Controls 1.03 cfs @ 2.08 fps) (Free Discharge)

Summary for Pond 62P: CB-14

Outflow Primary Inflow Inflow Area = 0.136 ac,100.00% Impervious, Inflow Depth = 4.20" 0.57 cfs @ 12.09 hrs, Volume= 0.048 af 0.57 cfs @ 12.09 hrs, Volume= 0.048 af, Att 0.57 cfs @ 12.09 hrs, Volume= 0.048 af 0.048 af, Atten= 0%, Lag= 0.0 min 0.048 af ਨ੍ਹ 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.33' @ 12.09 hrs Flood Elev= 221.90'

Routing Primary 218.90' Invert 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=0.56 cfs @ 12.09 hrs HW=219.33'
—1=Culvert (Inlet Controls 0.56 cfs @ 1.75 fps) (Free Discharge)

Summary for Pond 54P: DMH-13

Outflow Inflow Area = п п п 0.161 ac,100.00% Impervious, Inflow Depth = 4.20" 0.68 cfs @ 12.09 hrs, Volume= 0.056 af 0.68 cfs @ 12.09 hrs, Volume= 0.056 af, Att 0.68 cfs @ 12.09 hrs, Volume= 0.056 af Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 246.87 @ 12.09 hrs Flood Elev= 250.20'

Routing Primary 246.40 12.0" Outlet Devices 12.0" Round Culvert
L= 85.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 246.40' / 240.00' S= 0.0753 /' n= 0.013, Flow Area= 0.79 sf Cc= 0.900

Primary OutFlow Max=0.66 cfs @ 12.09 hrs HW=246.87'
—1=Culvert (Inlet Controls 0.66 cfs @ 1.84 fps) (Free Discharge)

Summary for Pond 56P: DMH-12

Outflow Primary Inflow Area = п п 0.161 ac,100.00% Impervious, Inflow Depth = 4.20" 0.68 cfs @ 12.09 hrs, Volume= 0.056 af 0.68 cfs @ 12.09 hrs, Volume= 0.056 af, Atto 0.68 cfs @ 12.09 hrs, Volume= 0.056 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 240.37' @ 12.09 hrs Flood Elev= 244.00'

Primary 239.90' Invert 12.0" Round Culvert L= 110.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.90' / 231.70' S= 0.0745 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.66 cfs @ 12.09 hrs HW=240.37 —1=Culvert (Inlet Controls 0.66 cfs @ 1.84 fps) (Free Discharge)

Summary for Pond 58P: CB-13

Outflow Inflow Area = 0.26 cfs @ 0.26 cfs @ 0.26 cfs @ 0.060 ac,100.00% Impervious, Inflow Depth = 4.20" 12.09 hrs, Volume= 12.09 hrs, Volume= 12.09 hrs, Volume= 0.021 af 0.021 af, 0.021 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.18' @ 12.09 hrs Flood Elev= 221.90'

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Summary for Pond 63P: DMH-4

Inflow Outflow Inflow Area = П п

 2.245 ac, 91.37% Impervious, Inflow Depth = 3.68" for 10-yr event

 8.59 cfs @ 12.09 hrs, Volume=
 0.688 af

 8.59 cfs @ 12.09 hrs, Volume=
 0.688 af, Atten=0%, Lag=0.0 min

 8.59 cfs @ 12.09 hrs, Volume=
 0.688 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.63' @ 12.09 hrs Flood Elev= 222.20'

		#1	Device
		Primary	Routing
		218.10'	Invert
n= 0.013, Flow Area= 3.14 sf		218.10' 24.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=8.37 cfs @ 12.09 hrs HW=219.61'
—1=Culvert (Inlet Controls 8.37 cfs @ 3.30 fps) (Free Discharge)

Summary for Pond 65P: DMH-8

Outflow Primary Inflow Area = 11 11 П 0.909 ac, 7 2.93 cfs @ 2.93 cfs @ 2.93 cfs @ 2.93 cfs @ 78.68% Impervious, Inflow Depth = 2.91"

12.09 hrs, Volume= 0.220 af

12.09 hrs, Volume= 0.220 af, Atte

12.09 hrs, Volume= 0.220 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.99' @ 12.09 hrs Flood Elev= 220.40'

			#1	Device	
			#1 Primary	Device Routing	
			214.80'	Invert	
n= 0.013, Flow Area= 1.23 sf	Inlet / Outlet Invert= 214.80' / 214.20' S= 0.0028 '/' Cc= 0.900	L= 215.0' CPP, projecting, no headwall, Ke= 0.900	214.80' 15.0" Round Culvert	Invert Outlet Devices	
	8				

Primary OutFlow Max=2.87 cfs @ 12.09 hrs HW=215.97 —1=Culvert (Barrel Controls 2.87 cfs @ 3.12 fps) (Free Discharge)

Summary for Pond 66P: CB-6

0.134 ac, 100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 0.57 cfs @ 12.09 hrs, Volume= 0.047 af 0.57 cfs @ 12.09 hrs, Volume= 0.047 af, Atten=0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.43' @ 12.09 hrs Flood Elev= 219.00'

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Cc = 0.900

Type III 24-hr 10-yr Rainfall=4.44"

Device Routing Primary 216.00' 12.0" Round Culvert
L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.50' S= 0.0208 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

(Free Discharge)

Primary OutFlow Max=0.55 cfs @ 12.09 hrs HW=216.42'
—1=Culvert (Inlet Controls 0.55 cfs @ 1.75 fps)

Summary for Pond 67P: CB-7

Inflow Outflow Primary Inflow Area = H H H 0.093 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 0.39 cfs @ 12.09 hrs, Volume= 0.033 af 0.39 cfs @ 12.09 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min 0.39 cfs @ 12.09 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.35' @ 12.09 hrs Flood Elev= 219.00'

	#	Device Routing
	#1 Primary	Routing
	216.00'	Invert
Inlet / Outlet Invert= 216.00" / 215.50" S= 0.0208 // Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	216.00' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.38 cfs @ 12.09 hrs HW=216.35'
—1=Culvert (Inlet Controls 0.38 cfs @ 1.58 fps) (Free Discharge)

Summary for Pond 68P: DMH-9

Inflow Primary Outflow Inflow Area = 0.909 ac, 7 2.93 cfs @ 2.93 cfs @ 2.93 cfs @ 2.93 cfs @ 78.68% Impervious, Inflow Depth = 2.91" for 10-yr event

② 12.09 hrs, Volume= 0.220 af

③ 12.09 hrs, Volume= 0.220 af, Atten= 0%, Lag= 0.0 min

③ 12.09 hrs, Volume= 0.220 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.60' @ 12.09 hrs Flood Elev= 218.70'

	Primary	Routing
	215.40'	Invert
L= 190.0° CPP, projecting, no neadwall, Ke= 0.900 Inlet / Outlet Invert= 215.40° / 214.90° S= 0.0026 '/' Cc= n= 0.013, Flow Area= 1.23 sf	215.40' 15.0" Round Culvert	Invert Outlet Devices

0.900

Primary OutFlow Max=2.87 cfs @ 12.09 hrs HW=216.58'
—1=Culvert (Barrel Controls 2.87 cfs @ 3.08 fps) (Free Discharge)

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Type III 24-hr 10-yr Rainfall=4.44"

Inflow Outflow Inflow Area = п 0.107 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 0.45 cfs @ 12.09 hrs, Volume= 0.037 af 0.45 cfs @ 12.09 hrs, Volume= 0.037 af, Atten=0%, Lag= 0.0 min 0.45 cfs @ 12.09 hrs, Volume= 0.037 af

Summary for Pond 69P: CB-11

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.01' @ 12.09 hrs Flood Elev= 218.60'

	#1	Device
	Primary	Device Routing
	215.60'	Invert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' / 215.50' S= 0.0067 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.60' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.44 cfs @ 12.09 hrs HW=216.00'
—1=Culvert (Barrel Controls 0.44 cfs @ 2.20 fps) (Free Discharge)

Summary for Pond 70P: CB-12

Outflow Primary Inflow Area = 11 11 П 0.802 ac, 7 2.48 cfs @ 2.48 cfs @ 2.48 cfs @ 2.48 cfs @ 75.84% Impervious, Inflow Depth = 2.74" 0 12.09 hrs, Volume= 0.183 af 0 12.09 hrs, Volume= 0.183 af, Atta 0 12.09 hrs, Volume= 0.183 af Atten= 0%, Lag= 0.0 min for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.79' @ 12.09 hrs Flood Elev= 218.60'

			#1	Device
			Primary	Routing
			215.60'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.60' / 215.50' S= 0.0067 '/' Cc= 0.900	L= 15.0' CPP, projecting, no headwall, Ke= 0.900	215.60' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=2.44 cfs @ 12.09 hrs HW=216.77'
—1=Culvert (Barrel Controls 2.44 cfs @ 3.34 fps) (Free Discharge)

Summary for Pond 71P: CB-8

Primary =	Outflow =	Inflow =	Inflow Area =
0.74 cfs @ 12.09 hrs, Volume= 0.061 af	0.74 cfs @ 12.09 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min	0.74 cfs @ 12.09 hrs, Volume= 0.061 af	0.175 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.02' @ 12.09 hrs Flood Elev= 218.50'

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Device Routing Primary 215.50' 12.0" Round Culvert
L= 32.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0062 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=0.72 cfs @ 12.09 hrs HW=216.01' (Free Discharge) —1=Culvert (Barrel Controls 0.72 cfs @ 2.58 fps)

Summary for Pond 72P: CB-9

Inflow Outflow Primary Inflow Area = H H H 0.165 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 0.70 cfs @ 12.09 hrs, Volume= 0.058 af 0.70 cfs @ 12.09 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min 0.70 cfs @ 12.09 hrs, Volume= 0.058 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.01' @ 12.09 hrs Flood Elev= 218.50'

	#1 Primary	Device Routing
	`	uting
	215.50'	Invert
L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.68 cfs @ 12.09 hrs HW=216.01' (Free Discharge) —1=Culvert (Barrel Controls 0.68 cfs @ 2.49 fps)

Summary for Pond 73P: DMH-6

Inflow Primary Outflow Inflow Area = 0.340 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event
1.44 cfs @ 12.09 hrs, Volume= 0.119 af
1.44 cfs @ 12.09 hrs, Volume= 0.119 af, Atten= 0%, Lag= 0.0 min
1.44 cfs @ 12.09 hrs, Volume= 0.119 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.00' @ 12.09 hrs Flood Elev= 219.10'

	_	Э
	Primary	ce Routing
	215.20'	Invert
L= 96.0' CPP, projecting, no headwall, Ke= 0.900 inlet / Outlet Invert= 215.20' / 214.80' S= 0.0042 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.20' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.40 cfs @ 12.09 hrs HW=215.99'
—1=Culvert (Barrel Controls 1.40 cfs @ 2.91 fps) (Free Discharge)

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Summary for Pond 77P: DMH-7

Outflow Inflow Area = 0.323 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 1.37 cfs @ 12.09 hrs, Volume= 0.113 af 1.37 cfs @ 12.09 hrs, Volume= 0.113 af, Atten=0%, Lag=0.0 min 1.37 cfs @ 12.09 hrs, Volume= 0.113 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.35' @ 12.09 hrs Flood Elev= 220.20'

Primary Routing 215.70 15.0" Round Culvert
L= 181.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.70' / 214.80' S= 0.0050 '/
n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=1.33 cfs @ 12.09 hrs HW=216.34 —1=Culvert (Barrel Controls 1.33 cfs @ 3.06 fps) (Free Discharge)

Summary for Pond 78P: CB-19

Outflow Primary Inflow Area = н н П 0.122 ac,100.00% Impervious, Inflow Depth = 4.20" 0.52 cfs @ 12.09 hrs, Volume= 0.043 af 0.52 cfs @ 12.09 hrs, Volume= 0.043 af, Atto 0.52 cfs @ 12.09 hrs, Volume= 0.043 af 0.043 af 0.043 af, Atten= 0%, Lag= 0.0 min 0.043 af for 10-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.45' @ 12.09 hrs Flood Elev= 219.00'

			#1	Device
			#1 Primary	Device Routing
			216.00'	Invert
n= 0.013. Flow Area= 0.79 sf	Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0041 '/' Cc= 0.900	L= 49.0' CPP, projecting, no headwall, Ke= 0.900	216.00' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.50 cfs @ 12.09 hrs HW=216.45'
—1=Culvert (Barrel Controls 0.50 cfs @ 2.19 fps) (Free Discharge)

Summary for Pond 79P: CB-10

Inflow Area =	0.200 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event
Inflow =	0.85 cfs @ 12.09 hrs, Volume= 0.070 af
Outflow =	0.85 cfs @ 12.09 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min
Primary =	0.85 cfs @ 12.09 hrs, Volume= 0.070 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.56' @ 12.09 hrs Flood Elev= 219.00'

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Device Routing Outlet Devices

Primary

216.00'

12.0" Round CulvertL= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0069 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.83 cfs @ 12.09 hrs HW=216.55' —1=Culvert (Barrel Controls 0.83 cfs @ 2.70 fps) (Free Discharge)

Summary for Pond 80P: DMH-5

Inflow Outflow Primary Inflow Area = 0.663 ac,100.00% Impervious, Inflow Depth = 4.20" for 10-yr event 2.81 cfs @ 12.09 hrs, Volume= 0.232 af 2.81 cfs @ 12.09 hrs, Volume= 0.232 af, Atten= 0%, Lag= 0.0 min 2.81 cfs @ 12.09 hrs, Volume= 0.232 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.69' @ 12.09 hrs Flood Elev= 219.10'

	#1	Device
,	#1 Primary	Device Routing
	214.70'	Invert
L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.70' / 214.20' S= 0.0064 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf	214.70' 15.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=2.73 cfs @ 12.09 hrs HW=215.68'
—1=Culvert (Inlet Controls 2.73 cfs @ 2.66 fps) (Free Discharge)

Summary for Pond 81P: CB-5

Primary Outflow Inflow Inflow Area = 0.287 ac, 8 1.09 cfs @ 1.09 cfs @ 1.09 cfs @ 88.82% Impervious, Inflow Depth = 3.44" for 10-yr event
12.09 hrs, Volume= 0.082 af
12.09 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min
12.09 hrs, Volume= 0.082 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.72' @ 12.09 hrs Flood Elev= 219.00'

Routing Primary 216.00' Invert Outlet Devices

Primary OutFlow Max=1.06 cfs @ 12.09 hrs HW=216.71'
—1=Culvert (Barrel Controls 1.06 cfs @ 2.51 fps) 12.0" Round Culvert
L= 31.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 '/' n= 0.013, Flow Area= 0.79 sf (Free Discharge) Cc= 0.900

Type III 24-hr 10-yr Rainfall=4.44"

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Type III 24-hr 25-yr Rainfall=5.55"

Summary for Pond 82P: DMH-3

Inflow Outflow Inflow Area = П 11 11 0.287 ac, 8 1.09 cfs @ 1.09 cfs @ 1.09 cfs @ 88.82% Impervious, Inflow Depth = 3.44" for 10-yr event 12.09 hrs, Volume= 0.082 af 12.09 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min 12.09 hrs, Volume= 0.082 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.72' @ 12.09 hrs Flood Elev= 218.90'

Routing Primary 216.00' Invert Outlet Devices 12.0" Round Culvert
L= 31.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 '/' Cc= 0.900
n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=1.06 cfs @ 12.09 hrs HW=216.71' (Free Discharge) L1=Culvert (Barrel Controls 1.06 cfs @ 2.51 fps)

Summary for Link 20L: DP-A

Primary Inflow Area = Inflow = н п 30.660 ac, 24.72% Impervious, Inflow Depth = 0.59" for 10-yr event 11.61 cfs @ 12.40 hrs, Volume= 1.498 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment9S: APT. BLDG. A	Runoff Area=17,818 st 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=2.17 cfs 0.181 af
Subcatchment16S: APT. BLDG. B	Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=2.17 cfs 0.181 af
Subcatchment18S: APT. BLDG. C	Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=2.17 cfs 0.181 af
Subcatchment21S: A.1	Runoff Area=20,195 sf 5.87% Impervious Runoff Depth=0.47" Tc=10.0 min CN=42 Runoff=0.09 cfs 0.018 af
Subcatchment22S: A.2	Runoff Area=13,850 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=1.69 cfs 0.141 af
Subcatchment23S: A.3	Runoff Area=9,767 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=1.19 cfs 0.099 af
Subcatchment24S: A.4	Runoff Area=5,341 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.65 cfs 0.054 af
Subcatchment25S: A.5	Runoff Area=22,426 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=2.73 cfs 0.228 af
Subcatchment 26S: B.6	Runoff Area=40,090 sf 22.31% Impervious Runoff Depth=0.93" Tc=6.0 min UI Adjusted CN=50 Runoff=0.72 cfs 0.071 af
Subcatchment27S: A.6	Runoff Area=12,567 sf 87.12% Impervious Runoff Depth=4.41" Tc=6.0 min CN=90 Runoff=1.40 cfs 0.106 af
Subcatchment 28S: B.1	Runoff Area=30,829 sf 0.88% Impervious Runoff Depth=0.32" Tc=6.0 min UI Adjusted CN=39 Runoff=0.07 cfs 0.019 af
Subcatchment29S: B.2	Runoff Area=13,381 sf 83.76% Impervious Runoff Depth=4.19" Tc=6.0 min CN=88 Runoff=1.43 cfs 0.107 af
Subcatchment 30S: B.3	Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=4.96" Tc=6.0 min CN=95 Runoff=2.03 cfs 0.162 af
Subcatchment31S: B.4	Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=4.96" Tc=6.0 min CN=95 Runoff=2.03 cfs 0.162 af
Subcatchment32S: B.5	Runoff Area=24,627 sf 67.38% Impervious Runoff Depth=3.28" Tc=6.0 min CN=79 Runoff=2.13 cfs 0.155 af
Subcatchment33S: B.7	Runoff Area=290,511 sf 2.55% Impervious Runoff Depth=1.27" Tc=30.0 min CN=55 Runoff=4.81 cfs 0.704 af

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Subcatchment 34S: B.8	Runoff Area=12,484 sf 88.82% Impervious Runoff Depth=4.52" Tc=6.0 min CN=91 Runoff=1.41 cfs 0.108 af
Subcatchment 35S: C.1	Runoff Area=236,308 sf 9.34% Impervious Runoff Depth=1.48" Tc=20.0 min UI Adjusted CN=58 Runoff=5.69 cfs 0.671 af
Subcatchment 36S: C.2	Runoff Area=22,516 sf 83.62% Impervious Runoff Depth=4.19" Tc=6.0 min CN=88 Runoff=2.41 cfs 0.181 af
Subcatchment 37S: C.3	Runoff Area=12,429 sf 61.75% Impervious Runoff Depth=2.90" Tc=6.0 min CN=75 Runoff=0.95 cfs 0.069 af
Subcatchment 38S: C.4	Runoff Area=4,655 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.57 cfs 0.047 af
Subcatchment 39S: C.5	Runoff Area=5,857 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.71 cfs 0.060 af
Subcatchment 40S: C.6	Runoff Area=4,047 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.49 cfs 0.041 af
Subcatchment 41S: C.7	Runoff Area=7,188 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.88 cfs 0.073 af
Subcatchment 42S: C.8	Runoff Area=7,639 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.93 cfs 0.078 af
Subcatchment 43S: C.9	Runoff Area=8,732 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=1.06 ds 0.089 af
Subcatchment 44S: C.10	Runoff Area=5,326 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.65 ds 0.054 af
Subcatchment 45S: C.11	Runoff Area=2,631 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.32 cfs 0.027 af
Subcatchment 46S: C.12	Runoff Area=5,910 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.72 cfs 0.060 af
Subcatchment 47S: C.13	Runoff Area=1,987 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.24 cfs 0.020 af
Subcatchment 48S: C.14	Runoff Area=1,885 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af
Subcatchment 49S: C.15	Runoff Area=3,487 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.42 cfs 0.035 af
Subcatchment 50S: C.16	Runoff Area=3,508 sf 100.00% Impervious Runoff Depth=5.31" Tc=6.0 min CN=98 Runoff=0.43 cfs 0.036 af
Subcatchment 51S: D.1	Runoff Area=402,771 sf 0.38% Impervious Runoff Depth=0.42" Tc=20.0 min CN=41 Runoff=1.30 cfs 0.322 af

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Pond 30P: DMH-15 Pond 28P: DMH-16 Pond 27P: CB-22 Pond 26P: DMH-1 Pond 24P: CB-2 Pond 23P: CB-1 Pond 22P: DMH-2 Pond 19P: STONE RECHARGE TRENCH Peak Elev=221.01' Storage=1,942 cf Inflow=2.17 cfs 0.181 af

Discarded=0.17 cfs 0.156 af Primary=2.41 cfs 0.025 af Outflow=2.58 cfs 0.181 af Pond 17P: STONE RECHARGE TRENCH Peak Elev=221.01' Storage=1,942 cf Inflow=2.17 cfs 0.181 af Discarded=0.17 cfs 0.156 af Primary=2.41 cfs 0.025 af Outflow=2.58 cfs 0.181 af Pond 12P: STONE RECHARGE TRENCH Peak Elev=221.01' Storage=1,942 cf Inflow=2.17 cfs 0.181 af Discarded=0.17 cfs 0.156 af Primary=2.41 cfs 0.025 af Outflow=2.58 cfs 0.181 af Pond 7P: Infiltration Basin #1 Peak Elev=215.49' Storage=8,341 cf Inflow=12.24 cfs 1.606 af Discarded=0.97 cfs 0.935 af Primary=8.51 cfs 0.671 af Outflow=9.49 cfs 1.606 af Pond 5P: Wet Basin Pond 4P: Infiltration Basin #2 Subcatchment 52S: B.9 Pond 29P: CB-21 Pond 25P: CB-3 Pond 21P: CB-4 1#2 Peak Elev=213.92' Storage=10,923 cf Inflow=7.67 cfs 0.646 af Discarded=0.77 cfs 0.646 af Primary=0.00 cfs 0.000 af Outflow=0.77 cfs 0.646 af Peak Elev=216.94' Inflow=2.99 cfs 0.225 af 12.0" Round Culvert n=0.013 L=101.0' S=0.0050 '/' Outflow=2.99 cfs 0.225 af Peak Elev=215.73' Inflow=3.38 cfs 0.282 af 15.0" Round Culvert n=0.013 L=250.0' S=0.0036'/' Outflow=3.38 cfs 0.282 af Peak Elev=216.91' Inflow=2.73 cfs 0.228 af 12.0" Round Culvert n=0.013 L=160.0' S=0.0037'/' Outflow=2.73 cfs 0.228 af 12.0" Peak Elev=216.73' Inflow=5.59 cfs 0.424 af 18.0" Round Culvert n=0.013 L=48.0' S=0.0104 '/' Outflow=5.59 cfs 0.424 af 12.0" Peak Elev=217.15' Inflow=2.03 cfs 0.162 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0400'/' Outflow=2.03 cfs 0.162 af Peak Elev=216.36' Inflow=1.43 cfs 0.107 af 12.0" Round Culvert n=0.013 L=27.0' S=0.0074 '/' Outflow=1.43 cfs 0.107 af Peak Elev=216.34' Inflow=1.58 cfs 0.117 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054'/' Outflow=1.58 cfs 0.117 af Peak Elev=216.66' Inflow=0.65 cfs Round Culvert n=0.013 L=26.0' S=0.0192 '/' Outflow=0.65 cfs Peak Elev=216.97' Inflow=2.73 cfs Round Culvert n=0.013 L=51.0' S=0.0039'/' Outflow=2.73 cfs Peak Elev=217.51' Inflow=2.13 cfs 0.155 af Round Culvert n=0.013 L=38.0' S=0.0289'/' Outflow=2.13 cfs 0.155 af Peak Elev=215.01' Storage=10,944 cf Inflow=13.49 cfs 1.559 af Runoff Area=15,018 sf 80.72% Impervious Runoff Depth=4.09" Tc=6.0 min CN=87 Runoff=1.58 cfs 0.117 af o.054 af 0.054 af s 0.228 af s 0.228 af

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Pond 31P: DMH-14	Peak Elev=215.54' Inflow=7.66 ds 0.628 af 18.0" Round Culvert n=0.013 L=61.0' S=0.0164'/' Outflow=7.66 ds 0.628 af
Pond 32P: CB-20	Peak Elev=216.32' Inflow=1.69 dfs 0.141 af 12.0" Round Culvert n=0.013 L=12.0' S=0.0167'/' Outflow=1.69 dfs 0.141 af
Pond 33P: DMH-17	Peak Elev=216.35' Inflow=2.59 cfs 0.205 af 12.0" Round Culvert n=0.013 L=180.0' S=0.0083'/' Outflow=2.59 cfs 0.205 af
Pond 34P: CB-23	Peak Elev=216.23' Inflow=1.40 ds 0.106 af 12.0" Round Culvert n=0.013 L=28.0' S=0.0107'/' Outflow=1.40 ds 0.106 af
Pond 35P: CB-24	Peak Elev=216.16' Inflow=1.19 dfs 0.099 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0150'/' Outflow=1.19 dfs 0.099 af
Pond 37P: DMH-10	Peak Elev=218.99' Inflow=2.36 cfs 0.197 af 15.0" Round Culvert n=0.013 L=122.0' S=0.0295'/' Outflow=2.36 cfs 0.197 af
Pond 38P: CB-15	Peak Elev=232.46' Inflow=0.23 dfs 0.019 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/' Outflow=0.23 dfs 0.019 af
Pond 39P: CB-16	Peak Elev=232.47' Inflow=0.24 cfs 0.020 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/' Outflow=0.24 cfs 0.020 af
Pond 52P: CB-17	Peak Elev=247.77' Inflow=0.43 cfs 0.036 af 12.0" Round Culvert n=0.013 L=18.0' S=0.0500'/' Outflow=0.43 cfs 0.036 af
Pond 53P: CB-18	Peak Elev=247.77' Inflow=0.42 cfs 0.035 af 12.0" Round Culvert n=0.013 L=19.0' S=0.0474'/' Outflow=0.42 cfs 0.035 af
Pond 54P: DMH-13	Peak Elev=246.94' Inflow=0.85 cfs 0.071 af 12.0" Round Culvert n=0.013 L=85.0' S=0.0753'/' Outflow=0.85 cfs 0.071 af
Pond 56P: DMH-12	Peak Elev=240.44' Inflow=0.85 cfs 0.071 af 12.0" Round Culvert n=0.013 L=110.0' S=0.0745'/' Outflow=0.85 cfs 0.071 af
Pond 58P: CB-13	Peak Elev=219.22' Inflow=0.32 cfs 0.027 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467'/' Outflow=0.32 cfs 0.027 af
Pond 61P: DMH-11	Peak Elev=232.30' Inflow=1.32 cfs 0.110 af 12.0" Round Culvert n=0.013 L=198.0' S=0.0677'/' Outflow=1.32 cfs 0.110 af
Pond 62P: CB-14	Peak Elev=219.39' Inflow=0.72 cfs 0.060 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467'/' Outflow=0.72 cfs 0.060 af
Pond 63P: DMH-4	Peak Elev=219.94' Inflow=11.02 cfs 0.888 af 24.0" Round Culvert n=0.013 L=122.0' S=0.0295'/' Outflow=11.02 cfs 0.888 af
Pond 65P: DMH-8	Peak Elev=216.40' Inflow=3.93 cfs 0.297 af 15.0" Round Culvert n=0.013 L=215.0' S=0.0028'/' Outflow=3.93 cfs 0.297 af
Pond 66P: CB-6	Peak Elev=216.49' Inflow=0.71 cfs 0.060 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208'/' Outflow=0.71 cfs 0.060 af

Link 20L: DP-A

Total Runoff Area = 30.660 ac Runoff Volume = 4.676 af Average Runoff Depth = 1.83" 75.28% Pervious = 23.079 ac 24.72% Impervious = 7.580 ac Pond 82P: DMH-3

Pond 81P: CB-5

12.0"

Peak Elev=216.84' Inflow=1.41 cfs 0.108 af 12.0" Round Culvert n=0.013 L=31.0' S=0.0032'/' Outflow=1.41 cfs 0.108 af

Inflow=22.80 cfs 2.627 af Primary=22.80 cfs 2.627 af Peak Elev=216.84' Inflow=1.41 cfs $\,$ 0.108 af Round Culvert $\,$ n=0.013 L=31.0' S=0.0032 '/' Outflow=1.41 cfs $\,$ 0.108 af

Pond 80P: DMH-5

Peak Elev=215.88' Inflow=3.52 cfs 0.294 af 15.0" Round Culvert n=0.013 L=78.0' S=0.0064 // Outflow=3.52 cfs 0.294 af

Peak Elev=216.64' Inflow=1.06 cfs 0.089 af 12.0" Round Culvert n=0.013 L=29.0' S=0.0069 // Outflow=1.06 cfs 0.089 af

Peak Elev=216.51' Inflow=0.65 cfs 0.054 af Round Culvert n=0.013 L=49.0' S=0.0041 '/' Outflow=0.65 cfs 0.054 af

Pond 79P: CB-10

Pond 78P: CB-19

12.0"

Pond 77P: DMH-7

Peak Elev=216.44' Inflow=1.71 cfs 0.143 af 15.0" Round Culvert n=0.013 L=181.0' S=0.0050 '/' Outflow=1.71 cfs 0.143 af

Peak Elev=216.13' Inflow=1.81 cfs 0.151 af 12.0" Round Culvert n=0.013 L=96.0' S=0.0042'/' Outflow=1.81 cfs 0.151 af

Peak Elev=216.09' Inflow=0.88 cfs 0.073 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054 '/' Outflow=0.88 cfs 0.073 af

Peak Elev=216.10' Inflow=0.93 cfs 0.078 af 12.0' Round Culvert n=0.013 L=32.0' S=0.0062 '/' Outflow=0.93 cfs 0.078 af

Peak Elev=217.37' Inflow=3.36 cfs $\,0.250$ af Round Culvert $\,$ n=0.013 $\,$ L=15.0' S=0.0067 '/' $\,$ Outflow=3.36 cfs $\,$ 0.250 af

Pond 73P: DMH-6

Pond 72P: CB-9

Pond 71P: CB-8

Pond 70P: CB-12

12.0"

Pond 69P: CB-11

Pond 68P: DMH-9

Peak Elev=217.15' Inflow=3.93 cfs 0.297 af 15.0" Round Culvert n=0.013 L=190.0' S=0.0026'/' Outflow=3.93 cfs 0.297 af

Peak Elev=216.40' Inflow=0.49 cfs 0.041 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208'/' Outflow=0.49 cfs 0.041 af

Peak Elev=216.06' Inflow=0.57 cfs 0.047 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0067 // Outflow=0.57 cfs 0.047 af

Pond 67P: CB-7

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Type III 24-hr 25-yr Rainfall=5.55"

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Type III 24-hr 25-yr Rainfall=5.55"

Summary for Subcatchment 9S: APT. BLDG. A

Runoff 2.17 cfs @ 12.09 hrs, Volume= 0.181 af, Depth= 5.31

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

	<u> </u>			
6.0	lii 군	_	_	Are
	Length (feet)	17,818	17,818	Area (sf)
	Slope (ft/ft)		98 F	CN
	Velocity (ft/sec)	100.00% Impervious Area	98 Roofs, HSG A	Description
	Capacity (cfs)	pervious A	Α	
Direct Entry,	/ Description)	Area		

Summary for Subcatchment 16S: APT. BLDG. B

2.17 cfs @ 12.09 hrs, Volume= 0.181 af, Depth= 5.31"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

6.0	nin)	_	L	Ar
	Length (feet)	17,818	7,818	Area (sf)
	Slope V (ft/ft)	_	98 R	CN
	Velocity (ft/sec)	00.00% lm	Roofs, HSG A	CN Description
	Capacity (cfs)	100.00% Impervious Area	Þ	
Direct Entry,	Description	rea		

Summary for Subcatchment 18S: APT. BLDG. C

Runoff 2.17 cfs @ 12.09 hrs, Volume= 0.181 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

6.0	Tc Length SI (min) (feet) (17,818	17,818 98	Area (sf) CN
	Slope Velocity (ft/ft) (ft/sec)	100.00% In	17,818 98 Roofs, HSG A	Description
-	/ Capacity D	100.00% Impervious Area	A A	
Direct Entry,	Description	W		

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Summary for Subcatchment 21S: A.1

0.09 cfs @ 12.38 hrs, Volume= 0.018 af, Depth= 0.47"

Runoff

П

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

10.0	Tc Length (min) (feet)	95	1,186	19,009	20,195	1,091	95	291	18,718	Area (sf)
	, , , , , , , , , , , , , , , , , , ,					98	98	30	39	CN
Direct Entry,	Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)	8.01% Unconnected	5.87% Impervious Area	94.13% Pervious Area	42 Weighted Average		Unconnected pavement, HSG A	Woods, Good, HSG A	>75% Grass cover, Good, HSG A	Description

Summary for Subcatchment 22S: A.2

1.69 cfs @ 12.09 hrs, Volume= 0.141 af, Depth= 5.31"

Runoff П

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

	1			
6.0	Tc (min)			A
	Length (feet)	13,850 13,850	12,935 915	rea (sf)
	Slope (ft/ft	98	98 98	CN
	Slope Velocity (ft/ft) (ft/sec)	Weighted Average 100.00% Impervious Area	98 Paved parking, HSG A 98 Roofs, HSG A	Area (sf) CN Description
	Capacity (cfs)	verage ıpervious Ar	ing, HSG A A	
Direct Entry,	Description	rea		

Summary for Subcatchment 23S: A.3

Runoff 1.19 cfs @ 12.09 hrs, Volume= 0.099 af, Depth= 5.31"

		ı
9,767	9,767	Area (sf)
	98	S
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 25-yr Rainfall=5.55"

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

Summary for Subcatchment 24S: A.4

Runoff П 0.65 cfs @ 12.09 hrs, Volume=

0.054 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry,					6.0
(ft/sec) (cfs)	(cf:	(ft/sec)	(ft/ft)	(feet)	(min)
city Description	Capaci	Velocity	Slope	Length	Тc
				• • • •	
us Area	mpervious	100.00% Impervious Area		5.341	
	Average	Weighted Average	98	5,341	
	G A	98 Roofs, HSG A	98	5,114	
iG A	king, HSG	Paved parking, HSG A	98	227	
	_	Description	S	Area (sf)	

Summary for Subcatchment 25S: A.5

2.73 cfs @ 12.09 hrs, Volume= 0.228 af, Depth= 5.31"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

6.0	(mii			
.0	Tc Length (min) (feet)	22,426	22,426	Area (sf)
	Slope (ft/ft)		98	CN
	Velocity (ft/sec)	100.00% Impervious Area	98 Paved parking, HSG A	CN Description
	Capacity (cfs)	npervious A	ing, HSG A	
Direct Entry,	Description	vrea		

Summary for Subcatchment 26S: B.6

Runoff 0.72 cfs @ 12.12 hrs, Volume= 0.071 af, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Type III 24-hr 25-yr Rainfall=5.55"

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6.0	Tc (min)								
	Length (feet)	3,467	8,944	31,146	40,090	5,477	3,467	31,146	Area (sf) CN
	Slope (ft/ft)				52	98	98	39	S
					50				Adi
	Velocity (ft/sec)	38.76	22.31	77.69	Weig	Roofs	Unco	>75%	Adj Description
	Capacity (cfs)	38.76% Unconnected	22.31% Impervious Area	77.69% Pervious Area	hted Avera	Roofs, HSG A	nnected pa	Grass cov	ription
Direct Entry,	Description	nected	ious Area	is Area	Weighted Average, UI Adjusted		Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	

Summary for Subcatchment 27S: A.6

1.40 cfs @ 12.09 hrs, Volume= 0.106 af, Depth= 4.41"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

	6.0	Tc Length (min) (feet	9	10,948	1,6	12,5	1,117	9	1,6	8,8	Area (sf)
			48	48	19						l
		Slope (ft/ft)	œ	8	_	90 V	98 R			98 P	Ż
1		Velocity (ft/sec)	8.66% Unconnected	7.12% Imp	12.88% Pervious Area	Weighted Average	Roofs, HSG A	Inconnected	75% Grass	Paved parking, HSG A	CN Description
		Capacity (cfs)	nnected	87.12% Impervious Area	ious Area	/erage	A	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	າg, HSG A	
	Direct Entry,	Description		а				t, HSG A	od, HSG A		

Summary for Subcatchment 28S: B.1

Runoff 0.07 cfs @ 12.39 hrs, Volume= 0.019 af, Depth= 0.32"

270	270	30,559	30,829 40 39	270 98	30,559 39	Area (sf) CN Adj
100.00% Unconnected	0.88% Impervious Area	99.12% Pervious Area	Weighted Average, UI Adjusted	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Description

Type III 24-hr 25-yr Rainfall=5.55"

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Direct Entr					6.0
	(cfs)	(ft/sec)	(ft/ft)	(feet)	(min)
Description	Capacity	Velocity	Slope	Length	Тc

Summary for Subcatchment 29S: B.2

Runoff 1.43 cfs @ 12.09 hrs, Volume= 0.107 af, Depth= 4.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry,	10,360	(1011)	(leef)	6.0
Cap	Velocity	Slope	Length	(min)
17.82% Unconnected	7.82% U		1,997	
83.76% Impervious Area	33.76% In	ω	11,208	
16.24% Pervious Area	6.24% P	_	2,173	
Average	Weighted Average	88 \	13,381	
Paved parking, HSG A	^o aved par	98 F	9,211	
Unconnected pavement, HSG A	Jnconnec	98 ر	1,997	
>75% Grass cover, Good, HSG A	•75% Gra	39 >	2,173	
n	CN Description	CN [Area (sf)	Þ

Summary for Subcatchment 30S: B.3

Runoff 2.03 cfs @ 12.09 hrs, Volume=

0.162 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry,					6.0
Description	Capacity (cfs)	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
	connected	15.77% Unconnected	_	2,575	
	95.72% Impervious Area	15.72% lmp	(0	16,329	
	ious Area	4.28% Pervious Area	7	731	
	verage	Weighted Average	95 \	17,060	
	Paved parking, HSG A	aved park	98 F	13,754	
HSGA	Unconnected pavement, HSG A	Jnconnecte	98 ر	2,575	
d, HSG A	>75% Grass cover, Good, HSG A	·75% Grass	39 >	731	
		CN Description	S .	Area (sf)	Þ

Summary for Subcatchment 31S: B.4

Runoff 2.03 cfs @ 12.09 hrs, Volume=

0.162 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Type III 24-hr 25-yr Rainfall=5.55"

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				ı			
2,575	16,329	731	17,060	13,754	2,575	731	Area (sf)
			95	98	98	39	CN
15.77% Unconnected	95.72% Impervious Area	4.28% Pervious Area	Weighted Average	Paved parking, HSG A	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Description

Summary for Subcatchment 32S: B.5

Direct Entry,

Tc (min)

Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)

Runoff 2.13 cfs @ 12.09 hrs, Volume= 0.155 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

	6.0	
	(min)	
1,324		
3,593	<u>-</u>	
3,034		
	Ņ	
l	Are	
	a (sf) CN Description a (sf) CN Description B,616 98 Paved park B,034 39 75% Gras C,034 98 Unconnect C,6653 98 Roofs, HSC C,6653 98 Roofs C,	Area (sf) 8,616 8,034 1,324 6,653 24,627 8,034 16,593 1,324 Length (feet)

Summary for Subcatchment 33S: B.7

Runoff 4.81 cfs @ 12.49 hrs, Volume= 0.704 af, Depth= 1.27"

Type III 24-hr 25-yr Rainfall=5.55"

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129,407	Area (sf)
39	CN
>75% Grass cover, Good, HSG A	Description

4.399	15,779	27,194	9,046	97,286
77	70	30	80	74
Woods, Good, HSG D	Woods, Good, HSG C	Woods, Good, HSG A	>75% Grass cover, Good, HSG D	>75% Grass cover, Good, HSG C

		,	
pavement, HSG C	Unconnected	98	319
Unconnected pavement, HSG A	Unconnected	98	1,606
, HSG D	Woods, Good, HSG D	77	4,399

1,925	7,400	283,111	290,511	5,475
			55	98
26.01% Unconnected	2.55% Impervious Area	97.45% Pervious Area	Weighted Average	Roofs, HSG A

Direct Entry					300
	(cfs)	(ft/sec)	(ft/ft)	(feet)	min)
Description	Capacity	Velocity	Slope	Length	Тс

Summary for Subcatchment 34S: B.8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55" Runoff 1.41 cfs @ 12.09 hrs, Volume= 0.108 af, Depth= 4.52"

Direct Entry.					6.0	
	(cfs)	(ft/sec)		(feet)	(min)	
Description	Capacity	Velocity		Length	Tc	
	connected	12.30% Unconnected	_	1,364		
ea	88.82% Impervious Area	8.82% lmp	8	11,088		
	11.18% Pervious Area	1.18% Per	_	1,396		
	verage	Weighted Average	91 V	12,484		
nt, HSG A	Unconnected pavement, HSG A	Inconnecte	98 ر	1,364		
od, HSG A	>75% Grass cover, Good, HSG A	75% Grass		1,396		
	Paved parking, HSG A	aved parki	98 F	9,724		
		Description	CN D	Area (sf)	A	

Summary for Subcatchment 35S: C.1

Runoff 5.69 cfs @ 12.31 hrs, Volume=

0.671 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Type III 24-hr 25-yr Rainfall=5.55"

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	Direct Entry						20.0
	Description	Velocity Capacity Description (ft/sec) (cfs)	/elocity (ft/sec)		Slope (ft/ft)	Length (feet)	Tc (min)
	ected	64.08% Unconnected	64.08			14,141	
	us Area	9.34% Impervious Area	9.349			22,067	
	s Area	90.66% Pervious Area	90.66			214,241	
	Weighted Average, UI Adjusted	hted Averag		58	59	236,308	
		Roofs, HSG A	Roof		98	7,926	
	Unconnected pavement, HSG A	nnected pay	Unco		98	14,141	
	ISG D	Woods, Good, HSG D	Wood		77	16,469	
	>75% Grass cover, Good, HSG D	6 Grass cov	>75%		80	69,229	
	>75% Grass cover, Good, HSG A	6 Grass cov	>75%		39	128,543	
		ription	Adj Description	Ad	S	Area (sf)	Þ
rage 94	nydiocad⊛ 10.10-3a s/i103390 ⊛ 2020 nydiocad Soliwale Solutions LEC	DITYGROCAD	00 0020	0000	oa s/II	0.10-	TydioCA

Summary for Subcatchment 36S: C.2

Runoff II 2.41 cfs @ 12.09 hrs, Volume= 0.181 af, Depth= 4.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Summary for Subcatchment 37S: C.3

Runoff П 0.95 cfs @ 12.09 hrs, Volume= 0.069 af, Depth= 2.90"

4,754 7,675	12,429	1,900	509	4,754	5,266	Area (sf)
	75	98	98	39	98	ရ
38.25% Pervious Area 61.75% Impervious Area	Weighted Average	Roofs, HSG A	Roofs, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	Description

Type III 24-hr 25-yr Rainfall=5.55"

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Tc (min) 6.0

Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)

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Type III 24-hr 25-yr Rainfall=5.55"

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

Summary for Subcatchment 38S: C.4

Direct Entry,

Runoff 0.57 cfs @ 12.09 hrs, Volume= 0.047 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

6.0 Direct Entry,	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	4,655 100.00% Impervious Area	4,655 98 Paved parking, HSG A	Area (sf) CN Description
itry,	on			

Summary for Subcatchment 39S: C.5

Runoff 0.71 cfs @ 12.09 hrs, Volume= 0.060 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Summary for Subcatchment 40S: C.6

Runoff 0.49 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

4,047	4,047 98	Area (sf) CN
100.00% Impervious Area	Paved parking, HSG A	Description

Summary for Subcatchment 41S: C.7

Runoff II 0.88 cfs @ 12.09 hrs, Volume= 0.073 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry,					6.0	
Capacity Description (cfs)	Capacity (cfs)	Velocity ((ft/sec)	Slope (ft/ft)	Tc Length min) (feet)	Tc (min)	
\rea	100.00% Impervious Area	100.00% 1		7,188		
	Average	Weighted.	98 \	7,188		
	GA	Roofs, HS	98 F	1,116		
	98 Paved parking, HSG A	⊃aved par	98 F	6,072		
		Alea (SI) CIV Description	2	1100 (31)		

Summary for Subcatchment 42S: C.8

0.93 cfs @ 12.09 hrs, Volume= 0.078 af, Depth= 5.31"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

	(m			
6.0	min) L	7	7	Area
	Length (feet)	7,639	,639	a (sf)
	Slope (ft/ft)		98	Area (sf) CN I
	e Vel (ft/	100.00	Paved	Description
	Velocity () (ft/sec)	0% Imp	l parkir	iption
	Capacity (cfs)	100.00% Impervious Area	7,639 98 Paved parking, HSG A	
Direct Entry,	Description	∖rea		

Summary for Subcatchment 43S: C.9

1.06 cfs @ 12.09 hrs, Volume= 0.089 af, Depth= 5.31"

Runoff

	ı	ı
8,732	8,732	Area (sf)
	98	CN
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 25-yr Rainfall=5.55"

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

Summary for Subcatchment 44S: C.10

Runoff П 0.65 cfs @ 12.09 hrs, Volume= 0.054 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry,					6.0
Description	Capacity (cfs)	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
rea	100.00% Impervious Area	00.00% In	_	5,326	
	98 Paved parking, HSG A	aved park	98 F	5,326	
		Description	CN	Area (sf) CN	,

Summary for Subcatchment 45S: C.11

0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Depth= 5.31"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Area (sf) CN Description 1.483 98 Paved parking, HSG A
C N

Summary for Subcatchment 46S: C.12

Runoff 0.72 cfs @ 12.09 hrs, Volume= 0.060 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Type III 24-hr 25-yr Rainfall=5.55"

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0	(m									
6.0	Tc Length in) (feet)	1,549	5,910	5,910	96	696	853	2,121	2,144	Area (sf)
	Slope (ft/ft)			98		98	98		98	S
	e Velocity) (ft/sec)	26.21% Uı	100.00% I	Weighted Average	Roofs, HSG A	Unconnec	Unconnec	Paved par	Paved par	Description
	Capacity (cfs)	26.21% Unconnected	100.00% Impervious Area	Average	G A	Unconnected pavement, HSG D	Unconnected pavement, HSG A	Paved parking, HSG D	Paved parking, HSG A	ם
Direct Entry,	/ Description	_	Area			ent, HSG D	ent, HSG A	0	Þ	
y,										

Summary for Subcatchment 47S: C.13

0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Depth= 5.31"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

6.0	Tc (min)						
	Length (feet)	155	1,987	1,987	155	1,832	Area (sf)
	Slope (ft/ft)			98	98	98	S
	Velocity (ft/sec)	7.80% Unconnected	100.00% Impervious Area	Weighted Average	98 Unconnected pavement, HSG D	Paved parking, HSG D	CN Description
	Capacity (cfs)	onnected	ıpervious Ar	verage	ed pavemen	ing, HSG D	
Direct Entry,	Description		ea		t, HSG D		

Summary for Subcatchment 48S: C.14

Runoff 0.23 cfs @ 12.09 hrs, Volume= 0.019 af, Depth= 5.31"

141	1,885	1,885	141	1,744	Area (sf)
		98	98	98	CN
7.48% Unconnected	100.00% Impervious Area	Weighted Average	Unconnected pavement, HSG D	Paved parking, HSG D	Description

Type III 24-hr 25-yr Rainfall=5.55"

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T_c Length (feet) Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Direct Entry,

Summary for Subcatchment 49S: C.15

Runoff П 0.42 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry,			- 1	6.0
(ft/sec) (cfs)		(#/#)	(feet)	(min)
•		<u>S</u>		T _C
7.66% Unconnected	7.66%		267	
100.00% Impervious Area	100.00		3,487	
Weighted Average	Weigh	98	3,487	
Unconnected pavement, HSG D	Uncor	98	267	
Paved parking, HSG D	Paved	98	3,220	
ription	CN Description	CN	Area (sf)	

Summary for Subcatchment 50S: C.16

Runoff 0.43 cfs @ 12.09 hrs, Volume= 0.036 af, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

Direct Entry.				- 1	6.0	
Description		Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	Slope (ft/ft)	Length (feet)	Tc (min)	
	onnected	7.70% Unconnected	7	270		
ea	100.00% Impervious Area	00.00% Im	_	3,508		
	verage	Weighted Average	98 V	3,508		
t, HSG D	98 Unconnected pavement, HSG D	Inconnecte	86 ر	l		
	98 Paved parking, HSG D	aved parki	98 F	3,238		
		escription)	N L	Area (sf) CN Description	Þ	

Summary for Subcatchment 51S: D.1

1.30 cfs @ 12.55 hrs, Volume= 0.322 af, Depth= 0.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

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Type III 24-hr 25-yr Rainfall=5.55"

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Direct Entry,			20.0	
acity Description (cfs)	Velocity Capacity (ft/sec)	Slope (ft/ft)	Tc Length (min) (feet)	1
nected	100.00% Unconnected		1,527	
s Area	0.38% Impervious Area		1,527	
Area	99.62% Pervious Area		401,244	
Je	Weighted Average	41	402,771	
SGD	Woods, Good, HSG D	77	450	
SGB	Woods, Good, HSG B	55	5,106	
SG A	Woods, Good, HSG A	30	160,796	
er, Good, HSG D	>75% Grass cover, Good, HSG D	80	51,440	
er, Good, HSG B	>75% Grass cover, Good, HSG	61	518	
er, Good, HSG A	>75% Grass cover, Good, HSG	39	182,934	
vement, HSG A	Unconnected pavement, HSG A	98		
	Description	CN	Area (sf)	

Summary for Subcatchment 52S: B.9

Runoff П 1.58 cfs @ 12.09 hrs, Volume= 0.117 af, Depth= 4.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 25-yr Rainfall=5.55"

ć	6.0	(min) (feet)	Tc Length	1,150	12,123	2,895	15,018	1,150	2,895	10,973	Area (sf)	
			_	_	w	01	87	98		3 98	CN	
1		(ft/ft) (ft/sec)	Slope Velocity Capacity Description	9.49% Unconnected	80.72% Impervious Area	19.28% Pervious Area	Weighted Average	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	Description	
		(cfs)	Capacity	nected	vious Are	ous Area	rage	pavemen:	over, Goo), HSG A		
on our ring,	Direct Entry		Description		ä			t, HSG A	od, HSG A			

Summary for Pond 4P: Infiltration Basin #2

Denting to Other last most and Hims Disease 0.00 NO.00 to 14- 0.07 to	Inflow = Outflow = Discarded = Primary =	Inflow Area =
	7.67 cfs @ 0.77 cfs @ 0.77 cfs @ 0.00 cfs @	1.932 ac.
	7.67 cfs @ 12.09 hrs, Volume= 0.77 cfs @ 12.91 hrs, Volume= 0.77 cfs @ 12.91 hrs, Volume= 0.00 cfs @ 0.00 hrs, Volume=	1.932 ac, 75.49% Impervious, Inflow Depth = 4.01" for 25-yr event
70 00 1	blume= blume= blume=	ious, Inflow D
0	0.646 af 0.646 af, Atten= 90%, Lag= 49.1 min 0.646 af 0.000 af	epth = 4.01"
	en= 90%, L:	for 25-yr e
	ag= 49.1 min	vent

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 213.92' @ 12.91 hrs Surf.Area= 8,795 sf Storage= 10,923 cf

Plug-Flow detention time= 129.4 min calculated for 0.646 af (100% of inflow) Center-of-Mass det. time= 129.4 min (888.2 - 758.8)

Type III 24-hr 25-yr Rainfall=5.55"

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Type III 24-hr 25-yr Rainfall=5.55"

Device 1 215.50' Cv= 2.56 (C= 3.20)
4.2' long x 4.2' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.37 2.53 2.69 2.68 2.67 2.67 2.65 2.66 2.66
2.67 2.71 2.72 2.74 2.77 2.85 3.01 3.23

Primary OutFlow Max=8.05 cfs @ 12.44 hrs HW=215.01' (Free Discharge)
1=Culvert (Barrel Controls 8.05 cfs @ 4.14 fps)
2=Sharp-Crested Vee/Trap Weir (Passes 8.05 cfs of 14.12 cfs potential flow)
3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 7P: Infiltration Basin #1

Inflow =
Outflow =
Discarded =
Primary = Inflow Area = 10.584 ac, 21.75% Impervious, Inflow Depth = 1.82" for 25-yr event 12.24 cts @ 12.10 hrs, Volume= 1.606 af, Atten= 23%, Lag= 6 0.97 cts @ 12.20 hrs, Volume= 0.935 af 8.51 cts @ 12.20 hrs, Volume= 0.671 af 1.606 af 1.606 af, Atten= 23%, Lag= 6.2 min 0.935 af 0.671 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.49' @ 12.20 hrs Surf.Area= 13,300 sf Storage= 8,341 cf

Plug-Flow detention time= 45.2 min calculated for 1.606 af (100% of inflow) Center-of-Mass det. time= 45.2 min (891.5 - 846.2)

Invert
l.Storage
Avail.Storage Storage Description

Discarded OutFlow Max=0.97 cfs @ 12.20 hrs HW=215.49' (Free Discharge) **C2=Exfiltration** (Controls 0.97 cfs)

Primary OutFlow Max=8.51 cfs @ 12.20 hrs HW=215.49' (Free Discharge)
1-1=Broad-Crested Rectangular Weir (Weir Controls 8.51 cfs @ 1.10 fps)

Volume	Invert	Avail.S	torage	Avail.Storage Storage Description		
#1	212.50'	32,	065 cf	32,065 cf Custom Stage Data (Irregular)Listed below (Recalc)	ı (Irregular) Listed k	pelow (Recalc)
Elevation	Su	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(feet)		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
212.50		6,645	342.0	0	0	6,645
214.00		8,926	397.0	11,636	11,636	9,927
216.00		11,559	453.0	20,428	32,065	13,809
Device Routing	Routing	Inver	t Outle	Invert Outlet Devices		
#1 [Discarded	212.50') 2.410	2.410 in/hr Exfiltration over Surface area	ver Surface area	
				Conductivity to Groundwater Elevation = 210.40	ter Elevation = 210	.40'
#2 F	Primary	215.50		20.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64	h Broad-Crested F 60 0.80 1.00 1.20 2.70 2.67 2.66	Rectangular Weir 0 1.40 1.60 2.67 2.66 2.64
Discardec └1=Exfil	OutFlow tration(C	Max=0.77 ontrols 0.7	cfs @ 12 7 cfs)	Discarded OutFlow Max=0.77 cfs @ 12.91 hrs HW=213.92' (Free Discharge) —1=Exfiltration (Controls 0.77 cfs)	(Free Discharge)	
Drimary O		av=0 00 cfs		Primary OutFlow May=0.00 ofs @ 0.00 hrs HW/=212 50' (Free Discharge)	ree Discharge)	

(Free Discharge)

Summary for Pond 5P: Wet Basin

Primary Inflow Outflow Inflow Area = H H H 13.49 cfs @ 8.05 cfs @ 8.05 cfs @ 7.670 ac, 33.35% Impervious, Inflow Depth = 2.44" for 25-yr event 12.10 hrs, Volume= 12.44 hrs, Volume= 12.44 hrs, Volume= 1.559 af, Atten= 40%, Lag= 20.1 min 1.559 af .559 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.01' @ 12.44 hrs Surf.Area= 12,501 sf Storage= 10,944 cf

Plug-Flow detention time= 27.3 min calculated for 1.558 af (100% of inflow)

Wet.Area	Cum.Store	Inc.Store	Surf.Area Perim.	Surf.	Elevation
below (Recalc	a (Irregular) Listed	103,930 cf Custom Stage Data (Irregular)Listed below (Recalc	103,930 cf	214.00'	#1
		Avail.Storage Storage Description	Avail.Storage	Invert	Volume
		3.4 - 816.0)	Center-of-Mass det. time= 27.4 mln (843.4 - 816.0	lass det. tim	Center-or-N

ap Weir	rp-Crested Vee/Tra	45.0 deg x 4.0' long Sharp-Crested Vee/Trap Weir		214.00'	Device 1	#2
0031 7 Cc= 0.900	13" / 211.63" S= 0.1 14 sf	net / Outlet Invert= 213.43 / 211.63 S= 0.0031 // Cc= 0.900 n= 0.013, Flow Area= 3.14 sf	n= 0.			
)= 0.900	g, no headwall, Ke	L= 580.0' CPP, projecting, no headwall, Ke= 0.900	L= 5			
		24.0" Round Culvert		213.43'	Primary	#1
		Invert Outlet Devices	rt Outle	Inve	Routing	Device
16,550	103,930	42,506	390.0	22,316	ŏ	220.00
15,359	61,425	36,350	375.0	20,207	8	218.00
10,927	25,075	25,075	442.0	16,216	8	216.0
9,189	0	0	420.0	9,189	8	214.0
(sq-ft)	(cubic-feet)	(cubic-feet)	(feet)	(sq-ft)	ť	(feet)
Wet.Area	Cum.Store	Inc.Store	Perim.	Surf.Area	_	Elevatior
below (Recalc)	a (Irregular)∟isted i	103,930 ct Custom Stage Data (Irregular)Listed below (Recalc,	s,930 ct		214.00	#

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Type III 24-hr 25-yr Rainfall=5.55"

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Routing Primary 221.00' Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 Outlet Devices 2.50 3.00

Discarded 219.00 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00'

#2

Discarded OutFlow Max=0.17 cfs @ 12.20 hrs HW=221.01'
-2=Exfiltration (Controls 0.17 cfs) (Free Discharge)

Primary OutFlow Max=1.47 cfs @ 12.20 hrs HW=221.01' (Free Discharge, 1-1=Broad-Crested Rectangular Weir (Weir Controls 1.47 cfs @ 0.24 fps)

Summary for Pond 19P: STONE RECHARGE TRENCH

Primary Inflow Discarded = Outflow Inflow Area = 0.409 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 2.17 cfs @ 12.09 hrs, Volume= 0.181 af 2.58 cfs @ 12.20 hrs, Volume= 0.181 af, Atten= 0%, Lag= 6.8 min 0.17 cfs @ 12.20 hrs, Volume= 0.156 af 2.41 cfs @ 12.20 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 221.01' @ 12.20 hrs Surf.Area= 2,427 sf Storage= 1,94 Storage= 1,942 cf

Plug-Flow detention time= 75.0 min calculated for 0.181 af (100% of inflow) Center-of-Mass det. time= 74.9 min (821.3 - 746.3)

Volume #1 Invert Avail.Storage Storage Description

219.00' 1,942 cf 3.00'W x 809.00'L x 2.00'H Prismatoid 4,854 cf Overall x 40.0% Voids

#2				#.	Device
#2 Discarded				#1 Primary	Device Routing
219.00'				221.00'	Invert
219.00' 2.410 in/hr Exfiltration over Surface area	Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32	2.50 3.00	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00	221.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir	Invert Outlet Devices

Discarded OutFlow Max=0.17 cfs @ 12.20 hrs HW=221.01'
-2=Exfiltration (Controls 0.17 cfs) (Free Discharge)

Conductivity to Groundwater Elevation = 210.00'

Primary OutFlow Max=1.47 cfs @ 12.20 hrs HW=221.01' (Free Discharge)
1-1=Broad-Crested Rectangular Weir (Weir Controls 1.47 cfs @ 0.24 fps)

Summary for Pond 12P: STONE RECHARGE TRENCH

Inflow Outflow Primary Discarded = nflow Area = 0.409 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 2.17 cfs @ 12.09 hrs, Volume= 0.181 af, Atten= 0%, Lag= 6.8 min 0.17 cfs @ 12.20 hrs, Volume= 0.156 af 2.41 cfs @ 12.20 hrs, Volume= 0.25 af

Routing by S Peak Elev= 2 Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs = 221.01' @ 12.20 hrs Surf.Area= 2,427 sf Storage= 1,942 cf

Plug-Flow detention time= 75.0 min calculated for 0.181 af (100% of inflow) Center-of-Mass det. time= 74.9 min (821.3 - 746.3)

Volume

Invert

Avail.Storage

Storage Description

Routing Primary 219.00' 221.00' 1,942 cf 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.50 3.00 Outlet Devices **3.00'W x 809.00'L x 2.00'H Prismatoid 4,854** cf Overall x 40.0% Voids

#2 Discarded 219.00' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.30 3.31 3.32

3.20 3.28 3.31

2.00

Discarded OutFlow Max=0.17 cfs @ 12.20 hrs HW=221.01' (Free Discharge) —2=Exfiltration (Controls 0.17 cfs)

Primary OutFlow Max=1.47 cfs @ 12.20 hrs HW=221.01' (Free Discharge) 1=Broad-Crested Rectangular Weir (Weir Controls 1.47 cfs @ 0.24 fps)

Summary for Pond 17P: STONE RECHARGE TRENCH

Inflow Discarded Outflow Inflow Area = н н П 0.409 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 2.17 cfs @ 12.09 hrs, Volume= 0.181 af 2.58 cfs @ 12.20 hrs, Volume= 0.181 af, Atten=0%, Lag=6.8 0.17 cfs @ 12.20 hrs, Volume= 0.156 af 2.41 cfs @ 12.20 hrs, Volume= 0.125 af Atten= 0%, Lag= 6.8 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 221.01' @ 12.20 hrs Surf.Area= 2,427 sf Storage= 1,942 cf

Plug-Flow detention time= 75.0 min calculated for 0.181 af (100% of inflow) Center-of-Mass det. time= 74.9 min (821.3 - 746.3)

Volume # 219.00' Invert Avail.Storage 1,942 cf **3.00'W x 809.00'L x 2.00'H Prismatoid 4,854** cf Overall x 40.0% Voids Storage Description

Type III 24-hr 25-yr Rainfall=5.55"

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Summary for Pond 21P: CB-4

Primary Inflow Outflow Inflow Area = П 0.345 ac, 8 1.58 cfs @ 1.58 cfs @ 1.58 cfs @

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.34' @ 12.09 hrs Flood Elev= 218.50'

	#1	Device
	#1 Primary	Device Routing
	215.50'	Invert
net / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/ Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.54 cfs @ 12.09 hrs HW=216.33'
—1=Culvert (Barrel Controls 1.54 cfs @ 3.01 fps) (Free Discharge)

Summary for Pond 22P: DMH-2

Outflow Primary Inflow Area = Inflow = 0 0 0 0.631 ac, 84.40% Impervious, Inflow Depth = 4.28" for 25-yr event 2.99 cfs @ 12.09 hrs, Volume= 0.225 af 2.99 cfs @ 12.09 hrs, Volume= 0.225 af, Atten=0%, Lag=0.1 2.99 cfs @ 12.09 hrs, Volume= 0.225 af 0.225 af 0.225 af, Atten= 0%, Lag= 0.0 min 0.225 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.94' @ 12.09 hrs Flood Elev= 218.90'

				Dev	
			#1	Device	
			#1 Primary	Routing	
			215.30'	Invert	
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0050 '/' Cc= 0.900	L= 101.0' CPP, projecting, no headwall, Ke= 0.900	215.30' 12.0" Round Culvert	Invert Outlet Devices	

Primary OutFlow Max=2.92 cfs @ 12.09 hrs HW=216.89'
—1=Culvert (Barrel Controls 2.92 cfs @ 3.71 fps) (Free Discharge)

Summary for Pond 23P: CB-1

Primary =	Outflow =	Inflow =	Inflow Area =
1.43 cfs @ 12.09 hrs, Volume=	1.43 cfs @ 12.09 hrs, Volume=	1.43 cfs @ 12.09 hrs, Volume=	0.307 ac, 83.76% Impervious, I
. 0.107 af	0.107 af, Atten= 0%, Lag= 0.0 min	1.43 cfs @ 12.09 hrs, Volume= 0.107 af	nflow Depth = 4.19" for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.36' @ 12.09 hrs Flood Elev= 218.60'

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Type III 24-hr 25-yr Rainfall=5.55"

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			#1	Device
			#1 Primary	Device Routing
			215.60'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.60' / 215.40' S= 0.0074 '/' Cc= 0:	L= 27.0' CPP, projecting, no headwall, Ke= 0.900	215.60' 12.0" Round Culvert	Invert Outlet Devices

.900

Primary OutFlow Max=1.40 cfs @ 12.09 hrs HW=216.35' (Free Discharge) —1=Culvert (Barrel Controls 1.40 cfs @ 3.06 fps)

Summary for Pond 24P: CB-2

Primary =	Outflow =	Inflow =	Inflow Area =
0.162 af	2.03 cfs @ 12.09 hrs, Volume= 0.162 af, Atten= 0%, Lag=	0.162 af	0.392 ac, 95.72% Impervious, Inflow Depth = 4.96" for 25-yr event
	Lag= 0.0 min		+

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.15' @ 12.09 hrs Flood Elev= 219.20'

	#1	Device
	#1 Primary	Device Routing
	216.20'	Invert
L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.40' S= 0.0400 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	216.20' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.98 cfs @ 12.09 hrs HW=217.13' (Free Discharge) —1=Culvert (Inlet Controls 1.98 cfs @ 2.60 fps)

Summary for Pond 25P: CB-3

Primary =	Outflow =	Inflow =	Inflow Area =
2.13 cfs @	2.13 cfs @	2.13 cfs @	0.565 ac,
2.13 cfs @ 12.09 hrs, Volume=) 12.09 hrs, Volume=) 12.09 hrs, Volume=	0.565 ac, 67.38% Impervious, Inflow Depth = 3.28'
0.155 af	 0.155 af, Atten= 0%, Lag= 0.0 min 	e 0.155 af	Inflow Depth = 3.28" for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.51' @ 12.09 hrs Flood Elev= 219.50'

			#1 Primary	Device Routing
			216.50'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 216.50' / 215.40' S= 0.0289 '/' Cc= 0.900	L= 38.0' CPP, projecting, no headwall, Ke= 0.900	216.50' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=2.09 cfs @ 12.09 hrs HW=217.49' (Free Discharge) —1=Culvert (Inlet Controls 2.09 cfs @ 2.67 fps)

Type III 24-hr 25-yr Rainfall=5.55"

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Summary for Pond 26P: DMH-1

Outflow Inflow Area = п п п 1.264 ac, 8 5.59 cfs @ 5.59 cfs @ 5.59 cfs @

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.73' @ 12.09 hrs Flood Elev= 218.90'

	#1	Device
	Primary	Device Routing
	215.30'	Invert
L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0104 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf	215.30' 18.0" Round Culvert	Outlet Devices

Primary OutFlow Max=5.47 cfs @ 12.09 hrs HW=216.70'
—1=Culvert (Inlet Controls 5.47 cfs @ 3.18 fps) (Free Discharge)

Summary for Pond 27P: CB-22

Outflow Primary Inflow Area = 11 11 П 0.515 ac,100.00% Impervious, Inflow Depth = 5.31"
2.73 cfs @ 12.09 hrs, Volume= 0.228 af
2.73 cfs @ 12.09 hrs, Volume= 0.228 af, Atte
2.73 cfs @ 12.09 hrs, Volume= 0.228 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.97' @ 12.08 hrs Flood Elev= 218.50'

			#1	Device	
			#1 Primary	Device Routing	
			215.50'	Invert	
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0039 '/' Cc= 0.900	L= 51.0' CPP, projecting, no headwall, Ke= 0.900	215.50' 12.0" Round Culvert	Invert Outlet Devices	

Primary OutFlow Max=2.66 cfs @ 12.09 hrs HW=216.92'
—1=Culvert (Barrel Controls 2.66 cfs @ 3.39 fps) (Free Discharge)

Summary for Pond 28P: DMH-16

Primary =	Outflow =	Inflow =	Inflow Area =
		2.73 cfs @ 12.09 hrs, Volume= 0.228 af	of low D
	1%, Lag= 0.0 min		25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.91' @ 12.09 hrs Flood Elev= 218.70'

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Type III 24-hr 25-yr Rainfall=5.55"

Device Routing Primary 215.20' **12.0"** Round Culvert
L= 160.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.20' / 214.60' S= 0.0037 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=2.66 cfs @ 12.09 hrs HW=216.83'
—1=Culvert (Barrel Controls 2.66 cfs @ 3.39 fps) (Free Discharge)

Summary for Pond 29P: CB-21

Inflow Outflow Primary Inflow Area = п 0.123 ac.100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 0.65 cfs @ 12.09 hrs, Volume= 0.054 af 0.65 cfs @ 12.09 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min 0.65 cfs @ 12.09 hrs, Volume= 0.054 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.66' @ 12.09 hrs Flood Elev= 219.20'

	#1	Device
	#1 Primary	Routing
	216.20'	Invert
L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.70' S= 0.0192 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	216.20' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.63 cfs @ 12.09 hrs HW=216.66' —1=Culvert (Inlet Controls 0.63 cfs @ 1.81 fps) (Free Discharge)

Summary for Pond 30P: DMH-15

Inflow Primary Outflow Inflow Area = 0.637 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 3.38 cfs @ 12.09 hrs, Volume= 0.282 af 3.38 cfs @ 12.09 hrs, Volume= 0.282 af, Atten= 0%, Lag= 0.0 min 3.38 cfs @ 12.09 hrs, Volume= 0.282 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.73' @ 12.09 hrs Flood Elev= 219.80'

Routing Primary 214.50' Invert 15.0" Round Culvert
L= 250.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 214.50' / 213.60' S= 0.0036 '/'
n= 0.013, Flow Area= 1.23 sf Outlet Devices

Primary OutFlow Max=3.29 cfs @ 12.09 hrs HW=215.71' **—1=Culvert** (Barrel Controls 3.29 cfs @ 3.45 fps) (Free Discharge)

Cc = 0.900

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Summary for Pond 31P: DMH-14

Primary Outflow Inflow Area = 1.468 ac, 9 7.66 cfs @ 7.66 cfs @ 7.66 cfs @ 7.66 cfs @ 97.47% Impervious, Inflow Depth = 5.13" for 25-yr event

12.09 hrs, Volume= 0.628 af

12.09 hrs, Volume= 0.628 af, Atten=0%, Lag= 0.0 min

12.09 hrs, Volume= 0.628 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.54' @ 12.09 hrs Flood Elev= 218.60'

	#	Device Routing
	#1 Primary	Routing
	213.50'	Invert
L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 213.50' / 212.50' S= 0.0164 '/ Cc= 0.900 n= 0.013, Flow Area= 1.77 sf	213.50' 18.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=7.46 cfs @ 12.09 hrs HW=215.48'
—1=Culvert (Inlet Controls 7.46 cfs @ 4.22 fps) (Free Discharge)

Summary for Pond 32P: CB-20

Outflow Inflow Area = Inflow = Primary 0 0 0 0.318 ac,100.00% Impervious, Inflow Depth = 5.31"
1.69 cfs @ 12.09 hrs, Volume= 0.141 af
1.69 cfs @ 12.09 hrs, Volume= 0.141 af, Atte
1.69 cfs @ 12.09 hrs, Volume= 0.141 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.32' @ 12.09 hrs Flood Elev= 218.50'

			#1	Device Routing	
			#1 Primary	Routing	
			215.50'	Invert	
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0167 '/' Cc= 0.900	L= 12.0' CPP, projecting, no headwall, Ke= 0.900	215.50' 12.0" Round Culvert	Outlet Devices	

Primary OutFlow Max=1.64 cfs @ 12.09 hrs HW=216.31'
—1=Culvert (Inlet Controls 1.64 cfs @ 2.42 fps) (Free Discharge)

Summary for Pond 33P: DMH-17

Inflow Area =	0.513 ac, 92.75% Impervious, Inflow	Depth = 4.80 " for 25-yr event
Inflow =	2.59 cfs @ 12.09 hrs, Volume=	0.205 af
Outflow =	2.59 cfs @ 12.09 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.1	0.205 af, Atten= 0%, Lag= 0.0 min
Primary =	2.59 cfs @ 12.09 hrs, Volume=	0.205 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.35' @ 12.09 hrs Flood Elev= 218.80'

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Type III 24-hr 25-yr Rainfall=5.55"

			#1	Device
			Primary	Device Routing
			215.10'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.10' / 213.60' S= 0.0083 '/' Cc= 0.900	L= 180.0' CPP, projecting, no headwall, Ke= 0.900	215.10' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=2.52 cfs @ 12.09 hrs HW=216.31' (Free Discharge) —1=Culvert (Inlet Controls 2.52 cfs @ 3.21 fps)

Summary for Pond 34P: CB-23

Primary =	Outflow =	Inflow =	Inflow Area =
1.40 cfs @ 12.09 hrs, Volume= 0.106 af	1.40 cfs @ 12.09 hrs, Volume= 0.106 af, Atten= 0%, Lag= 0.0 min	1.40 cfs @ 12.09 hrs, Volume= 0.106 af	0.288 ac, 87.12% Impervious, Inflow Depth = 4.41" for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.23' @ 12.09 hrs Flood Elev= 218.50'

Routing Primary 215.50' Invert 12.0" Round Culvert
L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0107 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=1.36 cfs @ 12.09 hrs HW=216.21'
—1=Culvert (Inlet Controls 1.36 cfs @ 2.27 fps) (Free Discharge)

Summary for Pond 35P: CB-24

Primary =	Outflow =	Inflow =	Inflow Area =
1.19 cfs @ 12.	1.19 cfs @ 12.	1.19 cfs @ 12.	0.224 ac,100.00
1.19 cfs @ 12.09 hrs, Volume=	09 hrs, Volume=	09 hrs, Volume=)% Impervious, Inf
0.099 af	0.099 af, Atten= 0%,	0.099 af	0.224 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr even
	en= 0%, Lag= 0.0 min		for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.16' @ 12.09 hrs Flood Elev= 218.50'

	#1	ice
	#1 Primary	ice Routing
	215.50'	Invert
L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0150 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.16 cfs @ 12.09 hrs HW=216.15'
—1=Culvert (Inlet Controls 1.16 cfs @ 2.16 fps) (Free Discharge)

Type III 24-hr 25-yr Rainfall=5.55"

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Type III 24-hr 25-yr Rainfall=5.55"

Outflow Inflow Area = П 0.446 ac,100.00% Impervious, Inflow Depth = 5.31"
2.36 cfs @ 12.09 hrs, Volume= 0.197 af
2.36 cfs @ 12.09 hrs, Volume= 0.197 af, Atto
2.36 cfs @ 12.09 hrs, Volume= 0.197 af Atten= 0%, Lag= 0.0 min for 25-yr event

Summary for Pond 37P: DMH-10

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.99' @ 12.09 hrs Flood Elev= 222.20'

10:0 Kodila Odivoit	1	- I	77
218 10' 15 0" Cound Culvert	218 10	#1 Drimary	#,
	0		
illyeit Outlet Devices	IIIVEIL	Device Routing	Device
0::=0+ 0::::000	-	0	

Primary OutFlow Max=2.30 cfs @ 12.09 hrs HW=218.97'
—1=Culvert (Inlet Controls 2.30 cfs @ 2.51 fps) (Free Discharge)

Summary for Pond 38P: CB-15

Outflow Primary Inflow Area = 0.0 П 0.043 ac,100.00% Impervious, Inflow Depth = 5.31" 0.23 cfs @ 12.09 hrs, Volume= 0.019 af 0.23 cfs @ 12.09 hrs, Volume= 0.019 af, Atte 0.23 cfs @ 12.09 hrs, Volume= 0.019 af 0.019 af 0.019 af, Atten= 0%, Lag= 0.0 min 0.019 af for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.46' @ 12.09 hrs Flood Elev= 236.20'

Primary 232.20 Invert 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=0.22 cfs @ 12.09 hrs HW=232.46'
—1=Culvert (Inlet Controls 0.22 cfs @ 1.37 fps) (Free Discharge)

Summary for Pond 39P: CB-16

Primary =	Outflow =	Inflow =	Inflow Area =
0.24 cfs @ 12.09 hrs, Volume= 0.020 af	0.24 cfs @ 12.09 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0	0.24 cfs @ 12.09 hrs, Volume= 0.020 af	0.046 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr even
	0 min		

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.47' @ 12.09 hrs Flood Elev= 236.20'

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Device Routing Primary 232.20' Outlet Devices

12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet/Outlet Invert= 232.20' / 231.70' S= 0.0333 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.23 cfs @ 12.09 hrs HW=232.47'
—1=Culvert (Inlet Controls 0.23 cfs @ 1.39 fps) (Free Discharge)

Summary for Pond 52P: CB-17

Inflow Outflow Primary Inflow Area = H H H 0.081 ac.100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 0.43 cfs @ 12.09 hrs, Volume= 0.036 af 0.43 cfs @ 12.09 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min 0.43 cfs @ 12.09 hrs, Volume= 0.036 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.77' @ 12.09 hrs Flood Elev= 251.40'

	#1	Device
	Primary	Device Routing
	247.40'	Invert
L= 18.0' CPP, projecting, no headwall, Ke= 0.900 inlet / Outlet Invert= 247.40' / 246.50' S= 0.0500 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	247.40' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.42 cfs @ 12.09 hrs HW=247.76'
—1=Culvert (Inlet Controls 0.42 cfs @ 1.62 fps) (Free Discharge)

Summary for Pond 53P: CB-18

Primary =	Outflow =	Inflow =	Inflow Area =
12.09 hrs, Volume= 0.035 af	0.42 cfs @ 12.09 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min	0.42 cfs @ 12.09 hrs, Volume= 0.035 af	0.080 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.77' @ 12.09 hrs Flood Elev= 251.40'

Routing Primary 247.40' Invert Outlet Devices

12.0" Round Culvert
L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 247.40' / 246.50' S= 0.0474 '/' n= 0.013, Flow Area= 0.79 sf (Free Discharge)

Cc = 0.900

Primary OutFlow Max=0.41 cfs @ 12.09 hrs HW=247.76'
—1=Culvert (Inlet Controls 0.41 cfs @ 1.62 fps)

Type III 24-hr 25-yr Rainfall=5.55"

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Summary for Pond 54P: DMH-13

Outflow Inflow Area = п п п 0.161 ac,100.00% Impervious, Inflow Depth = 5.31" 0.85 cfs @ 12.09 hrs, Volume= 0.071 af 0.85 cfs @ 12.09 hrs, Volume= 0.071 af, Atto 0.85 cfs @ 12.09 hrs, Volume= 0.071 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 246.94' @ 12.09 hrs Flood Elev= 250.20'

Routing Primary 246.40 **12.0" Round Culvert**L= 85.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 246.40' / 240.00' S= 0.0753 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Cc= 0.900

Primary OutFlow Max=0.83 cfs @ 12.09 hrs HW=246.93'
—1=Culvert (Inlet Controls 0.83 cfs @ 1.96 fps) (Free Discharge)

Summary for Pond 56P: DMH-12

Outflow Primary Inflow Area = П 11 11 0.161 ac,100.00% Impervious, Inflow Depth = 5.31" 0.85 cfs @ 12.09 hrs, Volume= 0.071 af 0.85 cfs @ 12.09 hrs, Volume= 0.071 af, Atte 0.85 cfs @ 12.09 hrs, Volume= 0.071 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 240.44' @ 12.09 hrs Flood Elev= 244.00'

			#1	Device
			#1 Primary	Device Routing
			239.90'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 239.90' / 231.70' S= 0.0745 '/' Cc= 0.900	L= 110.0' CPP, projecting, no headwall, Ke= 0.900	239.90' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.83 cfs @ 12.09 hrs HW=240.43'
—1=Culvert (Inlet Controls 0.83 cfs @ 1.96 fps) (Free Discharge)

Summary for Pond 58P: CB-13

Inflow Outflow Inflow Area = 0.32 cfs @ 0.32 cfs @ 0.32 cfs @ 0.060 ac,100.00% Impervious, Inflow Depth = 5.31" 0.32 cfs @ 12.09 hrs, Volume= 0.027 af 0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Atto 0.32 cfs @ 12.09 hrs, Volume= 0.027 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.22' @ 12.09 hrs Flood Elev= 221.90'

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Type III 24-hr 25-yr Rainfall=5.55"

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Device Routing Primary 218.90' 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.31 cfs @ 12.09 hrs HW=219.21' (Free Discharge) —1=Culvert (Inlet Controls 0.31 cfs @ 1.50 fps)

Summary for Pond 61P: DMH-11

Inflow Outflow Primary Inflow Area = H H H 0.249 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 1.32 cfs @ 12.09 hrs, Volume= 0.110 af 1.32 cfs @ 12.09 hrs, Volume= 0.110 af, Atten= 0%, Lag= 0.0 min 1.32 cfs @ 12.09 hrs, Volume= 0.110 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.30' @ 12.09 hrs Flood Elev= 235.70'

	#1	Device
	Primary	Routing
	231.60'	Invert
L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.60' / 218.20' S= 0.0677 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	231.60' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.29 cfs @ 12.09 hrs HW=232.29'
—1=Culvert (Inlet Controls 1.29 cfs @ 2.23 fps) (Free Discharge)

Summary for Pond 62P: CB-14

Outflow Inflow Primary Inflow Area = 0.136 ac,100.00% Impervious, Inflow Depth = 5.31" 0.72 cfs @ 12.09 hrs, Volume= 0.060 af 0.72 cfs @ 12.09 hrs, Volume= 0.060 af, Atto 0.72 cfs @ 12.09 hrs, Volume= 0.060 af 0.060 af, Atten= 0%, Lag= 0.0 min 0.060 af ο̈́ 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.39' @ 12.09 hrs Flood Elev= 221.90'

Routing Primary 218.90' Invert 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary OutFlow Max=0.70 cfs @ 12.09 hrs HW=219.38'
—1=Culvert (Inlet Controls 0.70 cfs @ 1.87 fps) (Free Discharge)

Cc = 0.900

Type III 24-hr 25-yr Rainfall=5.55"

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Summary for Pond 63P: DMH-4

Inflow Outflow Inflow Area = п п п 2.245 ac, 9 11.02 cfs @ 11.02 cfs @ 11.02 cfs @ 91.37% Impervious, Inflow Depth = 4.75" § 12.09 hrs, Volume= 0.888 af § 12.09 hrs, Volume= 0.888 af, Atta § 12.09 hrs, Volume= 0.888 af) 12.09 hrs, Volume=) 12.09 hrs, Volume=) 12.09 hrs, Volume= Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.94 @ 12.09 hrs Flood Elev= 222.20'

Routing Primary 218.10' 24.0" Round Culvert
L= 122.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.10' / 214.50' S= 0.0295 '/ n= 0.013, Flow Area= 3.14 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=10.74 cfs @ 12.09 hrs HW=219.90'
—1=Culvert (Inlet Controls 10.74 cfs @ 3.61 fps) (Free Discharge)

Summary for Pond 65P: DMH-8

Outflow Primary Inflow Area = П п п 0.909 ac, 7 3.93 cfs @ 3.93 cfs @ 3.93 cfs @ 78.68% Impervious, Inflow Depth = 3.92" § 12.09 hrs, Volume= 0.297 af § 12.09 hrs, Volume= 0.297 af, Atta § 12.09 hrs, Volume= 0.297 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.40' @ 12.09 hrs Flood Elev= 220.40'

Primary 214.80 Invert L= 215.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.80' / 214.20' S= 0.0028 '/' n= 0.013, Flow Area= 1.23 sf 15.0" Round Culvert Outlet Devices Cc = 0.900

Primary OutFlow Max=3.89 cfs @ 12.09 hrs HW=216.35'
—1=Culvert (Barrel Controls 3.89 cfs @ 3.26 fps) (Free Discharge)

Summary for Pond 66P: CB-6

Outflow Inflow Area = 0.134 ac,100.00% Impervious, Inflow Depth = 5.31" 0.71 cfs @ 12.09 hrs, Volume= 0.060 af 0.71 cfs @ 12.09 hrs, Volume= 0.060 af, Atto 0.71 cfs @ 12.09 hrs, Volume= 0.060 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.49 @ 12.09 hrs Flood Elev= 219.00'

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Device

Routing

Type III 24-hr 25-yr Rainfall=5.55"

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Outlet Devices

Primary 216.00' 12.0" Round Culvert
L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.50' S= 0.0208 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.69 cfs @ 12.09 hrs HW=216.48'
—1=Culvert (Inlet Controls 0.69 cfs @ 1.86 fps) (Free Discharge)

Summary for Pond 67P: CB-7

Inflow Outflow Primary Inflow Area = п 0.093 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 0.49 cfs @ 12.09 hrs, Volume= 0.041 af 0.49 cfs @ 12.09 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min 0.49 cfs @ 12.09 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.40' @ 12.09 hrs Flood Elev= 219.00'

	#1	Device
	Primary	Routing
	216.00'	Invert
L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.50' S= 0.0208 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	216.00' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.48 cfs @ 12.09 hrs HW=216.39'
—1=Culvert (Inlet Controls 0.48 cfs @ 1.68 fps) (Free Discharge)

Summary for Pond 68P: DMH-9

Outflow Inflow Primary Inflow Area = 0.909 ac, 7 3.93 cfs @ 3.93 cfs @ 3.93 cfs @ 78.68% Impervious, Inflow Depth = 3.92" § 12.09 hrs, Volume= 0.297 af § 12.09 hrs, Volume= 0.297 af, Att § 12.09 hrs, Volume= 0.297 af 0.297 af, Atten= 0%, Lag= 0.0 min 0.297 af ο̈́ 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.15' @ 12.10 hrs Flood Elev= 218.70'

	#1 Primary	ice Routing
	215.40'	Invert
L= 190.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.40' / 214.90' S= 0.0026 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf	215.40' 15.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=3.77 cfs @ 12.09 hrs HW=217.08'
—1=Culvert (Barrel Controls 3.77 cfs @ 3.07 fps) (Free Discharge)

Type III 24-hr 25-yr Rainfall=5.55"

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Summary for Pond 69P: CB-11

Outflow Inflow Area = П п п 0.107 ac,100.00% Impervious, Inflow Depth = 5.31" 0.57 cfs @ 12.09 hrs, Volume= 0.047 af 0.57 cfs @ 12.09 hrs, Volume= 0.047 af, Atto 0.57 cfs @ 12.09 hrs, Volume= 0.047 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.06' @ 12.09 hrs Flood Elev= 218.60'

Primary Routing 215.60 12.0" Round Culvert

L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' /215.50' S= 0.0067 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=0.55 cfs @ 12.09 hrs HW=216.06'
—1=Culvert (Barrel Controls 0.55 cfs @ 2.31 fps) (Free Discharge)

Summary for Pond 70P: CB-12

Outflow Primary Inflow Area = н н П 0.802 ac, 7 3.36 cfs @ 3.36 cfs @ 3.36 cfs @ 75.84% Impervious, Inflow Depth = 3.73" 12.09 hrs, Volume= 0.250 af 12.09 hrs, Volume= 0.250 af, Atta 12.09 hrs, Volume= 0.250 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.37' @ 12.09 hrs Flood Elev= 218.60'

	#1	Device
	#1 Primary	Routing
	215.60'	Invert
L= 15.0° CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60° / 215.50° S= 0.0067 ′/° Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.60' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=3.29 cfs @ 12.09 hrs HW=217.31'
—1=Culvert (Inlet Controls 3.29 cfs @ 4.19 fps) (Free Discharge)

Summary for Pond 71P: CB-8

Primary =	Outflow =	Inflow =	Inflow Area =
0.93 cfs @ 12.09 hrs, Volume= 0.078 af	0.93 cfs @ 12.09 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0	0.93 cfs @ 12.09 hrs, Volume= 0.078 af	0.175 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event
	≣.		

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.10' @ 12.09 hrs Flood Elev= 218.50'

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Type III 24-hr 25-yr Rainfall=5.55"

Device Routing Primary 215.50' Outlet Devices

12.0" Round CulvertL= 32.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0062 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.91 cfs @ 12.09 hrs HW=216.09'
—1=Culvert (Barrel Controls 0.91 cfs @ 2.72 fps) (Free Discharge)

Summary for Pond 72P: CB-9

Inflow Outflow Primary Inflow Area = 11 11 11 0.165 ac.100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 0.88 cfs @ 12.09 hrs, Volume= 0.073 af 0.88 cfs @ 12.09 hrs, Volume= 0.073 af, Atten= 0%, Lag= 0.0 min 0.88 cfs @ 12.09 hrs, Volume= 0.073 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.09' @ 12.09 hrs Flood Elev= 218.50'

Device Routing Primary 215.50' Invert 12.0" Round Culvert
L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/' Outlet Devices Cc = 0.900

Primary OutFlow Max=0.85 cfs @ 12.09 hrs HW=216.08'
—1=Culvert (Barrel Controls 0.85 cfs @ 2.62 fps) (Free Discharge)

n= 0.013, Flow Area= 0.79 sf

Summary for Pond 73P: DMH-6

Outflow Primary Inflow Inflow Area = 0.340 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 1.81 cfs @ 12.09 hrs, Volume= 0.151 af 1.81 cfs @ 12.09 hrs, Volume= 0.151 af, Atten= 0%, Lag= 0.0 min 1.81 cfs @ 12.09 hrs, Volume= 0.151 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.13' @ 12.09 hrs Flood Elev= 219.10'

Routing Primary 215.20' Invert **12.0" Round Culvert**L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.20' / 214.80' S= 0.0042 / n= 0.013, Flow Area= 0.79 sf Outlet Devices S= 0.0042 '/'

Cc= 0.900

Primary OutFlow Max=1.76 cfs @ 12.09 hrs HW=216.12'
—1=Culvert (Barrel Controls 1.76 cfs @ 3.06 fps) (Free Discharge)

Type III 24-hr 25-yr Rainfall=5.55"

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Summary for Pond 77P: DMH-7

Outflow Inflow Area = 0.323 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-yr event 1.71 cfs @ 12.09 hrs, Volume= 0.143 af 1.71 cfs @ 12.09 hrs, Volume= 0.143 af, Atten=0%, Lag=0.0 min 1.71 cfs @ 12.09 hrs, Volume= 0.143 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.44' @ 12.09 hrs Flood Elev= 220.20'

Primary 215.70 15.0" Round Culvert
L= 181.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.70' / 214.80' S= 0.0050 '/
n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=1.67 cfs @ 12.09 hrs HW=216.43'
L1=Culvert (Barrel Controls 1.67 cfs @ 3.23 fps) (Free Discharge)

Summary for Pond 78P: CB-19

Outflow Primary Inflow Area = П 11 11 0.122 ac,100.00% Impervious, Inflow Depth = 5.31" 0.65 cfs @ 12.09 hrs, Volume= 0.054 af 0.65 cfs @ 12.09 hrs, Volume= 0.054 af, Atte 0.65 cfs @ 12.09 hrs, Volume= 0.054 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.51' @ 12.09 hrs Flood Elev= 219.00'

Primary 216.00' Invert 12.0" Round Culvert n= 0.013, Flow Area= 0.79 sf L= 49.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0041 '/' Outlet Devices Cc = 0.900

Primary OutFlow Max=0.63 cfs @ 12.09 hrs HW=216.50' —1=Culvert (Barrel Controls 0.63 cfs @ 2.32 fps) (Free Discharge)

Summary for Pond 79P: CB-10

Outflow Inflow Area = 1.06 cfs @ 1.06 cfs @ 1.06 cfs @ 0.200 ac,100.00% Impervious, Inflow Depth = 5.31"
1.06 cfs @ 12.09 hrs, Volume= 0.089 af
1.06 cfs @ 12.09 hrs, Volume= 0.089 af, Att
1.06 cfs @ 12.09 hrs, Volume= 0.089 af Atten= 0%, Lag= 0.0 min for 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.64 @ 12.09 hrs Flood Elev= 219.00'

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Type III 24-hr 25-yr Rainfall=5.55"

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Device Routing Primary 216.00' **12.0" Round Culvert**L= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0069 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=1.03 cfs @ 12.09 hrs HW=216.63'
—1=Culvert (Barrel Controls 1.03 cfs @ 2.84 fps) (Free Discharge)

Summary for Pond 80P: DMH-5

Inflow Outflow Primary Inflow Area = 11 11 11 0.663 ac,100.00% Impervious, Inflow Depth = 5.31" for 25-3.52 cfs @ 12.09 hrs, Volume= 0.294 af 3.52 cfs @ 12.09 hrs, Volume= 0.294 af, Atten= 0%, 3.52 cfs @ 12.09 hrs, Volume= 0.294 af for 25-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.88' @ 12.09 hrs Flood Elev= 219.10'

	#1	Device
	Primary	Routing
	214.70'	Invert
L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.70' / 214.20' S= 0.0064 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf	214.70' 15.0" Round Culvert	Outlet Devices

Primary OutFlow Max=3.43 cfs @ 12.09 hrs HW=215.86' —1=Culvert (Inlet Controls 3.43 cfs @ 2.89 fps) (Free Discharge)

Summary for Pond 81P: CB-5

Outflow Primary Inflow Inflow Area = 0.287 ac, 8 1.41 cfs @ 1.41 cfs @ 1.41 cfs @ 88.82% Impervious, Inflow Depth = 4.52" 12.09 hrs, Volume= 0.108 af 12.09 hrs, Volume= 0.108 af, Att 0.108 af 0.108 af Atten= 0%, Lag= 0.0 min ο̈́ 25-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.84' @ 12.09 hrs Flood Elev= 219.00'

Routing Primary 216.00' Invert **12.0" Round Culvert**L= 31.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 / n= 0.013, Flow Area= 0.79 sf Outlet Devices S= 0.0032 '/' Cc = 0.900

Primary OutFlow Max=1.37 cfs @ 12.09 hrs HW=216.83'
—1=Culvert (Barrel Controls 1.37 cfs @ 2.69 fps) (Free Discharge)

Inflow Outflow

0.287 ac, 8: 1.41 cfs @ 1.41 cfs @ 1.41 cfs @

Summary for Pond 82P: DMH-3

Inflow Area =

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.84' @ 12.09 hrs Flood Elev= 218.90'

Routing Primary

216.00'

Outlet Devices

12.0" Round Culvert
L= 31.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 '/' n= 0.013, Flow Area= 0.79 sf

Cc= 0.900

Type III 24-hr 25-yr Rainfall=5.55"

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Type III 24-hr 100-yr Rainfall=7.81"

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment9S: APT. BLDG. A Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=3.06 cfs 0.258 af

Subcatchment 16S: APT. BLDG. B Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=3.06 cfs 0.258 af

Subcatchment 21S: A.1 Subcatchment 18S: APT. BLDG. C Runoff Area=17,818 sf 100.00% Impervious Runoff Depth=7.57" Runoff Area=20,195 sf 5.87% Impervious Runoff Depth=1.35" Tc=10.0 min CN=42 Runoff=0.46 cfs 0.052 af Tc=6.0 min CN=98 Runoff=3.06 cfs 0.258 af

Subcatchment 22S: A.2 Runoff Area=13,850 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=2.38 cfs 0.201 af

Subcatchment 23S: A.3 Subcatchment 24S: A.4 Runoff Area=5,341 sf 100.00% Impervious Runoff Depth=7.57" Runoff Area=9,767 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.92 cfs 0.077 af Tc=6.0 min CN=98 Runoff=1.68 cfs 0.141 af

Subcatchment 25S: A.5 Runoff Area=22,426 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=3.85 cfs 0.325 af

Subcatchment 26S: B.6 Runoff Area=40,090 sf 22.31% Impervious Runoff Depth=2.14" Tc=6.0 min UI Adjusted CN=50 Runoff=2.07 cfs 0.164 af

Subcatchment 27S: A.6 Runoff Area=12,567 sf 87.12% Impervious Runoff Depth=6.62" Tc=6.0 min CN=90 Runoff=2.05 cfs 0.159 af

Runoff Area=30,829 sf 0.88% Impervious Runoff Depth=1.08" Tc=6.0 min UI Adjusted CN=39 Runoff=0.54 cfs 0.064 af

Subcatchment 28S: B.1

Subcatchment 29S: B.2 Runoff Area=13,381 sf 83.76% Impervious Runoff Depth=6.38" Tc=6.0 min CN=88 Runoff=2.13 cfs 0.163 af

Subcatchment31S: B.4 Subcatchment 30S: B.3 Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=7.21" Tc=6.0 min CN=95 Runoff=2.90 cfs 0.235 af Runoff Area=17,060 sf 95.72% Impervious Runoff Depth=7.21" Tc=6.0 min CN=95 Runoff=2.90 cfs 0.235 af

Subcatchment 33S: B.7 Subcatchment32S: B.5 Runoff Area=290,511 sf 2.55% Impervious Runoff Depth=2.66" Runoff Area=24,627 sf 67.38% Impervious Runoff Depth=5.33" Tc=6.0 min CN=79 Runoff=3.42 cfs 0.251 af Tc=30.0 min CN=55 Runoff=11.17 cfs 1.476 af

Summary for Link 20L: DP-A

Primary OutFlow Max=1.37 cfs @ 12.09 hrs HW=216.83' (Free Discharge) —1=Culvert (Barrel Controls 1.37 cfs @ 2.69 fps)

Inflow Area = 30.660 ac, 24.72% Impervious, Inflow Depth = 1.03" for 25-yr event 22.80 cfs @ 12.20 hrs, Volume= 2.627 af 22.80 cfs @ 12.20 hrs, Volume= 2.627 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

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Type III 24-hr 100-yr Rainfall=7.81"

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Subcatchment 34S: B.8	Runoff Area=12,484 sf 88.82% Impervious Runoff Depth=6.74" Tc=6.0 min CN=91 Runoff=2.05 cfs 0.161 af
Subcatchment 35S: C.1	Runoff Area=236,308 sf 9.34% Impervious Runoff Depth=2.98" Tc=20.0 min UI Adjusted CN=58 Runoff=12.31 cfs 1.345 af
Subcatchment 36S: C.2	Runoff Area=22,516 sf 83.62% Impervious Runoff Depth=6.38" Tc=6.0 min CN=88 Runoff=3.59 cfs 0.275 af
Subcatchment 37S: C.3	Runoff Area=12,429 sf 61.75% Impervious Runoff Depth=4.87" Tc=6.0 min CN=75 Runoff=1.59 cfs 0.116 af
Subcatchment 38S: C.4	Runoff Area=4,655 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.80 cfs 0.067 af
Subcatchment 39S: C.5	Runoff Area=5,857 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=1.01 cfs 0.085 af
Subcatchment 40S: C.6	Runoff Area=4,047 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.70 cfs 0.059 af
Subcatchment 41S: C.7	Runoff Area=7,188 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=1.24 cfs 0.104 af
Subcatchment 42S: C.8	Runoff Area=7,639 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=1.31 cfs 0.111 af
Subcatchment 43S: C.9	Runoff Area=8,732 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=1.50 cfs 0.126 af
Subcatchment 44S: C.10	Runoff Area=5,326 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.92 cfs 0.077 af
Subcatchment 45S: C.11	Runoff Area=2,631 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.45 cfs 0.038 af
Subcatchment 46S: C.12	Runoff Area=5,910 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=1.02 cfs 0.086 af
Subcatchment 47S: C.13	Runoff Area=1,987 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.34 cfs 0.029 af
Subcatchment 48S: C.14	Runoff Area=1,885 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.32 cfs 0.027 af
Subcatchment 49S: C.15	Runoff Area=3,487 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.60 cfs 0.051 af
Subcatchment 50S: C.16	Runoff Area=3,508 sf 100.00% Impervious Runoff Depth=7.57" Tc=6.0 min CN=98 Runoff=0.60 cfs 0.051 af
Subcatchment 51S: D.1	Runoff Area=402,771 sf 0.38% Impervious Runoff Depth=1.26"

Tc=20.0 min CN=41 Runoff=6.61 cfs 0.970 af

Pond 30P: DMH-15 Pond 29P: CB-21 Pond 28P: DMH-16 Pond 27P: CB-22 Pond 26P: DMH-1 Pond 25P: CB-3 Pond 24P: CB-2 Pond 23P: CB-1 Pond 22P: DMH-2 Pond 21P: CB-4 Pond 19P: STONE RECHARGE TRENCH Peak Elev=221.01' Storage=1,942 cf Inflow=3.06 cfs 0.258 af Discarded=0.17 cfs 0.188 af Primary=2.83 cfs 0.070 af Outflow=3.00 cfs 0.258 af Pond 17P: STONE RECHARGE TRENCH Peak Elev=221.01' Storage=1,942 cf Inflow=3.06 cfs 0.258 af Discarded=0.17 cfs 0.188 af Primary=2.83 cfs 0.070 af Outflow=3.00 cfs 0.258 af Pond 12P: STONE RECHARGE TRENCH Peak Elev=221.01' Storage=1,942 cf Inflow=3.06 cfs 0.258 af Discarded=0.17 cfs 0.188 af Primary=2.83 cfs 0.070 af Outflow=3.00 cfs 0.258 af Pond 7P: Infiltration Basin #1 Peak Elev=215.63' Storage=10,175 cf Inflow=21.92 cfs 2.929 af Discarded=1.05 cfs 1.184 af Primary=19.17 cfs 1.745 af Outflow=20.22 cfs 2.929 af Pond 5P: Wet Basin Pond 4P: Infiltration Basin #2 Subcatchment 52S: B.9 1#2 Peak Elev=214.65' Storage=17,701 cf Inflow=11.20 cfs 0.956 af Discarded=0.99 cfs 0.956 af Primary=0.00 cfs 0.000 af Outflow=0.99 cfs 0.956 af Peak Elev=218.28' Inflow=4.42 cfs 0.341 af 12.0" Round Culvert n=0.013 L=101.0' S=0.0050 '/' Outflow=4.42 cfs 0.341 af Peak Elev=216.67' Inflow=4.77 cfs 0.402 af 15.0" Round Culvert n=0.013 L=250.0' S=0.0036'/' Outflow=4.77 cfs 0.402 af Peak Elev=218.18' Inflow=3.85 cfs 0.325 af 12.0" Round Culvert n=0.013 L=160.0' S=0.0037'/' Outflow=3.85 cfs 0.325 af 12.0" Round Culvert n=0.013 L=27.0' S=0.0074 /' Outflow=2.13 cfs 0.163 af Peak Elev=217.65' Inflow=3.85 cfs 0.325 af 12.0" Round Culvert n=0.013 L=51.0' S=0.0039 '/' Outflow=3.85 cfs 0.325 af Peak Elev=217.63' Inflow=8.44 cfs 0.650 af 18.0" Round Culvert n=0.013 L=48.0' S=0.0104 '/' Outflow=8.44 cfs 0.650 af Peak Elev=218.31' Inflow=3.42 cfs 0.251 af 12.0" Round Culvert n=0.013 L=38.0' S=0.0289 // Outflow=3.42 cfs 0.251 af Peak Elev=217.64' Inflow=2.90 cfs 0.235 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0400 '/' Outflow=2.90 cfs 0.235 af Peak Elev=216.63' Inflow=2.36 cfs 0.180 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054'/' Outflow=2.36 cfs 0.180 af Peak Elev=216.76' Inflow=0.92 cfs 0.077 af Round Culvert n=0.013 L=26.0' S=0.0192 '/' Outflow=0.92 cfs 0.077 af Peak Elev=215.73' Storage=20,903 cf Inflow=22.50 cfs 2.646 af Outflow=13.02 cfs 2.646 af Runoff Area=15,018 sf 80.72% Impervious Runoff Depth=6.26" Tc=6.0 min CN=87 Runoff=2.36 cfs 0.180 af

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Pond 31P: DMH-14	Peak Elev=216.86' Inflow=10.88 cfs 0.903 af 18.0" Round Culvert n=0.013 L=61.0' S=0.0164'/ Outflow=10.88 cfs 0.903 af
Pond 32P: CB-20	Peak Elev=216.63' Inflow=2.38 cfs 0.201 af 12.0" Round Culvert n=0.013 L=12.0' S=0.0167 // Outflow=2.38 cfs 0.201 af
Pond 33P: DMH-17	Peak Elev=217.21' Inflow=3.73 cfs 0.301 af 12.0" Round Culvert n=0.013 L=180.0' S=0.0083 '/' Outflow=3.73 cfs 0.301 af
Pond 34P: CB-23	Peak Elev=216.46' Inflow=2.05 cfs 0.159 af 12.0" Round Culvert n=0.013 L=28.0' S=0.0107 '/' Outflow=2.05 cfs 0.159 af
Pond 35P: CB-24	Peak Elev=216.32' Inflow=1.68 cfs 0.141 af 12.0" Round Culvert n=0.013 L=20.0' S=0.0150 '/' Outflow=1.68 cfs 0.141 af
Pond 37P: DMH-10	Peak Elev=219.23' Inflow=3.34 cfs 0.281 af 15.0" Round Culvert n=0.013 L=122.0' S=0.0295 '/' Outflow=3.34 cfs 0.281 af
Pond 38P: CB-15	Peak Elev=232.52' Inflow=0.32 cfs 0.027 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/' Outflow=0.32 cfs 0.027 af
Pond 39P: CB-16	Peak Elev=232.53' Inflow=0.34 cfs 0.029 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0333'/' Outflow=0.34 cfs 0.029 af
Pond 52P: CB-17	Peak Elev=247.84' Inflow=0.60 cfs 0.051 af 12.0" Round Culvert n=0.013 L=18.0' S=0.0500 '/' Outflow=0.60 cfs 0.051 af
Pond 53P: CB-18	Peak Elev=247.84' Inflow=0.60 cfs 0.051 af 12.0" Round Culvert n=0.013 L=19.0' S=0.0474'/' Outflow=0.60 cfs 0.051 af
Pond 54P: DMH-13	Peak Elev=247.06' Inflow=1.20 cfs 0.101 af 12.0" Round Culvert n=0.013 L=85.0' S=0.0753'/' Outflow=1.20 cfs 0.101 af
Pond 56P: DMH-12	Peak Elev=240.56' Inflow=1.20 cfs 0.101 af 12.0" Round Culvert n=0.013 L=110.0' S=0.0745'/' Outflow=1.20 cfs 0.101 af
Pond 58P: CB-13	Peak Elev=219.28' Inflow=0.45 cfs 0.038 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467 '/' Outflow=0.45 cfs 0.038 af
Pond 61P: DMH-11	Peak Elev=232.49' Inflow=1.87 cfs 0.157 af 12.0" Round Culvert n=0.013 L=198.0' S=0.0677 '/' Outflow=1.87 cfs 0.157 af
Pond 62P: CB-14	Peak Elev=219.50' Inflow=1.02 cfs 0.086 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0467 '/' Outflow=1.02 cfs 0.086 af
Pond 63P: DMH-4	Peak Elev=220.88' Inflow=15.98 cfs 1.301 af 24.0" Round Culvert n=0.013 L=122.0' S=0.0295 '/' Outflow=15.98 cfs 1.301 af
Pond 65P: DMH-8	Peak Elev=217.99' Inflow=5.98 cfs 0.458 af 15.0" Round Culvert n=0.013 L=215.0' S=0.0028'/' Outflow=5.98 cfs 0.458 af
Pond 66P: CB-6	Peak Elev=216.59' Inflow=1.01 cfs 0.085 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208'/' Outflow=1.01 cfs 0.085 af

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Link 20L: DP-A Pond 82P: DMH-3 Pond 81P: CB-5 Pond 80P: DMH-5 Pond 79P: CB-10 Pond 78P: CB-19 Pond 77P: DMH-7 Pond 73P: DMH-6 Pond 72P: CB-9 Pond 71P: CB-8 Pond 70P: CB-12 Pond 69P: CB-11 Pond 68P: DMH-9 Pond 67P: CB-7 Total Runoff Area = 30.660 ac Runoff Volume = 8.275 af Average Runoff Depth = 3.24" 75.28% Pervious = 23.079 ac 24.72% Impervious = 7.580 ac Peak Elev=216.61' Inflow=2.42 cfs 0.204 af 15.0" Round Culvert n=0.013 L=181.0' S=0.0050 '/' Outflow=2.42 cfs 0.204 af Peak Elev=218.48' Inflow=5.98 cfs 0.458 af 15.0" Round Culvert n=0.013 L=190.0' S=0.0026 '/' Outflow=5.98 cfs 0.458 af Peak Elev=216.17' Inflow=0.80 cfs 0.067 af 12.0" Round Culvert n=0.013 L=15.0' S=0.0067 // Outflow=0.80 cfs 0.067 af Peak Elev=217.08' Inflow=2.05 cfs 0.161 af 12.0" Round Culvert n=0.013 L=31.0' S=0.0032 '/' Outflow=2.05 cfs 0.161 af Peak Elev=216.45' Inflow=4.96 cfs 0.418 af 15.0" Round Culvert n=0.013 L=78.0' S=0.0064 '/' Outflow=4.96 cfs 0.418 af Peak Elev=216.79' Inflow=1.50 cfs 0.126 af 12.0" Round Culvert n=0.013 L=29.0' S=0.0069'/' Outflow=1.50 cfs 0.126 af Peak Elev=216.62' Inflow=0.92 cfs 0.077 af 12.0" Round Culvert n=0.013 L=49.0' S=0.0041'/' Outflow=0.92 cfs 0.077 af Peak Elev=216.59' Inflow=2.55 cfs 0.215 af 12.0" Round Culvert n=0.013 L=96.0' S=0.0042'/' Outflow=2.55 cfs 0.215 af Peak Elev=216.22' Inflow=1.24 cfs 0.104 af 12.0" Round Culvert n=0.013 L=37.0' S=0.0054 // Outflow=1.24 cfs 0.104 af Peak Elev=216.24' Inflow=1.31 cfs 0.111 af 12.0' Round Culvert n=0.013 L=32.0' S=0.0062'/' Outflow=1.31 cfs 0.111 af 12.0" Peak Elev=216.48' Inflow=0.70 cfs 0.059 af 12.0" Round Culvert n=0.013 L=24.0' S=0.0208 '/' Outflow=0.70 cfs 0.059 af Peak Elev=217.08' Inflow=2.05 cfs 0.161 af 12.0" Round Culvert n=0.013 L=31.0' S=0.0032'/' Outflow=2.05 cfs 0.161 af Peak Elev=219.10' Inflow=5.18 cfs 0.391 af Round Culvert n=0.013 L=15.0' S=0.0067'/' Outflow=5.18 cfs 0.391 af Inflow=38.91 cfs 5.572 af Primary=38.91 cfs 5.572 af

Type III 24-hr 100-yr Rainfall=7.81"

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Type III 24-hr 100-yr Rainfall=7.81"

Summary for Subcatchment 9S: APT. BLDG. A

Runoff 3.06 cfs @ 12.09 hrs, Volume= 0.258 af, Depth= 7.57

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

6.0	Tc Length (min) (feet)	17,818	17,818	Area (sf)
		00		<u>τ</u>
	Slope (ft/ft)	10	8 R	De
	Velocity (ft/sec)	0.00% lm	98 Roofs, HSG A	Description
	Capacity (cfs)	100.00% Impervious Area	Α	
Direct Entry,	Description	rea		

Summary for Subcatchment 16S: APT. BLDG. B

3.06 cfs @ 12.09 hrs, Volume= 0.258 af, Depth= 7.57"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

6.0 Direct Entry,	To Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	17,818 100.00% Impervious Area	17,818 98 Roofs, HSG A	Area (sf) CN Description
ry,				

Summary for Subcatchment 18S: APT. BLDG. C

Runoff 3.06 cfs @ 12.09 hrs, Volume= 0.258 af, Depth= 7.57

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

6.0	(mi			
0	c Length n) (feet)	17,818	17,818	Area (sf)
	Slope (ft/ft)		98) CN I
	Velocity (ft/sec)	100.00% Impervious Area	98 Roofs, HSG A	Description
	Capacity (cfs)	າpervious Ar	βA	
Direct Entry,	Description	rea		

Summary for Subcatchment 21S: A.1

0.46 cfs @ 12.18 hrs, Volume= 0.052 af, Depth= 1.35'

Runoff

П

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

P00 P	Unconnected pavement, HSG A
	ient, HSG A
	pavement, HSG A
	cted pavement, HSG A
Woods, Good, HSG A	

Summary for Subcatchment 22S: A.2

Runoff

П

2.38 cfs @ 12.09 hrs, Volume=

0.201 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

	l		l	l
6.0	Tc (min)			⊳
	Tc Length (min) (feet)	13,850 13,850	12,935 915	rea (sf)
	Slope (ft/ft)	98	98 98	CN
	Velocity (ft/sec	Weighted Average 100.00% Impervious Area	98 Paved parking, HSG A 98 Roofs, HSG A	Area (sf) CN Description
	Capacity (cfs)	verage ıpervious Ar	ing, HSG A A	
Direct Entry,	Description	Vrea		

Summary for Subcatchment 23S: A.3

Runoff 1.68 cfs @ 12.09 hrs, Volume= 0.141 af, Depth= 7.57"

		ı
9,767	9,767	Area (sf)
	98	S
100.00% Impervious Area	Paved parking, HSG A	Description

Type III 24-hr 100-yr Rainfall=7.81"

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Direct Entry					60
	(cfs)	(ft/sec)	(ft/f	(feet)	(min)
Description	Capacity	e Velocity (Slop	Tc Length	Tc

Summary for Subcatchment 24S: A.4

Runoff П 0.92 cfs @ 12.09 hrs, Volume= 0.077 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Direct Entry,				6.0
(cfs)	(ft/sec)	(ft/ft)	(feet)	(min)
Capacity Description	Velocity	Slope	Length	Tc
ervious Area	100.00% Impervious Area		5,341	
rage	Weighted Average	98	5,341	
	Roofs, HSG A	98	5,114	
,, HSG A	Paved parking, HSG A	98	227	
	Description	S	Area (sf)	_

Summary for Subcatchment 25S: A.5

Runoff 3.85 cfs @ 12.09 hrs, Volume= 0.325 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

6.0	(mii			
.0	Tc Length (min) (feet)	22,426	22,426	Area (sf)
	Slope (ft/ft)		98	CN
	Velocity (ft/sec)	100.00% Impervious Area	98 Paved parking, HSG A	CN Description
	Capacity (cfs)	npervious A	ing, HSG A	
Direct Entry,	Description	vrea		

Summary for Subcatchment 26S: B.6

2.07 cfs @ 12.10 hrs, Volume= 0.164 af, Depth= 2.14"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Type III 24-hr 100-yr Rainfall=7.81"

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Summary for Subcatchment 27S: A.6

2.05 cfs @ 12.09 hrs, Volume= 0.159 af, Depth= 6.62"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

6.0	Tc Length (min) (feet)	948	10,948	1,619	12,567	1,117	948	1,619	8,883	Area (sf)
	Slope (ft/ft)				90	98	98	39	98	S
Direct Entry,	pe Velocity Capacity Description /ft) (ft/sec) (cfs)	8.66% Unconnected	87.12% Impervious Area	12.88% Pervious Area	Weighted Average	Roofs, HSG A	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	CN Description

Summary for Subcatchment 28S: B.1

Runoff П 0.54 cfs @ 12.13 hrs, Volume= 0.064 af, Depth= 1.08"

270	30,559 370	40	270 98	30,559 39	Area (sf) CN /
		39			<u>A</u>
100.00% Unconnected	99.12% Pervious Area	Weighted Average, UI Adjusted	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Description

Type III 24-hr 100-yr Rainfall=7.81"

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Type III 24-hr 100-yr Rainfall=7.81"

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T_c Length (feet) Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)

₽
Direct E
intry
•

Summary for Subcatchment 29S: B.2

Runoff п 2.13 cfs @ 12.09 hrs, Volume=

0.163 af, Depth= 6.38'

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.31"

Direct Entry,				6.0
(cfs)	(ft/sec)	(ft/ft)	(feet)	(min)
Capacity Description	Velocity	Slope	Length	Tc
nnected	17.82% Unconnected		1,997	
rvious Area	83.76% Impervious Area		11,208	
ious Area	16.24% Pervious Area		2,173	
erage	Weighted Average	88	13,381	
g, HSG A	Paved parking, HSG A	98	9,211	
Unconnected pavement, HSG A	Unconnected	98	1,997	
>75% Grass cover, Good, HSG A	>75% Grass	39	2,173	
	CN Description	S	Area (sf)	,

Summary for Subcatchment 30S: B.3

2.90 cfs @ 12.09 hrs, Volume=

0.235 af, Depth= 7.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Summary for Subcatchment 31S: B.4

Runoff 2.90 cfs @ 12.09 hrs, Volume=

0.235 af, Depth= 7.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Tc (min) 6.0 17,060 731 16,329 2,575 731 2,575 13,754 Slope (ft/ft) 98 98 >75% Grass cover, Good, HSG A Unconnected pavement, HSG A Paved parking, HSG A 95.72% Impervious Area 15.77% Unconnected Weighted Average 4.28% Pervious Area Description Velocity (ft/sec) Capacity Description (cfs) Direct Entry,

Summary for Subcatchment 32S: B.5

3.42 cfs @ 12.09 hrs, Volume= 0.251 af, Depth= 5.33'

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

nected Capacity Description (cfs) Direct Entry,	7.98% Impervious Area 7.98% Unconnected Velocity Capacity [(ff/sec) (cfs)	Slope (ft/ft)	16,593 1,324 Length (feet)	Тс (min) 6.0
erage ious Area	Weighted Average 32.62% Pervious Area	79	24,627 8,034	
Unconnected pavement, HSG A Roofs, HSG A	Unconnected p Roofs, HSG A	98 98	1,324 6,653	
Paved parking, HSG A >75% Grass cover, Good, HSG A	Paved parking, HSG A >75% Grass cover, Go	39	8,616 8,034	
	Description	CN	Area (sf)	\

Summary for Subcatchment 33S: B.7

Runoff П 11.17 cfs @ 12.45 hrs, Volume= 1.476 af, Depth= 2.66"

Type III 24-hr 100-yr Rainfall=7.81"

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Direct Entry,				30.0
(cfs)) (ft/sec)	(ft/ft)	(feet)	(min)
Capacity Description	Velocity	Slope	Length	Tc
nected	26.01% Unconnected		1,925	
us Area	2.55% Impervious Area		7,400	
ıs Area	97.45% Pervious Area		283,111	
age	Weighted Average	55	290,511	
	Roofs, HSG A	98	5,475	
Unconnected pavement, HSG C	Unconnected p	~	319	
Jnconnected pavement, HSG A	Unconnected p	98	1,606	
HSG D	Woods, Good, HSG D	77	4,399	
HSG C	Woods, Good, HSG C	70	15,779	
HSG A	Woods, Good,	30	27,194	
>75% Grass cover, Good, HSG D	>75% Grass co	80	9,046	
>75% Grass cover, Good, HSG C	>75% Grass co	74	97,286	
>75% Grass cover, Good, HSG A	>75% Grass co	39	129,407	
	Description	CN	Area (sf)	Þ

Summary for Subcatchment 34S: B.8

Runoff 2.05 cfs @ 12.09 hrs, Volume= 0.161 af, Depth= 6.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

	ı					ı			ı
6.0	(min)								₽
	Length (feet)	1,364	11,088	1,396	12,484	1,364	1,396	9,724	Area (sf)
	Slope (ft/ft)		~		91 \	98 (98 F	S
	Velocity (ft/sec)	12.30% Unconnected	38.82% Imp	11.18% Pervious Area	Weighted Average	Jnconnecte	-75% Grass	^o aved parki	Description
	Velocity Capacity (ft/sec) (cfs)	connected	88.82% Impervious Area	vious Area	verage	Unconnected pavement, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	
Direct Entry,	Description		ä			t, HSG A	od, HSG A		
•									

Summary for Subcatchment 35S: C.1

12.31 cfs @ 12.29 hrs, Volume= 1.345 af, Depth= 2.98"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Type III 24-hr 100-yr Rainfall=7.81"

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Direct Entry,						20.0
Description	Capacity (cfs)	Velocity (ft/sec)		Slope (ft/ft)	Length (feet)	Tc (min)
ected	64.08% Unconnected	64.0			14,141	
s Area	9.34% Impervious Area	9.34			22,067	
Area	90.66% Pervious Area	90.6			214,241	
Weighted Average, UI Adjusted	yhted Averaເ		58	59	236,308	
	Roofs, HSG A	Roof		98	7,926	
Unconnected pavement, HSG A	onnected pay	Uncc		98	14,141	
SG D	Woods, Good, HSG D	Woo		77	16,469	
>75% Grass cover, Good, HSG D	6 Grass cov	>75%		80	69,229	
>75% Grass cover, Good, HSG A	% Grass covi	>75%		39	128,543	
	Description		Adi	CN	Area (sf)	_

Summary for Subcatchment 36S: C.2

Runoff II 3.59 cfs @ 12.09 hrs, Volume= 0.275 af, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Summary for Subcatchment 37S: C.3

Runoff 1.59 cfs @ 12.09 hrs, Volume= 0.116 af, Depth= 4.87"

4,754 7,675	12,429	1,900	509	4,754	5,266	Area (sf)
	75	98	98	39	98	CN
38.25% Pervious Area 61.75% Impervious Area	Weighted Average	Roofs, HSG A	Roofs, HSG A	>75% Grass cover, Good, HSG A	Paved parking, HSG A	Description

Type III 24-hr 100-yr Rainfall=7.81"

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Type III 24-hr 100-yr Rainfall=7.81"

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Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Direct Entry,

Tc (min) 6.0

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

Summary for Subcatchment 38S: C.4

0.80 cfs @ 12.09 hrs, Volume= 0.067 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Area (sf) 4,655 98 CN Paved parking, HSG A 100.00% Impervious Area Description

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

Summary for Subcatchment 39S: C.5

1.01 cfs @ 12.09 hrs, Volume= 0.085 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

(min) 6.0 Area (sf) 5,857 5,857 1,777 4,080 1,777 888 98 Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Weighted Average 100.00% Impervious Area 30.34% Unconnected Paved parking, HSG A Unconnected pavement, Description Direct Entry,

Summary for Subcatchment 40S: C.6

0.70 cfs @ 12.09 hrs, Volume= 0.059 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

98 Paved parking, HSG A 100.00% Impervious Area

Summary for Subcatchment 41S: C.7

Runoff П 1.24 cfs @ 12.09 hrs, Volume= 0.104 af, Depth= 7.57

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

(min) 6.0 Area (sf) 6,072 1,116 7,188 7,188 98 S 98 Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Weighted Average 100.00% Impervious Area Paved parking, HSG A Roofs, HSG A Description Direct Entry,

Summary for Subcatchment 42S: C.8

1.31 cfs @ 12.09 hrs, Volume= 0.111 af, Depth= 7.57"

П

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

(min) 6.0 Area (sf) 7,639 Length (feet) 7,639 98 CN Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs) Paved parking, HSG A 100.00% Impervious Area Description Direct Entry

Summary for Subcatchment 43S: C.9

1.50 cfs @ 12.09 hrs, Volume= 0.126 af, Depth= 7.57

II

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Area (sf) 8,732 8,732 98 Paved parking, HSG A Description 100.00% Impervious Area

Type III 24-hr 100-yr Rainfall=7.81"

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Area (sf)

2,144 2,121 853 696 96

98 8 8 8 S

Paved parking, HSG A
Paved parking, HSG D
Unconnected pavement, HSG A
Unconnected pavement, HSG D
Roofs, HSG A

5,910 5,910 1,549

Weighted Average 100.00% Impervious Area 26.21% Unconnected

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Type III 24-hr 100-yr Rainfall=7.81"

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

Summary for Subcatchment 44S: C.10

0.92 cfs @ 12.09 hrs, Volume= 0.077 af, Depth= 7.57"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Direct Entry,					6.0
Description	Capacity (cfs)	Velocity (ft/sec)	Slope (ft/ft)	Length (feet)	Tc (min)
rea	100.00% Impervious Area	00.00% In	_	5,326	
	98 Paved parking, HSG A	aved park	98 F	5,326	
		Description	CN	Area (sf)	_

Summary for Subcatchment 45S: C.11

0.45 cfs @ 12.09 hrs, Volume= 0.038 af, Depth= 7.57"

Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Direct Entry,	(IVSec)	(1011)	(leet)	6.0
Capacity Description		Slope	Length	T _C
nnected	7.68% Unconnected		202	
100.00% Impervious Area	100.00% Im		2,631	
verage	Weighted Average	98	2,631	
Unconnected pavement, HSG D	Unconnecte	98	76	
Unconnected pavement, HSG A	Unconnecte		126	
ng, HSG D	Paved parking, HSG D	98	946	
ng, HSG A	Paved parking, HSG A		1,483	
	Description	S	Area (sf)	Þ

Summary for Subcatchment 46S: C.12

Runoff 1.02 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Summary for Subcatchment 47S: C.13	Direct Entry,
nt 47S: C.13	<u>.</u>

Tc (min) 6.0

Slope (ft/ft)

Velocity Capacity Description (ft/sec) (cfs)

0.34 cfs @ 12.09 hrs, Volume= 0.029 af, Depth= 7.57

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

	I				l		l
6.0	Tc (min)						Are
	Length (feet)	155	1,987	1,987	155	1,832	ea (sf)
	Slope (ft/ft)	7	_	98 V	98 L	98 F	S
	Velocity (ft/sec)	7.80% Unconnected	100.00% Impervious Area	Weighted Average	Unconnected pavement, HSG D	Paved parking, HSG D	Area (sf) CN Description
	Capacity (cfs)	nnected	pervious Ar	/erage	d pavemen	ng, HSG D	
Direct Entry,	Description		rea		nt, HSG D		
					l		

Summary for Subcatchment 48S: C.14

Runoff 0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Depth= 7.57"

141		141	1,744	Area (sf) (
	98	98	98	S
100.00% impervious Area 7.48% Unconnected	Weighted Average	Unconnected pavement, HSG D	Paved parking, HSG D	Description

Type III 24-hr 100-yr Rainfall=7.81"

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(min)

Length (feet)

Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)

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Type III 24-hr 100-yr Rainfall=7.81"

0.051 af, Depth= 7.57" 402,771 401,244 1,527 1,527 51,440 160,796 5,106 450 1,527 182,934 518 Area (sf) 98 39 61 80 80 30 55 77 Woods, Good, HSG A Woods, Good, HSG B Woods, Good, HSG D Weighted Average 99.62% Pervious Area 0.38% Impervious Area 100.00% Unconnected Unconnected pavement, HSG A >75% Grass cover, Good, HSG A >75% Grass cover, Good, HSG B >75% Grass cover, Good, HSG D

Direct Entry,

Tc (min) 20.0

Length (feet)

Slope (ft/ft)

Velocity Capacity Description (ft/sec) (cfs)

Summary for Subcatchment 52S: B.9

Runoff П 2.36 cfs @ 12.09 hrs, Volume= 0.180 af, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Summary for Pond 4P: Infiltration Basin #2

Primary =	Discarded =	Outflow =	Inflow =	Inflow Area =
0.00 cfs @ 0.00 hrs, Volume= 0.000 af		0.99 cfs @ 13.05 hrs, Volume= 0.956 af, Atten= 91%, Lag= 57.5 min	11.20 cfs @ 12.09 hrs, Volume= 0.956 af	1.932 ac, 75.49% Impervious, Inflow Depth = 5.94" for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 214.65' @ 13.05 hrs Surf.Area= 9,744 sf Storage= 17,701 cf

Plug-Flow detention time= 181.3 min calculated for 0.956 af (100% of inflow) Center-of-Mass det. time= 181.2 min (937.5 - 756.2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81" Weighted Average 100.00% Impervious Area 7.66% Unconnected Paved parking, HSG D Description Unconnected pavement, HSG D

Area (sf) 3,220 267 3,487 3,487 3,487 267

98 98 98

S

Runoff

II

0.60 cfs @ 12.09 hrs, Volume=

Summary for Subcatchment 49S: C.15

Direct Entry,

Summary for Subcatchment 50S: C.16

Direct Entry,

(min) 6.0

Length (feet)

Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)

0.60 cfs @ 12.09 hrs, Volume= 0.051 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Direct Entry,		6.0
Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)	Length (feet)	Tc (min)
7.70% Unconnected	270	
100.00% Impervious Area	3,508	
98 Weighted Average		
98 Unconnected pavement, HSG D		
98 Paved parking, HSG D	3,238	
CN Description	Area (sf)	Þ

Summary for Subcatchment 51S: D.1

6.61 cfs @ 12.37 hrs, Volume= 0.970 af, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Type III 24-hr 100-yr Rainfall=7.81"

Type III 24-hr 100-yr Rainfall=7.81"

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#3

Device 1

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Type III 24-hr 100-yr Rainfall=7.81"

	#2 Primary	#1 Discarded	Device Routing	216.00	214.00	212.50	(feet)	Elevation Su	#1 212.50'	Volume Invert
	215.50	212.50	Inver	11,559	8,926	6,645	(sq-ft)	Surf.Area	32,	Avail.S
Coef. (E)' 2.410 ir Conduc	Invert Outlet Devices	453.0	397.0	342.0	(feet)	Perim.	,065 cf C I	torage St
Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64	20.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60	212.50' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.40'	Devices	20,428	11,636	0	(cubic-feet)	Inc.Store	32,065 cf Custom Stage Data (Irregular)Listed below (Recalc)	Avail.Storage Storage Description
2.70 2.67 2.66 2	n Broad-Crested R 30	er Surface area er Elevation = 210.		32,065	11,636	0	(cubic-feet)	Cum.Store	(Irregular)Listed b	
2.67 2.66 2.64	lectangular Wei	40'		13,809	9,927	6,645	(sq-ft)	Wet.Area	elow (Recalc)	

Discarded OutFlow Max=0.99 cfs @ 13.05 hrs HW=214.65' (Free Discharge) T-1=Exfiltration (Controls 0.99 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=212.50' (Free Discharge) —2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 5P: Wet Basin

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.73' @ 12.49 hrs Surf.Area= 15,168 sf Storage= 20,903 cf

Plug-Flow detention time= 26.6 min calculated for 2.646 af (100% of inflow) Center-of-Mass det. time= 26.3 min (838.0 - 811.8)

∍= 0.900 0031 '/' Cc= 0.900 ap Weir	g, no headwall, Ke t3' / 211.63' S= 0.0 t4 sf rp-Crested Vee/Tr a	213.43' 24.0" Round Culvert 213.43' 24.0" Round Culvert = 580.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 213.43' / 211.63' S= 0.0031 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf 214.00' 45.0 deg x 4.0' long Sharp-Crested Vee/Trap Weir	3' 24.0' 3' L= 5; Inlet n= 0 45.0	213.43'	#1 Primary #2 Device 1	#2 #1
10,000	700,000	at Devices		lnve		Device
15,359 16,550	61,425 103 030	36,350 42,506	375.0	20,207	38	218.00
10,927	25,075	25,075	442.0	16,216	0	216.00
9,189	0	0	420.0	9,189	8	214.00
(sq-ft)	(cubic-feet)	(cubic-feet)	(feet)	(sq-ft)	et)	(feet)
Wet.Area	Cum.Store	Inc.Store	Perim.	Surf.Area	_	Elevatior
ວelow (Recalc)	a (Irregular)Listed k	103,930 cf Custom Stage Data (Irregular)Listed below (Recalc)	,930 cf		214.00	#1
		Storage Description	Avail.Storage		Invert	Volume
		Cellel-or-Mass det. tillle- zo:3 Hill (836:0 - 611:0)	1		JI-IVIGOO GEL	Calle

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215.50' Cv= 2.56 (C= 3.20)
4.2' long x 4.2' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.37 2.53 2.69 2.68 2.67 2.67 2.65 2.66 2.66
2.67 2.71 2.72 2.74 2.77 2.85 3.01 3.23

Primary OutFlow Max=13.01 cfs @ 12.49 hrs HW=215.73' (Free Discharge)

1=Culvert (Barrel Controls 13.01 cfs @ 4.51 fps)

2=Sharp-Crested Vee/Trap Weir (Passes < 33.37 cfs potential flow)

3=Broad-Crested Rectangular Weir (Passes < 1.13 cfs potential flow)

Summary for Pond 7P: Infiltration Basin #1

Inflow =
Outflow =
Discarded =
Primary = Inflow Area = 10.584 ac, 21.75% Impervious, Inflow Depth = 3.32" for 100-yr event 21.92 cfs @ 12.10 hrs, Volume= 2.929 af 20.22 cfs @ 12.15 hrs, Volume= 2.929 af, Atten= 8%, Lag= 3.1 min 1.05 cfs @ 12.15 hrs, Volume= 1.184 af 19.17 cfs @ 12.15 hrs, Volume= 1.745 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 215.63' @ 12.15 hrs Surf.Area= 13,792 sf Storage= 10,175 cf

Plug-Flow detention time= 37.3 min calculated for 2.927 af (100% of inflow)

Wet Area	Cum.Store	Inc.Store	Surf.Area Perim.	Surf	Elevation
below (Recalc)	a (Irregular)Listed	15,542 cf Custom Stage Data (Irregular)Listed below (Recalc)	15,542 cf	214.80'	#1
		Invert Avail.Storage Storage Description	Avail.Storage	Invert	Volume
		5.3 - 838.0)	Center-or-Mass det. time= 37.3 min (8/5.3 - 838.0	/lass det. tim	Center-ot-N

Discarded OutFlow Max=1.05 cfs @ 12.15 hrs HW=215.63' (Free Discharge) **C-2=Exfiltration** (Controls 1.05 cfs)

Primary OutFlow Max=19.11 cfs @ 12.15 hrs HW=215.63' (Free Discharge)
—1=Broad-Crested Rectangular Weir (Weir Controls 19.11 cfs @ 1.45 fps)

Type III 24-hr 100-yr Rainfall=7.81"

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Summary for Pond 12P: STONE RECHARGE TRENCH

Inflow Outflow Primary Discarded = nflow Area = 0.409 ac, 100.00% Impervious, Inflow Depth = 7.57" 3.06 cfs @ 12.09 hrs, Volume= 0.258 af, Atto 6.17 cfs @ 12.08 hrs, Volume= 0.188 af 2.83 cfs @ 12.08 hrs, Volume= 0.188 af 0.070 af 0.258 af 0.258 af, Atten= 2%, Lag= 0.0 min 0.188 af 0.070 af for 100-yr event

Routing by S Peak Elev= 2 Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs = 221.01' @ 12.10 hrs Surf.Area= 2,427 sf Storage= 1,942 cf

Plug-Flow detention time= 67.1 min calculated for 0.258 af (100% of inflow) Center-of-Mass det. time= 67.1 min (808.6 - 741.5)

Volume # 219.00' Invert Avail.Storage 1,942 cf 3.00'W x 809.00'L x 2.00'H Prismatoid 4,854 cf Overall x 40.0% Voids Storage Description

Device #1 #2 Routing Discarded Primary 221.00' 219.00' 2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32 Outlet Devices 2.00

Discarded OutFlow Max=0.17 cfs @ 12.10 hrs HW=221.01' (Free Discharge) —2=Exfiltration (Controls 0.17 cfs)

Summary for Pond 17P: STONE RECHARGE TRENCH

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=221.01' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.86 cfs @ 0.26 fps)

Inflow Discarded = Primary = Outflow Inflow Area = П 0.409 ac,100.00% Impervious, Inflow Depth = 7.57" 3.06 cfs @ 12.09 hrs, Volume= 0.258 af, 3.00 cfs @ 12.08 hrs, Volume= 0.258 af, Atto 0.17 cfs @ 12.10 hrs, Volume= 0.188 af 2.83 cfs @ 12.08 hrs, Volume= 0.070 af 0.258 af 0.258 af, Atten= 2%, Lag= 0.0 min 0.188 af 0.070 af for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 221.01' @ 12.10 hrs Surf.Area= 2,427 sf Storage= 1,942 cf

Plug-Flow detention time= 67.1 min calculated for 0.258 af (100% of inflow) Center-of-Mass det. time= 67.1 min (808.6 - 741.5)

Volume	Invert	Avail.Storage	Storage Description
#1	219.00'	1,942 cf	1,942 cf 3.00'W x 809.00'L x 2.00'H Prismatoid
			4.854 cf Overall x 40.0% Voids

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Device Routing Primary 221.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 Outlet Devices 2.50 3.00

219.00' 2.410 in/hr Exfiltration over Surface area Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Conductivity to Groundwater Elevation = 210.00'

#2

Discarded

Discarded OutFlow Max=0.17 cfs @ 12.10 hrs HW=221.01' **—2=Exfiltration** (Controls 0.17 cfs) (Free Discharge)

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=221.01' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.86 cfs @ 0.26 fps)

Summary for Pond 19P: STONE RECHARGE TRENCH

Inflow Discarded = Outflow Primary Inflow Area = 0.409 ac, 100.00% Impervious, Inflow Depth = 7.57" for 100-yr event 3.06 cfs @ 12.09 hrs, Volume= 0.258 af 3.00 cfs @ 12.08 hrs, Volume= 0.258 af, Atten= 2%, Lag= 0.0 0.17 cfs @ 12.10 hrs, Volume= 0.188 af 2.83 cfs @ 12.08 hrs, Volume= 0.070 af 0.258 af 0.258 af, Atten= 2%, Lag= 0.0 min 0.188 af 0.070 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 221.01' @ 12.10 hrs Surf.Area= 2,427 sf Storage= 1,94 Storage= 1,942 cf

Plug-Flow detention time= 67.1 min calculated for 0.258 af (100% of inflow) Center-of-Mass det. time= 67.1 min (808.6 - 741.5)

Volume Invert Avail.Storage Storage Description

#1	8	1,94	12 of 3.	1,942 cf 3.00°W x 809.00°L x 2.00°H Prismatoid 4,854 cf Overall x 40.0% Voids
Device	Device Routing	Invert	Invert Outlet Devices	evices
#1	#1 Primary	221.00'	809.0'	221.00' 809.0' long x 1.0' breadth Broad-Crested Rectangular Weir
			Head (feet 2.50 3.00	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00
			Coef. (English) 3.30 3.31 3.32	Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	219.00'	2.410 ir Conduc	2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 210.00'
				Collidado

Primary OutFlow Max=1.86 cfs @ 12.08 hrs HW=221.01' (Free Discharge)
—1=Broad-Crested Rectangular Weir (Weir Controls 1.86 cfs @ 0.26 fps)

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Summary for Pond 21P: CB-4

Outflow Inflow Area = 0.345 ac, 8 2.36 cfs @ 2.36 cfs @ 2.36 cfs @ 2.36 cfs @ 80.72% Impervious, Inflow Depth = 6.26" 12.09 hrs, Volume = 0.180 af 12.09 hrs, Volume = 0.180 af, Att 12.09 hrs, Volume = 0.180 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.63' @ 12.09 hrs Flood Elev= 218.50'

Primary 215.50 12.0" Round Culvert

L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary OutFlow Max=2.31 cfs @ 12.09 hrs HW=216.61 —1=Culvert (Barrel Controls 2.31 cfs @ 3.31 fps) (Free Discharge)

Cc= 0.900

Summary for Pond 22P: DMH-2

Outflow Inflow Area = н н П 0.631 ac, 8 4.42 cfs @ 4.42 cfs @ 4.42 cfs @ 84.40% Impervious, Inflow Depth = 6.48" 2 12.09 hrs, Volume= 0.341 af 2 12.09 hrs, Volume= 0.341 af, Att 3 12.09 hrs, Volume= 0.341 af 4 0.341 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.28' @ 12.09 hrs Flood Elev= 218.90'

			#1	Device
			#1 Primary	Routing
			215.30'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0050 '/' Cc= 0.900	L= 101.0' CPP, projecting, no headwall, Ke= 0.900	215.30' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=4.31 cfs @ 12.09 hrs HW=218.17 —1=Culvert (Barrel Controls 4.31 cfs @ 5.48 fps) (Free Discharge)

Summary for Pond 23P: CB-1

Primary =	Outflow =	Inflow =	Inflow Area =
2.13 cfs @ 12.09 hrs, Volume=	2.13 cfs @ 12.09 hrs, Volume=	2.13 cfs @ 12.09 hrs, Volume=	0.307 ac, 83.76% Impervious, In
0.163 af	0.163 af, Atten= 0%, Lag= 0.0 min	2.13 cfs @ 12.09 hrs, Volume= 0.163 af	າflow Depth = 6.38" for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.61' @ 12.09 hrs Flood Elev= 218.60'

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Device Routing Primary 215.60' 12.0" Round Culvert
L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' / 215.40' S= 0.0074 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=2.09 cfs @ 12.09 hrs HW=216.59'
—1=Culvert (Barrel Controls 2.09 cfs @ 3.35 fps) (Free Discharge)

Summary for Pond 24P: CB-2

Inflow Outflow Primary Inflow Area = 0.392 ac, 95.72% Impervious, Inflow Depth = 2.90 cfs @ 12.09 hrs, Volume= 0.235 2.90 cfs @ 12.09 hrs, Volume= 0.235 2.90 cfs @ 12.09 hrs, Volume= 0.235 epth = 7.21" for 100-yr event 0.235 af 0.235 af, Atten= 0%, Lag= 0.0 min 0.235 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.64' @ 12.09 hrs Flood Elev= 219.20'

Routing 216.20' Invert 12.0" Round Culvert
L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.40' S= 0.0400 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=2.82 cfs @ 12.09 hrs HW=217.59'
—1=Culvert (Inlet Controls 2.82 cfs @ 3.59 fps) (Free Discharge)

Summary for Pond 25P: CB-3

Inflow Primary Outflow Inflow Area = 0.565 ac, 6 3.42 cfs @ 3.42 cfs @ 3.42 cfs @ 3.42 cfs @ , 67.38% Impervious, Inflow Depth = 5.33" for 100-yr event ② 12.09 hrs, Volume= 0.251 af ② 12.09 hrs, Volume= 0.251 af, Atten= 0%, Lag= 0.0 min ② 12.09 hrs, Volume= 0.251 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.31' @ 12.09 hrs Flood Elev= 219.50'

Device Routing Invert Outlet Devices

			#1 F
			Primary
			216.50'
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 216.50' / 215.40' S= 0.0289 '/' Cc= 0.900	L= 38.0' CPP, projecting, no headwall, Ke= 0.900	216.50' 12.0" Round Culvert

Primary OutFlow Max=3.34 cfs @ 12.09 hrs HW=218.25'
—1=Culvert (Inlet Controls 3.34 cfs @ 4.26 fps) (Free Discharge)

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Summary for Pond 26P: DMH-1

for 100-yr event

Inflow Area =

п

п

Device Routing Primary 215.20' 12.0" Round Culvert
L= 160.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.20' / 214.60' S= 0.0037 '/ Outlet Devices

Outflow п 1.264 ac, 8 8.44 cfs @ 8.44 cfs @ 8.44 cfs @ 80.14% Impervious, Inflow Depth = 6.17" 12.09 hrs, Volume= 0.650 af 12.09 hrs, Volume= 0.650 af, Att 12.09 hrs, Volume= 0.650 af Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.63' @ 12.09 hrs Flood Elev= 218.90'

Routing Primary 215.30 **18.0" Round Culvert**L= 48.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.30' / 214.80' S= 0.0104 '/' n= 0.013, Flow Area= 1.77 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=8.24 cfs @ 12.09 hrs HW=217.55'
—1=Culvert (Inlet Controls 8.24 cfs @ 4.66 fps) (Free Discharge)

Summary for Pond 27P: CB-22

Outflow Primary Inflow Area = 11 11 п 0.515 ac,100.00% Impervious, Inflow Depth = 7.57"
3.85 cfs @ 12.09 hrs, Volume= 0.325 af
3.85 cfs @ 12.09 hrs, Volume= 0.325 af, Atto
3.85 cfs @ 12.09 hrs, Volume= 0.325 af 0.325 af, Atten= 0%, Lag= 0.0 min 0.325 af for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.65' @ 12.09 hrs Flood Elev= 218.50'

Primary 215.50 Invert 12.0" Round Culvert L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0039 '/' Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc= 0.900

Primary OutFlow Max=3.75 cfs @ 12.09 hrs HW=217.58'
—1=Culvert (Inlet Controls 3.75 cfs @ 4.78 fps) (Free Discharge)

Summary for Pond 28P: DMH-16

Outflow Inflow Area = 0.515 ac,100.00% Impervious, Inflow Depth = 7.57"
3.85 cfs @ 12.09 hrs, Volume= 0.325 af
3.85 cfs @ 12.09 hrs, Volume= 0.325 af, Att
3.85 cfs @ 12.09 hrs, Volume= 0.325 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.18' @ 12.09 hrs Flood Elev= 218.70'

Primary OutFlow Max=3.75 cfs @ 12.09 hrs HW=218.05'
—1=Culvert (Barrel Controls 3.75 cfs @ 4.78 fps) (Free Discharge)

n= 0.013, Flow Area= 0.79 sf

Cc= 0.900

Summary for Pond 29P: CB-21

Inflow Primary Outflow Inflow Area = 11 11 11 0.123 ac,100.00% Impervious, Inflow Depth = 0.92 cfs @ 12.09 hrs, Volume= 0.077; 0.92 cfs @ 12.09 hrs, Volume= 0.077; 0.92 cfs @ 12.09 hrs, Volume= 0.077; 0.077 af 0.077 af, Atten= 0%, 1 0.077 af 7.57" for 100-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.76' @ 12.09 hrs Flood Elev= 219.20'

Device Routing 216.20' Invert 12.0" Round Culvert
L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.20' / 215.70' S= 0.0192 '/' Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.89 cfs @ 12.09 hrs HW=216.75'
—1=Culvert (Inlet Controls 0.89 cfs @ 2.00 fps) (Free Discharge)

Summary for Pond 30P: DMH-15

Outflow Primary Inflow Inflow Area 0.637 ac,100.00% Impervious, Inflow Depth = 7.57" 4.77 cfs @ 12.09 hrs, Volume= 0.402 af 4.77 cfs @ 12.09 hrs, Volume= 0.402 af, Att 4.77 cfs @ 12.09 hrs, Volume= 0.402 af 0.402 af 0.402 af, Atten= 0%, Lag= 0.0 min 0.402 af ġ 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.67' @ 12.09 hrs Flood Elev= 219.80'

Routing Primary 214.50' Invert 15.0" Round Culvert
L= 250.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 214.50' / 213.60' S= 0.0036 '/'
n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=4.64 cfs @ 12.09 hrs HW=216.57'
—1=Culvert (Barrel Controls 4.64 cfs @ 3.78 fps) (Free Discharge)

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Summary for Pond 31P: DMH-14

Inflow Outflow Inflow Area = 10.88 cfs @ 10.88 cfs @ 10.88 cfs @ 1.468 ac, 97.47% Impervious, Inflow Depth = 7.38" 0 12.09 hrs, Volume= 0.903 af 0 12.09 hrs, Volume= 0.903 af, Atta 0 12.09 hrs, Volume= 0.903 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.86' @ 12.09 hrs Flood Elev= 218.60'

		#1	Device
		#1 Primary	Device Routing
		213.50'	Invert
lnlet / Outlet Invert= $213.50' / 212.50'$ S= $0.0164 '/'$ Cc= 0.900 n= 0.013 , Flow Area= 1.77 sf	L= 61.0' CPP, projecting, no headwall, Ke= 0.900	213.50' 18.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=10.59 cfs @ 12.09 hrs HW=216.74'
—1=Culvert (Inlet Controls 10.59 cfs @ 5.99 fps) (Free Discharge)

Summary for Pond 32P: CB-20

Outflow Primary Inflow Area = 11 11 П 0.318 ac,100.00% Impervious, Inflow Depth = 7.57"
2.38 cfs @ 12.09 hrs, Volume= 0.201 af
2.38 cfs @ 12.09 hrs, Volume= 0.201 af, Atto
2.38 cfs @ 12.09 hrs, Volume= 0.201 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.63' @ 12.09 hrs Flood Elev= 218.50'

			#1	Device
			#1 Primary	Device Routing
			215.50'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0167 '/' Cc= 0.900	L= 12.0' CPP, projecting, no headwall, Ke= 0.900	215.50' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=2.32 cfs @ 12.09 hrs HW=216.60'
—1=Culvert (Inlet Controls 2.32 cfs @ 2.95 fps) (Free Discharge)

Summary for Pond 33P: DMH-17

Primary =	Outflow =	Inflow =	Inflow Area =
3.73 cfs @ 12.09 hrs, Volume= 0.301 af	3.73 cfs @ 12.09 hrs, Volume= 0.30	3.73 cfs @ 12.09 hrs, Volume= 0.301 af	0.513 ac, 92.75% Impervious, Inflow Depth = 7.03" for 100-yr event
11 af	0.301 af, Atten= 0%, Lag= 0.0 min	1 af	= 7.03" for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.21' @ 12.09 hrs Flood Elev= 218.80'

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Type III 24-hr 100-yr Rainfall=7.81"

Routing Primary 215.10' **12.0"** Round Culvert
L= 180.0' CPP, profiting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.10' / 213.60' S= 0.0083'/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=3.64 cfs @ 12.09 hrs HW=217.12'
—1=Culvert (Barrel Controls 3.64 cfs @ 4.64 fps) (Free Discharge)

Summary for Pond 34P: CB-23

Inflow Outflow Primary Inflow Area = п 0.288 ac, 87.12% Impervious, Inflow Depth = 6.62" for 100-yr event 2.05 cfs @ 12.09 hrs, Volume= 0.159 af 2.05 cfs @ 12.09 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min 2.05 cfs @ 12.09 hrs, Volume= 0.159 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.46' @ 12.09 hrs Flood Elev= 218.50'

	#1	Device
	#1 Primary	Device Routing
	215.50'	Invert
L= 28.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0107 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=2.00 cfs @ 12.09 hrs HW=216.44'
—1=Culvert (Inlet Controls 2.00 cfs @ 2.61 fps) (Free Discharge)

Summary for Pond 35P: CB-24

Inflow Primary Outflow Inflow Area = 0.224 ac,100.00% Impervious, Inflow Depth = 7.57" for 100-yr event 1.68 cfs @ 12.09 hrs, Volume= 0.141 af 1.68 cfs @ 12.09 hrs, Volume= 0.141 af, Atten= 0%, Lag= 0.0 min 1.68 cfs @ 12.09 hrs, Volume= 0.141 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.32' @ 12.09 hrs Flood Elev= 218.50'

Routing Invert 12.0" Round Culvert
L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.20' S= 0.0150 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary

215.50

Cc= 0.900

Primary OutFlow Max=1.63 cfs @ 12.09 hrs HW=216.30' —1=Culvert (Inlet Controls 1.63 cfs @ 2.41 fps) (Free Discharge)

Type III 24-hr 100-yr Rainfall=7.81"

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Summary for Pond 37P: DMH-10

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Type III 24-hr 100-yr Rainfall=7.81"

Inflow Outflow Inflow Area = п п п 0.446 ac,100.00% Impervious, Inflow Depth = 7.57"
3.34 cfs @ 12.09 hrs, Volume= 0.281 af
3.34 cfs @ 12.09 hrs, Volume= 0.281 af, Att
3.34 cfs @ 12.09 hrs, Volume= 0.281 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.23' @ 12.09 hrs Flood Elev= 222.20'

Routing Primary 218.10' **15.0" Round Culvert**L= 122.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.10' / 214.50' S= 0.0295 '/' n= 0.013, Flow Area= 1.23 sf Outlet Devices

Cc= 0.900

Primary OutFlow Max=3.25 cfs @ 12.09 hrs HW=219.21'
—1=Culvert (Inlet Controls 3.25 cfs @ 2.83 fps) (Free Discharge)

Summary for Pond 38P: CB-15

Outflow Primary Inflow Area = П п п 0.043 ac,100.00% Impervious, Inflow Depth = 7.57"
0.32 cfs @ 12.09 hrs, Volume= 0.027 af
0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Atto
0.32 cfs @ 12.09 hrs, Volume= 0.027 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.52' @ 12.09 hrs Flood Elev= 236.20'

Primary 232.20 Invert 12.0" Round Culvert n= 0.013, Flow Area= 0.79 sf L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/' Outlet Devices Cc = 0.900

Primary OutFlow Max=0.31 cfs @ 12.09 hrs HW=232.51'
—1=Culvert (Inlet Controls 0.31 cfs @ 1.50 fps) (Free Discharge)

Summary for Pond 39P: CB-16

Outflow Inflow Area = 0.34 cfs @ 0.34 cfs @ 0.34 cfs @ 0.046 ac,100.00% Impervious, Inflow Depth = 7.57" 0.34 cfs @ 12.09 hrs, Volume= 0.029 af 0.34 cfs @ 12.09 hrs, Volume= 0.029 af, Atto 0.34 cfs @ 12.09 hrs, Volume= 0.029 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.53' @ 12.09 hrs Flood Elev= 236.20'

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Device Routing Primary 232.20' 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 232.20' / 231.70' S= 0.0333 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.33 cfs @ 12.09 hrs HW=232.52'
—1=Culvert (Inlet Controls 0.33 cfs @ 1.52 fps) (Free Discharge)

Summary for Pond 52P: CB-17

Inflow Outflow Primary Inflow Area = H H H 0.081 ac,100.00% Impervious, Inflow Depth = 7.57" 0.60 cfs @ 12.09 hrs, Volume= 0.051 af 0.60 cfs @ 12.09 hrs, Volume= 0.051 af, Atto 0.60 cfs @ 12.09 hrs, Volume= 0.051 af 0.051 af 0.051 af, Atten= 0%, 1 0.051 af for 100-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.84' @ 12.09 hrs Flood Elev= 251.40'

	#1	Device
	Primary	Routing
	247.40'	Invert
L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 247.40' / 246.50' S= 0.0500 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	247.40' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.59 cfs @ 12.09 hrs HW=247.84'
—1=Culvert (Inlet Controls 0.59 cfs @ 1.78 fps) (Free Discharge)

Summary for Pond 53P: CB-18

Outflow Primary Inflow Inflow Area = 0.080 ac,100.00% Impervious, Inflow Depth = 7.57" 0.60 cfs @ 12.09 hrs, Volume= 0.051 af 0.60 cfs @ 12.09 hrs, Volume= 0.051 af, Att 0.60 cfs @ 12.09 hrs, Volume= 0.051 af 0.051 af, Atten= 0%, Lag= 0.0 min 0.051 af φ 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.84' @ 12.09 hrs Flood Elev= 251.40'

Routing Primary 247.40' Invert **12.0" Round Culvert**L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 247.40' / 246.50' S= 0.0474 / n= 0.013, Flow Area= 0.79 sf Outlet Devices

S= 0.0474 '/'

Cc = 0.900

Primary OutFlow Max=0.58 cfs @ 12.09 hrs HW=247.84'
—1=Culvert (Inlet Controls 0.58 cfs @ 1.77 fps) (Free Discharge)

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Summary for Pond 54P: DMH-13

Outflow Inflow Area = п 0.161 ac,100.00% Impervious, Inflow Depth = 7.57"
1.20 cfs @ 12.09 hrs, Volume= 0.101 af
1.20 cfs @ 12.09 hrs, Volume= 0.101 af, Att
1.20 cfs @ 12.09 hrs, Volume= 0.101 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 247.06' @ 12.09 hrs Flood Elev= 250.20'

Routing Primary 246.40' 12.0" Round Culvert

L= 85.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 246.40' / 240.00' S= 0.0753'/ Outlet Devices

Primary OutFlow Max=1.17 cfs @ 12.09 hrs HW=247.05'
—1=Culvert (Inlet Controls 1.17 cfs @ 2.17 fps) (Free Discharge)

n= 0.013, Flow Area= 0.79 sf

Cc= 0.900

Summary for Pond 56P: DMH-12

Outflow Primary Inflow Area = П 11 11 0.161 ac,100.00% Impervious, Inflow Depth = 7.57"
1.20 cfs @ 12.09 hrs, Volume= 0.101 af
1.20 cfs @ 12.09 hrs, Volume= 0.101 af, Att
1.20 cfs @ 12.09 hrs, Volume= 0.101 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 240.56' @ 12.09 hrs Flood Elev= 244.00'

Primary 239.90' Invert 12.0" Round Culvert n= 0.013, Flow Area= 0.79 sf L= 110.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.90' / 231.70' S= 0.0745 '/ Outlet Devices Cc = 0.900

Primary OutFlow Max=1.17 cfs @ 12.09 hrs HW=240.55'
—1=Culvert (Inlet Controls 1.17 cfs @ 2.17 fps) (Free Discharge)

Summary for Pond 58P: CB-13

Outflow Inflow Area = 0.45 cfs @ 0.45 cfs @ 0.45 cfs @ 0.060 ac,100.00% Impervious, Inflow Depth = 7.57" 0.45 cfs @ 12.09 hrs, Volume= 0.038 af 0.45 cfs @ 12.09 hrs, Volume= 0.038 af, Atto 0.45 cfs @ 12.09 hrs, Volume= 0.038 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.28' @ 12.09 hrs Flood Elev= 221.90'

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Device Routing Primary 218.90' 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/ Outlet Devices Cc = 0.900

n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.44 cfs @ 12.09 hrs HW=219.27 —1=Culvert (Inlet Controls 0.44 cfs @ 1.64 fps) (Free Discharge)

Summary for Pond 61P: DMH-11

Inflow Primary Outflow Inflow Area = 11 11 11 0.249 ac,100.00% Impervious, Inflow Depth = 7.57" for 100 1.87 cfs @ 12.09 hrs, Volume= 0.157 af 1.87 cfs @ 12.09 hrs, Volume= 0.157 af, Atten= 0%, 1.87 cfs @ 12.09 hrs, Volume= 0.157 af for 100-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 232.49' @ 12.09 hrs Flood Elev= 235.70'

	#1	Device Routing
,	#1 Primary	Routing
	231.60'	Invert
L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.60' / 218.20' S= 0.0677 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	231.60' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=1.82 cfs @ 12.09 hrs HW=232.47 —1=Culvert (Inlet Controls 1.82 cfs @ 2.51 fps) (Free Discharge)

Summary for Pond 62P: CB-14

Outflow Primary Inflow Inflow Area = 0.136 ac,100.00% Impervious, Inflow Depth = 7.57" for 100-yr event 1.02 cfs @ 12.09 hrs, Volume= 0.086 af 1.02 cfs @ 12.09 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min 1.02 cfs @ 12.09 hrs, Volume= 0.086 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.50' @ 12.09 hrs Flood Elev= 221.90'

Routing Primary 218.90' Invert 12.0" Round Culvert
L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.90' / 218.20' S= 0.0467 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc = 0.900

Primary OutFlow Max=0.99 cfs @ 12.09 hrs HW=219.49'
—1=Culvert (Inlet Controls 0.99 cfs @ 2.06 fps) (Free Discharge)

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Summary for Pond 63P: DMH-4

Inflow Outflow Inflow Area = п п п 2.245 ac, 9 15.98 cfs @ 15.98 cfs @ 15.98 cfs @ 91.37% Impervious, Inflow Depth = 6.95" § 12.09 hrs, Volume= 1.301 af § 12.09 hrs, Volume= 1.301 af, Att § 12.09 hrs, Volume= 1.301 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 220.88' @ 12.09 hrs Flood Elev= 222.20'

Routing Primary 218.10' Invert 24.0" Round Culvert
L= 122.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 218.10' / 214.50' S= 0.0295 '/' n= 0.013, Flow Area= 3.14 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=15.57 cfs @ 12.09 hrs HW=220.80'
—1=Culvert (Inlet Controls 15.57 cfs @ 4.95 fps) (Free Discharge)

Summary for Pond 65P: DMH-8

Outflow Primary Inflow Area = П 11 11 0.909 ac, 7 5.98 cfs @ 5.98 cfs @ 5.98 cfs @ 78.68% Impervious, Inflow Depth = 6.05" 0 12.09 hrs, Volume = 0.458 af 0 12.09 hrs, Volume = 0.458 af, Atta 0 12.09 hrs, Volume = 0.458 af 0.458 af 0.458 af, Atten= 0%, Lag= 0.0 min 0.458 af for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.99' @ 12.09 hrs Flood Elev= 220.40'

Primary Routing 214.80 Invert 15.0" Round Culvert Outlet Devices L= 215.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.80' / 214.20' S= 0.0028 '/' n= 0.013, Flow Area= 1.23 sf

Cc = 0.900

Primary OutFlow Max=5.83 cfs @ 12.09 hrs HW=217.88' **—1=Culvert** (Barrel Controls 5.83 cfs @ 4.75 fps) (Free Discharge)

Summary for Pond 66P: CB-6

Primary =	Outflow =	Inflow =	Inflow Area =
1.01 cfs @ 12.09 hrs, Volume= 0.085 af	1.01 cfs @ 12.09 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min	1.01 cfs @ 12.09 hrs, Volume= 0.085 af	0.134 ac,100.00% Impervious, Inflow Depth = 7.57" for 100-yr
	= 0.0 min		vent

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.59 @ 12.09 hrs Flood Elev= 219.00'

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216.00' Outlet Devices

Device

Routing

Primary

12.0" Round Culvert
L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.50' S= 0.0208 '/ n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=0.98 cfs @ 12.09 hrs HW=216.58'
—1=Culvert (Inlet Controls 0.98 cfs @ 2.05 fps) (Free Discharge)

Summary for Pond 67P: CB-7

Inflow Outflow Primary Inflow Area = п 0.093 ac,100.00% Impervious, Inflow Depth = 0.70 cfs @ 12.09 hrs, Volume= 0.059 0.70 cfs @ 12.09 hrs, Volume= 0.059 0.70 cfs @ 12.09 hrs, Volume= 0.059 Depth = 7.57" for 100-0.059 af 0.059 af, Atten= 0%, L 0.059 af for 100-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.48' @ 12.09 hrs Flood Elev= 219.00'

	#1	Device
	Primary	Routing
	216.00'	Invert
L= 24.0	216.00' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=0.68 cfs @ 12.09 hrs HW=216.47 —1=Culvert (Inlet Controls 0.68 cfs @ 1.85 fps) (Free Discharge)

Summary for Pond 68P: DMH-9

Outflow Primary Inflow Inflow Area = 0.909 ac, 7 5.98 cfs @ 5.98 cfs @ 5.98 cfs @ 78.68% Impervious, Inflow Depth = 6.05" for 100-yr event

② 12.09 hrs, Volume= 0.458 af

③ 12.09 hrs, Volume= 0.458 af, Atten= 0%, Lag= 0.0 min

③ 12.09 hrs, Volume= 0.458 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 218.48' @ 12.09 hrs Flood Elev= 218.70'

Routing Primary 215.40' Invert 15.0" Round Culvert
L= 190.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.40' / 214.90' S= 0.0026'/
n= 0.013, Flow Area= 1.23 sf Outlet Devices

Primary OutFlow Max=5.83 cfs @ 12.09 hrs HW=218.37 — 1=Culvert (Barrel Controls 5.83 cfs @ 4.75 fps) (Free Discharge)

Cc= 0.900

Type III 24-hr 100-yr Rainfall=7.81"

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Summary for Pond 69P: CB-11

Outflow Inflow Area = п п п 0.107 ac,100.00% Impervious, Inflow Depth = 7.57" 0.80 cfs @ 12.09 hrs, Volume= 0.067 af 0.80 cfs @ 12.09 hrs, Volume= 0.067 af, Att 0.80 cfs @ 12.09 hrs, Volume= 0.067 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.17' @ 12.09 hrs Flood Elev= 218.60'

Primary Routing 215.60 12.0" Round Culvert

L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.60' /215.50' S= 0.0067 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=0.78 cfs @ 12.09 hrs HW=216.16' —1=Culvert (Barrel Controls 0.78 cfs @ 2.50 fps) (Free Discharge)

Summary for Pond 70P: CB-12

Outflow Primary Inflow Area = П 11 11 0.802 ac, 7 5.18 cfs @ 5.18 cfs @ 5.18 cfs @ 75.84% Impervious, Inflow Depth = 5.84" § 12.09 hrs, Volume= 0.391 af § 12.09 hrs, Volume= 0.391 af, Atta § 12.09 hrs, Volume= 0.391 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 219.10' @ 12.09 hrs Flood Elev= 218.60'

			#1	Device
			Primary	Routing
			215.60'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 215.60' / 215.50' S= 0.0067 '/' Cc= 0.900	L= 15.0' CPP, projecting, no headwall, Ke= 0.900	215.60' 12.0" Round Culvert	Outlet Devices

Primary OutFlow Max=5.06 cfs @ 12.09 hrs HW=218.97 —1=Culvert (Inlet Controls 5.06 cfs @ 6.44 fps) (Free Discharge)

Summary for Pond 71P: CB-8

Primary =	Outflow =	Inflow =	Inflow Area =
1.31 cfs @ 12.09 hrs, Volume=			0.175 ac,100.00% Impervious, Inflow Depth = 7.57" for 100-yr event
0.111 af	0.111 af, Atten= 0%, Lag= 0.0 min	0.111 af	epth = 7.57" for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.24 @ 12.09 hrs Flood Elev= 218.50

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Type III 24-hr 100-yr Rainfall=7.81"

Device Routing Primary 215.50' **12.0" Round Culvert**L= 32.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0062 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=1.28 cfs @ 12.09 hrs HW=216.22'
—1=Culvert (Barrel Controls 1.28 cfs @ 2.94 fps) (Free Discharge)

Summary for Pond 72P: CB-9

Inflow Outflow Primary Inflow Area = 11 11 11 1.24 cfs @ 1.24 cfs @ 1.24 cfs @ 0.165 ac,100.00% Impervious, Inflow Depth = 7.57" for 100 1.24 cfs @ 12.09 hrs, Volume= 0.104 af, Atten=0%, 1.24 cfs @ 12.09 hrs, Volume= 0.104 af, Atten=0%, 1.24 cfs @ 12.09 hrs, Volume= 0.104 af for 100-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.22' @ 12.09 hrs Flood Elev= 218.50'

	#1	Device
	#1 Primary	Device Routing
	215.50'	Invert
L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.50' / 215.30' S= 0.0054 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf	215.50' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=1.20 cfs @ 12.09 hrs HW=216.21' (Free Discharge) —1=Culvert (Barrel Controls 1.20 cfs @ 2.84 fps)

Summary for Pond 73P: DMH-6

Inflow Primary Outflow Inflow Area = 0.340 ac,100.00% Impervious, Inflow Depth = 7.57" for 100-yr event 2.55 cfs @ 12.09 hrs, Volume= 0.215 af 2.55 cfs @ 12.09 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.0 min 2.55 cfs @ 12.09 hrs, Volume= 0.215 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.59' @ 12.09 hrs Flood Elev= 219.10'

Routing Primary 215.20' Invert **12.0" Round Culvert**L= 96.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 215.20' / 214.80' S= 0.0042 / n= 0.013, Flow Area= 0.79 sf Outlet Devices

Primary OutFlow Max=2.47 cfs @ 12.09 hrs HW=216.53' **—1=Culvert** (Barrel Controls 2.47 cfs @ 3.15 fps) (Free Discharge)

S= 0.0042 '/'

Cc= 0.900

Type III 24-hr 100-yr Rainfall=7.81"

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Summary for Pond 77P: DMH-7

Outflow Inflow Area = п 0.323 ac,100.00% Impervious, Inflow Depth = 7.57" for 100-yr event 2.42 cfs @ 12.09 hrs, Volume= 0.204 af 2.42 cfs @ 12.09 hrs, Volume= 0.204 af, Atten=0%, Lag=0.0 min 2.42 cfs @ 12.09 hrs, Volume= 0.204 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.61 @ 12.09 hrs Flood Elev= 220.20'

Routing Primary 215.70 15.0" Round Culvert
L= 181.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 215.70' / 214.80' S= 0.0050 '/
n= 0.013, Flow Area= 1.23 sf Outlet Devices Cc= 0.900

Primary OutFlow Max=2.35 cfs @ 12.09 hrs HW=216.59' —1=Culvert (Barrel Controls 2.35 cfs @ 3.51 fps) (Free Discharge)

Summary for Pond 78P: CB-19

Outflow Primary Inflow Area = П 11 11 0.122 ac,100.00% Impervious, Inflow Depth = 7.57" 0.92 cfs @ 12.09 hrs, Volume= 0.077 af 0.92 cfs @ 12.09 hrs, Volume= 0.077 af, Atto 0.92 cfs @ 12.09 hrs, Volume= 0.077 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.62' @ 12.09 hrs Flood Elev= 219.00'

			#1	Device
			#1 Primary	Device Routing
			216.00'	Invert
n= 0.013, Flow Area= 0.79 sf	Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0041 '/' Cc= 0.900	L= 49.0' CPP, projecting, no headwall, Ke= 0.900	216.00' 12.0" Round Culvert	Invert Outlet Devices

Primary OutFlow Max=0.89 cfs @ 12.09 hrs HW=216.61'
—1=Culvert (Barrel Controls 0.89 cfs @ 2.53 fps) (Free Discharge)

Summary for Pond 79P: CB-10

Outflow Inflow Area = 1.50 cfs @ 1.50 cfs @ 1.50 cfs @ 0.200 ac,100.00% Impervious, Inflow Depth = 7.57"
1.50 cfs @ 12.09 hrs, Volume= 0.126 af
1.50 cfs @ 12.09 hrs, Volume= 0.126 af, Att
1.50 cfs @ 12.09 hrs, Volume= 0.126 af Atten= 0%, Lag= 0.0 min for 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.79' @ 12.09 hrs Flood Elev= 219.00'

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Type III 24-hr 100-yr Rainfall=7.81"

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Device Routing Primary 216.00' **12.0" Round Culvert**L= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.80' S= 0.0069 '/ Outlet Devices n= 0.013, Flow Area= 0.79 sf Cc = 0.900

Primary OutFlow Max=1.46 cfs @ 12.09 hrs HW=216.78'
—1=Culvert (Barrel Controls 1.46 cfs @ 3.06 fps) (Free Discharge)

Summary for Pond 80P: DMH-5

Inflow Outflow Primary Inflow Area = H H H 0.663 ac,100.00% Impervious, Inflow Depth = 7.57"
4.96 cfs @ 12.09 hrs, Volume= 0.418 af
4.96 cfs @ 12.09 hrs, Volume= 0.418 af, Att
4.96 cfs @ 12.09 hrs, Volume= 0.418 af 0.418 af 0.418 af, Atten= 0%, 1 0.418 af for 100-yr event Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 216.45' @ 12.09 hrs Flood Elev= 219.10'

	#1	Device
	#1 Primary	Device Routing
	214.70'	Invert
L= 78.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 214.70' / 214.20' S= 0.0064 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf	214.70' 15.0" Round Culvert	Outlet Devices

Primary OutFlow Max=4.83 cfs @ 12.09 hrs HW=216.40'
—1=Culvert (Inlet Controls 4.83 cfs @ 3.94 fps) (Free Discharge)

Summary for Pond 81P: CB-5

Outflow Primary Inflow Inflow Area = 0.287 ac, 8 2.05 cfs @ 2.05 cfs @ 2.05 cfs @ 2.05 cfs @ 88.82% Impervious, Inflow Depth = 6.74"

12.09 hrs, Volume = 0.161 af

12.09 hrs, Volume = 0.161 af, Atto

12.09 hrs, Volume = 0.161 af Atten= 0%, Lag= 0.0 min φ 100-yr event

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.08' @ 12.09 hrs Flood Elev= 219.00'

Routing Primary 216.00' Invert 12.0" Round Culvert
L= 31.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 '/' n= 0.013, Flow Area= 0.79 sf Outlet Devices

Cc = 0.900

Primary OutFlow Max=2.00 cfs @ 12.09 hrs HW=217.06'
—1=Culvert (Barrel Controls 2.00 cfs @ 2.98 fps) (Free Discharge)

Type III 24-hr 100-yr Rainfall=7.81"

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Summary for Pond 82P: DMH-3

Inflow Inflow Area = 11 11 11 0.287 ac, 88.82% Impervious, Inflow Depth = 6.74" for 100-yr event 2.05 cfs @ 12.09 hrs, Volume= 0.161 af 2.05 cfs @ 12.09 hrs, Volume= 0.161 af, Atten=0%, Lag= 0.0 min 2.05 cfs @ 12.09 hrs, Volume= 0.161 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 217.08' @ 12.09 hrs Flood Elev= 218.90'

Device Routing

Invert Outlet Devices

Primary

216.00' 12.0" Round Culvert
L= 31.0' CPP, projecting, no headwall, Ke= 0.900
Inlet / Outlet Invert= 216.00' / 215.90' S= 0.0032 '/' Cc= 0.900
n= 0.013, Flow Area= 0.79 sf

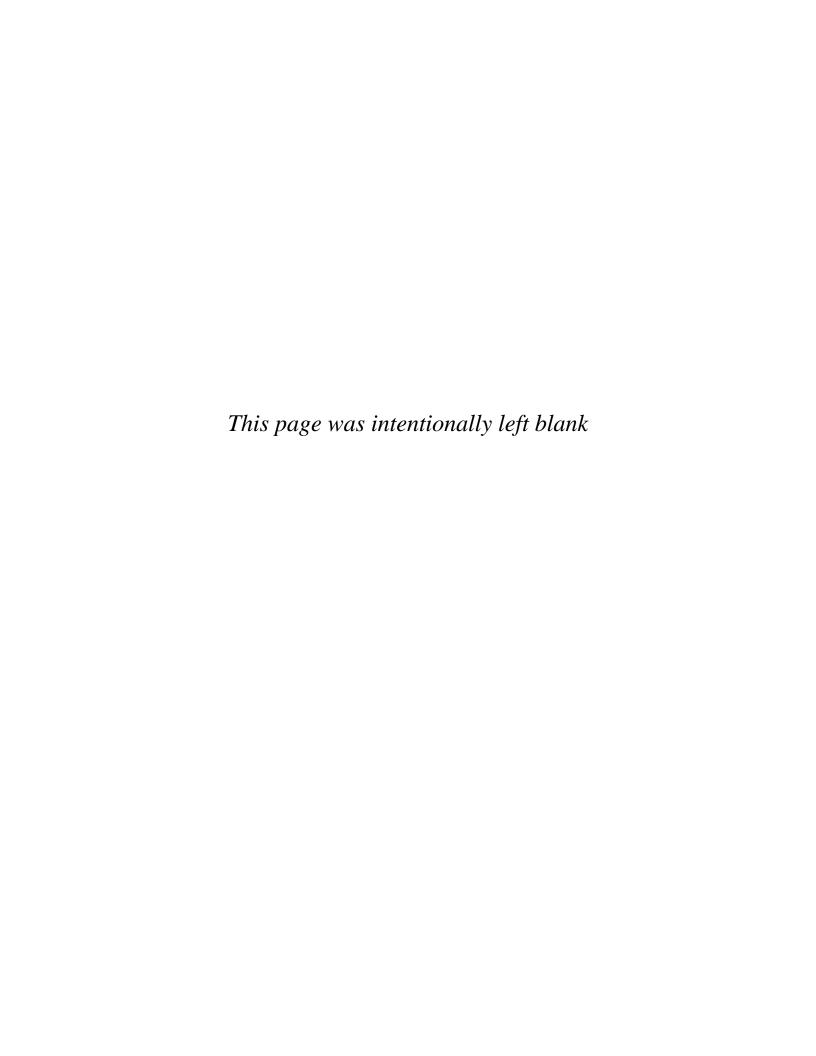
Primary OutFlow Max=2.00 cfs @ 12.09 hrs HW=217.06' (Free Discharge) —1=Culvert (Barrel Controls 2.00 cfs @ 2.98 fps)

Summary for Link 20L: DP-A

Inflow Area = Inflow = Primary = Primary 30.660 ac, 24.72% Impervious, Inflow Depth = 2.18" for 100-yr event 38.91 cfs @ 12.16 hrs, Volume= 5.572 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

${\bf Appendix} \; {\bf F-Stormwater} \; {\bf Calculations}$



Infiltration Basin #1

Stormwater Recharge Calculations

CALCULATIONS

Recharge Volume, Rv:

 $R_v = A_C x F$

Hydrologic Soil Group	Impervious Area (Ac) 1	Target Depth (F)	Recharge Volume (Rv) Ac-feet
A	2.295	0.6	0.115
Total	2.295		0.115

REFERENCES

Table 2.3.2: Recharge Target Depth by Hydrologic Soil Group

NRCS Hydrologic	Approx. Soil	Target Depth	
Soil Group	Texture	Factor (F)	
Α	sand	0.6 inch	
В	loam	0.35 inch	
С	silty loam	0.25 inch	
D	clay	0.1 inch	

Total Recharge Volume Required = 0.038 Ac-ft 1,673 C.ft Total Recharge Volume Required (Rv) = *Recharge Vol. Provided (from Infil. Basin 1) = 5,827.0 **C.ft**

*Stage Area Storage at elevation below lowest outlet = 215.30 (See Attached HydroCAD Storage Table)

Required Sediment Forebay vol, Fv:

 $F_v = A_C(cu.ft)x0.1inch$ of impervious area 2.295 Ac ¹ Imp. area captured by ponds, Ap = Required Sediment Forebay vol, Fv= 833 C.ft 1,687 C.ft

Sediment Forebay Volume Provided =

Drawdown Calculations

CALCULATIONS

Proposed Infiltration Area Calculations:

$$Drawdown = \frac{R_V}{(Rawls\ Rate)(Bottom\ Area)}$$

Drawdown Calculations:

Soil Texture:

2 Loamy Sand

² Bottom Surface Area (A): 10,430 SF 2.41 in/hr Rawls Rate: Total Recharge Volume Required = 1,673 C.ft 0.80 hr Drawdown: Drawdown is less than 72

Hours as Required

REFERENCES

Table 2.3.3: 1982 Rawls Rates

	NRCS	
	Hydrologic	
Texture Class	Soil Group	Infiltration Rate
1 Sand	Α	8.27 in/hr
2 Loamy Sand	A	2.41 in/hr
3 Sandy Loam	В	1.02 in/hr
4 Loam	В	0.52 in/hr
5 Silt Loam	С	0.27 in/hr
6 Sandy Clay Loam	С	0.17 in/hr
7 Clay Loam	D	0.09 in/hr
8 Silty Clay Loam	D	0.06 in/hr
9 Sandy Clay	D	0.05 in/hr
10 Silty Clay	D	0.04 in/hr
11 Clay	D	0.02 in/hr

NOTES:

Input Values

⁼ Refer to Proposed Conditions HydroCAD modeling report

Storage (cubic-feet)

13,453 13,747

14,043

14,339

14,638 14,938

15,239

15,542

Stage-Area-Storage for Pond 7P: Infiltration Basin #1

Surface

(sq-ft)

14,651

14,727

14,803

14,879

14,955

15,031

15,108

15,185

Elevation

(feet)

215.86

215.88

215.90

215.92

215.94

215.96

215.98

216.00

J		J
Surface (sq-ft)	Storage (cubic-feet)	
10,430 10,542	210 422	
10,769	636 852	
10,997 11,113	1,071 1,292	
11,345	1,742	
11,580 11,647	2,200 2,432	
11,715 11,783	2,666 2,901	
11,919	3,375	
12,055 12,124	3,854 4,096	
12,262	4,584	
12,401 12,470	5,077 5,326	
12,610	5,827	
12,751 12,822	6,335 6,590	
12,963	7,106	
13,106 13,178	7,627 7,890	
13,250 13,322	8,155 8,420	
13,466	8,956	
13,611 13,684	9,498 9,771	
13,831	10,321	
13,978 14,052	10,877 11,157	
14,201	11,722	
14,350 14,425	12,293 12,581	
14,500 14,575	12,870	
	(sq-ft) 10,430 10,542 10,655 10,769 10,883 10,997 11,113 11,229 11,345 11,462 11,580 11,647 11,715 11,783 11,850 11,919 11,987 12,055 12,124 12,193 12,262 12,331 12,401 12,470 12,540 12,681 12,751 12,822 12,892 12,963 13,035 13,106 13,178 13,250 13,322 13,394 13,466 13,178 13,250 13,322 13,394 13,466 13,539 13,106 13,178 13,250 13,322 12,892 12,963 13,035 13,106 13,178 13,250 13,378 14,425 14,126 14,201 14,275 14,350 14,425 14,500	(sq-ft) (cubic-feet) 10,430 0 10,542 210 10,655 422 10,769 636 10,883 852 10,997 1,071 11,113 1,292 11,229 1,516 11,345 1,742 11,462 1,970 11,580 2,200 11,647 2,432 11,715 2,666 11,783 2,901 11,850 3,137 11,919 3,375 11,987 3,614 12,055 3,854 12,124 4,096 12,193 4,339 12,262 4,584 12,331 4,830 12,401 5,077 12,470 5,326 12,540 5,576 12,610 5,827 12,681 6,080 12,751 6,335 12,892 6,848 12,963 7,106

Infiltration Basin #2

Stormwater Recharge Calculations

CALCULATIONS

Recharge Volume, Rv:

 $R_v = A_C x F$

Hydrologic Soil Group	Impervious Area (Ac) 1	Target Depth (F)	Recharge Volume (Rv) Ac-feet
A 	1.458	0.6	0.073
Total	1.458		0.073

REFERENCES

Table 2.3.2: Recharge Target Depth by Hydrologic Soil Group

NRCS Hydrologic	Approx. Soil	Target Depth	
Soil Group	Texture	Factor (F)	
Α	sand	0.6 inch	
В	loam	0.35 inch	
С	silty loam	0.25 inch	
D	clay	0.1 inch	

Total Recharge Volume Required = 0.045 Ac-ft Total Recharge Volume Required (Rv) = 1,952 C.ft *Recharge Vol. Provided (from Infil. Area 2) = 26,459.0 **C.ft**

*Stage Area Storage at elevation below lowest outlet = 215.50 (See Attached HydroCAD Storage Table)

Required Sediment Forebay vol, Fv:

 $F_v = A_C(cu.ft)x0.1inch$ of impervious area ¹ Imp. area captured by ponds, Ap =

1.458 Ac Required Sediment Forebay vol, Fv= 529 C.ft

2,134.0 **C.ft** Sediment Forebay Volume Provided =

Drawdown Calculations

CALCULATIONS

Proposed Infiltration Area Calculations:

$$Drawdown = \frac{R_V}{(Rawls\ Rate)(Bottom\ Area)}$$

Drawdown Calculations:

Soil Texture:

2 Loamy Sand

² Bottom Surface Area (A): 6,645 SF 2.41 in/hr Rawls Rate: Total Recharge Volume Required = 1,952 C.ft 1.46 hr Drawdown:

Drawdown is less than 72 Hours as Required

REFERENCES

Table 2.3.3: 1982 Rawls Rates

	NRCS	
	Hydrologic	
Texture Class	Soil Group	Infiltration Rate
1 Sand	Α	8.27 in/hr
2 Loamy Sand	Α	2.41 in/hr
3 Sandy Loam	В	1.02 in/hr
4 Loam	В	0.52 in/hr
5 Silt Loam	С	0.27 in/hr
6 Sandy Clay Loam	С	0.17 in/hr
7 Clay Loam	D	0.09 in/hr
8 Silty Clay Loam	D	0.06 in/hr
9 Sandy Clay	D	0.05 in/hr
10 Silty Clay	D	0.04 in/hr
11 Clav	D	0.02 in/hr

NOTES:

Input Values

⁼ Refer to Proposed Conditions HydroCAD modeling report

Storage

22,737

23,259

23,784

24,312

24,843

25,378

25,917

26,459

27,004

27,552

28,104

28,660

29,218

29,781

30,346

30,916

31,488

32,065

(cubic-feet)

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Stage-Area-Storage for Pond 4P: Infiltration Basin #2

Surface

(sq-ft) 10,398

10,465

10,532

10,599

10,666

10,733

10,801

10,869

10,937

11,005

11,074

11,142

11,211

11,280

11,350

11,419

11,489

11,559

	_		
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)
(feet) 212.50 212.55 212.60 212.65 212.70 212.75 212.80 212.85 212.90 212.95 213.00 213.05 213.15 213.20 213.25 213.30 213.35 213.40 213.45 213.50 213.55 213.60 213.55 213.60 213.75 213.80 213.75 213.80 213.75 213.80 213.95 214.00 214.15 214.20 214.25 214.30 214.25 214.30 214.25 214.40 214.55 214.60 214.55 214.60 214.55 214.60 214.70 214.75 214.80 214.85 214.90 214.95 215.00 215.05 215.10	(sq-ft) 6,645 6,716 6,787 6,858 6,930 7,002 7,074 7,147 7,220 7,294 7,368 7,442 7,517 7,592 7,668 7,744 7,820 7,896 7,973 8,051 8,128 8,206 8,285 8,364 8,443 8,523 8,602 8,683 8,763 8,988 9,050 9,112 9,174 9,237 9,299 9,362 9,425 9,425 9,489 9,552 9,489 9,552 9,616 9,680 9,744 9,809 9,744 9,809 9,874 9,938 10,004 10,266 10,332	(cubic-feet) 0 334 672 1,013 1,357 1,706 2,058 2,413 2,772 3,135 3,502 3,872 4,246 4,624 5,005 5,390 5,780 6,172 6,569 6,970 7,374 7,783 8,195 8,611 9,031 9,455 9,884 10,752 11,192 11,636 12,084 12,535 12,989 13,446 13,906 14,370 14,836 15,779 16,255 16,734 17,217 17,702 18,191 18,683 19,178 19,677 20,684 21,704 22,219	(feet) 215.15 215.20 215.25 215.30 215.35 215.40 215.45 215.50 215.55 215.60 215.70 215.75 215.80 215.90 215.95 216.00

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Adjusted Recharge/WQV Calcs

Stormwater Recharge Calculations

Capture Area Adjustment, Rvadj:

$$R_v a dj = \frac{A_t}{A_p} x R_v$$

1 Imp. area captured by ponds, Ap = 3.753 Ac
Total impervious area on site, AT = 6.353 Ac
Recharge volume required, Rv = 13,837 C.ft
Capture Rate= 59%
Capture Area Adjustment Factor= 1.69
Adjusted Recharge Volume Required Rvadj = 23,423 C.ft

Total impervious area on site, AT, omits the three apartment building's roofs as they are being recharged via drip line trench.

¹ Total Recharge Volume Provided = 32,286.0 C.ft

NOTES:

Input Values

Water Quality Calculations

CALCULATIONS

Water Quality Calculation:

 $V_{WQ} = D_{WQ}(ft)x A_T(ft^2)$

REFERENCES

1 inch depth
Zone II discharges
IWPA discharges
Critical Area
Runoff from LUHPPL
Infiltration rate >2.4 inches/hour
1/2 inch depth
Discharge to other ares
8 inch
9 inch
10 inch
11 inch

^{1 =} Sum of Recharge Vol. Provided from Infil. Basin 1, Infil. Basin 2

- 1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
- 2. Select BMP from Drop Down Menu
- 3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: TSS removal with pretreatment calculation.

TSS Removal Calculation Worksheet

В	С	D	E	F
	TSS Removal	Starting TSS	Amount	Remaining
BMP ¹	Rate ¹	Load*	Removed (C*D)	Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Sediment Forebay	0.25	0.75	0.19	0.56
	0.00	0.56	0.00	0.56
	0.00	0.56	0.00	0.56
	0.00	0.56	0.00	0.56

Total TSS Removal =

Separate Form Needs to be
Completed for Each Outlet or
BMP Train

Project: 500 Main Street
Prepared By: RPV
Date: 1-Feb-23

- 1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
- 2. Select BMP from Drop Down Menu
- 3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: TSS removal with pretreatment calculation.

TSS Removal Calculation Worksheet

В	С	D	E	F
	TSS Removal	Starting TSS	Amount	Remaining
BMP ¹	Rate ¹	Load*	Removed (C*D)	Load (D-E)
Grass Channel	0.50	1.00	0.50	0.50
Sediment Forebay	0.25	0.50	0.13	0.38
	0.00	0.38	0.00	0.38
	0.00	0.38	0.00	0.38
	0.00	0.38	0.00	0.38

Total TSS Removal =

Separate Form Needs to be
Completed for Each Outlet or
BMP Train

Project: 500 Main Street
Prepared By: RPV
Date: 1-Feb-23

- 1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
- 2. Select BMP from Drop Down Menu
- 3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: TSS removal for overall site.

С F В D Ε **TSS Removal** Starting TSS Remaining **Amount** BMP¹ Rate¹ Load (D-E) Removed (C*D) Load* **Deep Sump and Hooded Catch Basin** 0.25 1.00 0.25 0.75 **Infiltration Basin** 0.80 0.75 0.60 0.15 0.00 0.15 0.00 0.15 0.00 0.15 0.00 0.15 0.00 0.15 0.00 0.15

TSS Removal Calculation Worksheet

Total TSS Removal =

85%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: 500 Main Street
Prepared By: RPV
Date: 1-Feb-23

- 1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
- 2. Select BMP from Drop Down Menu
- 3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: TSS removal for overall site.

TSS Removal Calculation Worksheet

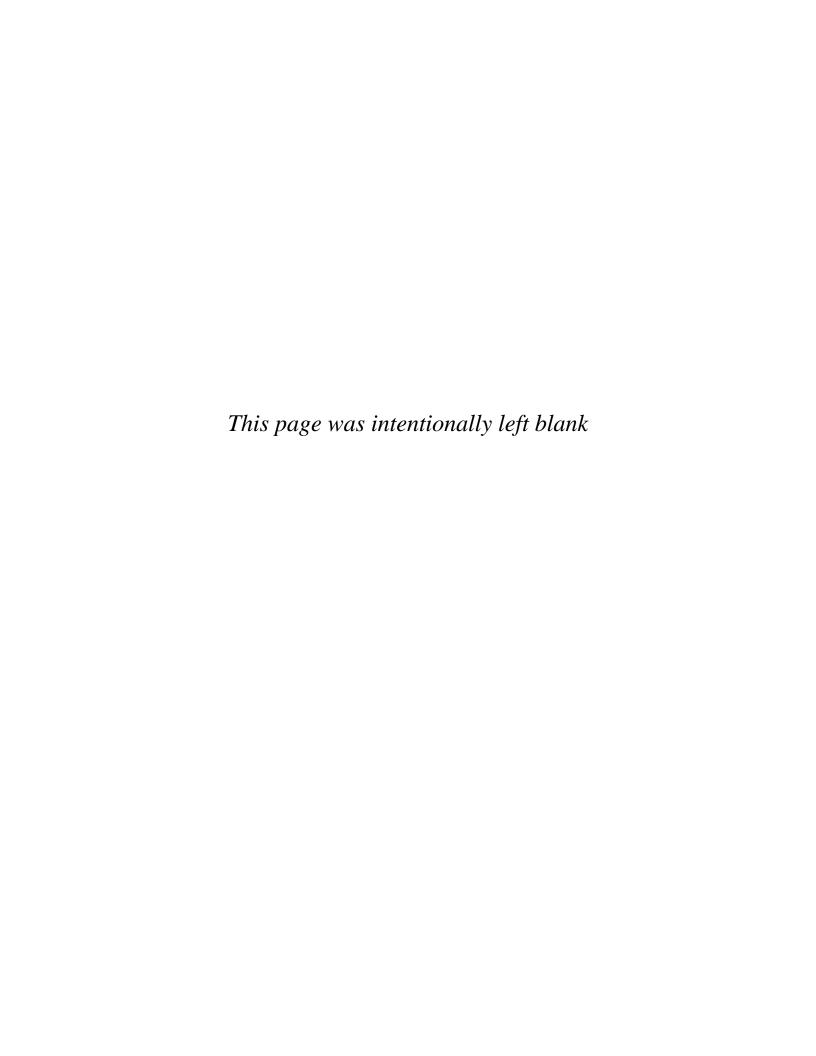
В	С	D	E	F
	TSS Removal	Starting TSS	Amount	Remaining
BMP ¹	Rate ¹	Load*	Removed (C*D)	Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Wet Basin	0.80	0.75	0.60	0.15
	0.00	0.15	0.00	0.15
	0.00	0.15	0.00	0.15
	0.00	0.15	0.00	0.15

Total TSS Removal =

85%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: 500 Main Street
Prepared By: RPV
Date: 1-Feb-23





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ENGINEERING 02/09/2023 #6842

LAND SURVEYING

WETLAND CONSULTING

Groton Farms 500 Main Street Groton, MA

Sediment Loading Calculations

The following pretreatment structure below for the proposed development receives the largest amount of tributary runoff on site to be sanded. This structure was used to analyze the capacity of the four-foot sump within the structure. This area is the sum of all paved areas that will be routed through the pre-treatment device prior to entering the stormwater management areas. The volume of sediment accumulated is based on a sand density of 90 pounds per cubic foot and assumes a frequency of 10 sandings per year. The calculation used is as follows:

Annual Sediment Accumulated = (Area to be sanded in acres)
$$x 500 \frac{lbs}{acre - storm} x \frac{10 storms}{90 \frac{lbs}{ft^3}}$$

Structure	Area to be Sanded (Acres)	Annual Sediment Accumulated (ft ³)
DCB-12	0.487	27.05

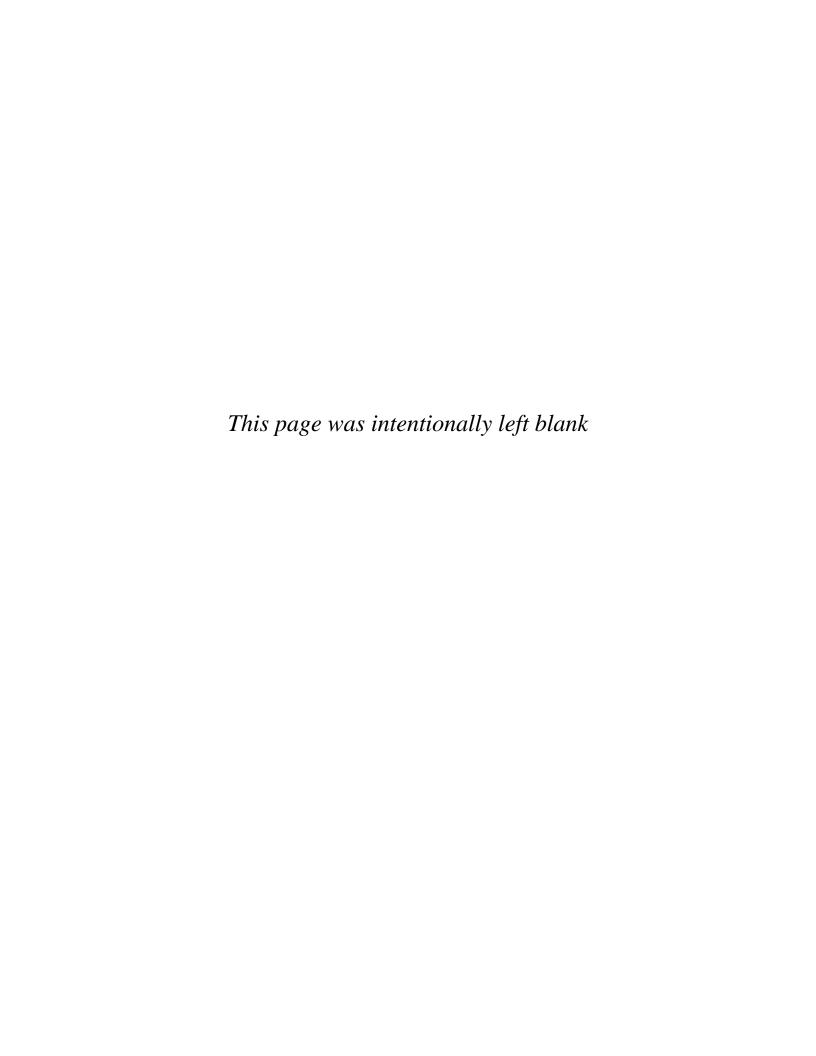
A four-foot sump in these structures equates to a storage area of approximately 50 cubic feet. As such, the accumulated sediment will not cause any clogging to the outlet culverts.

Ryan Vickers, E.I.T.

Civil Engineer

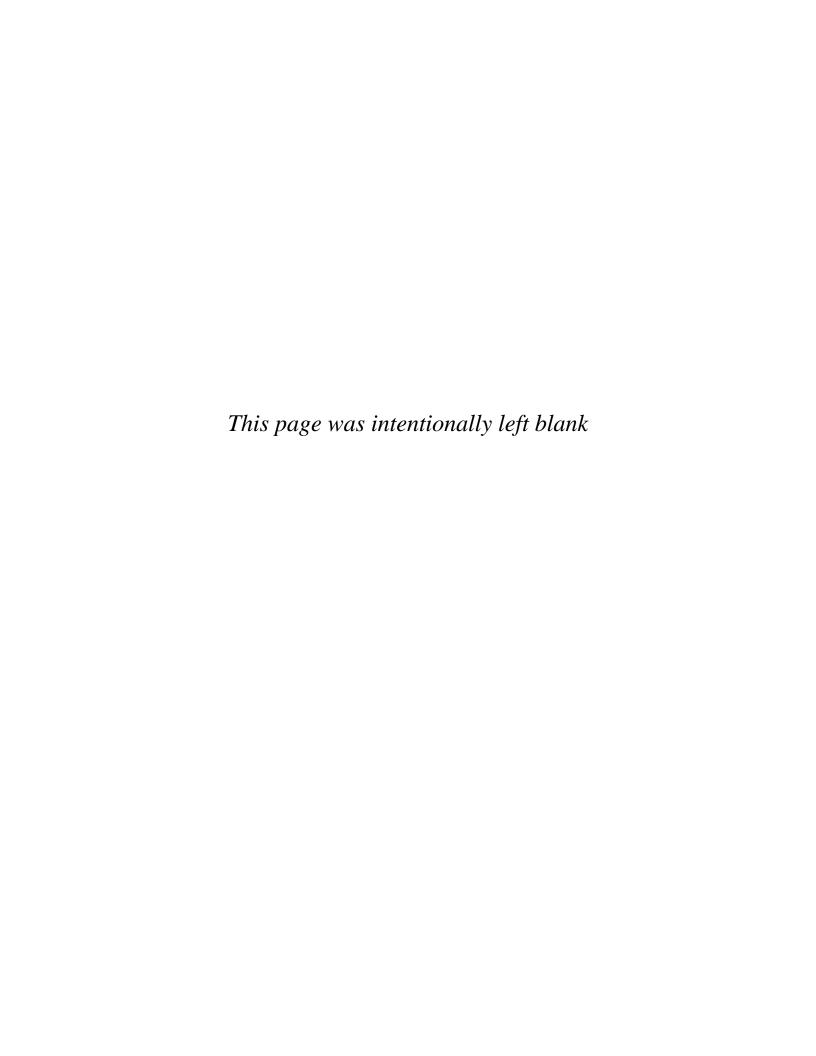
Gregory S. Roy, P.E.

Principal

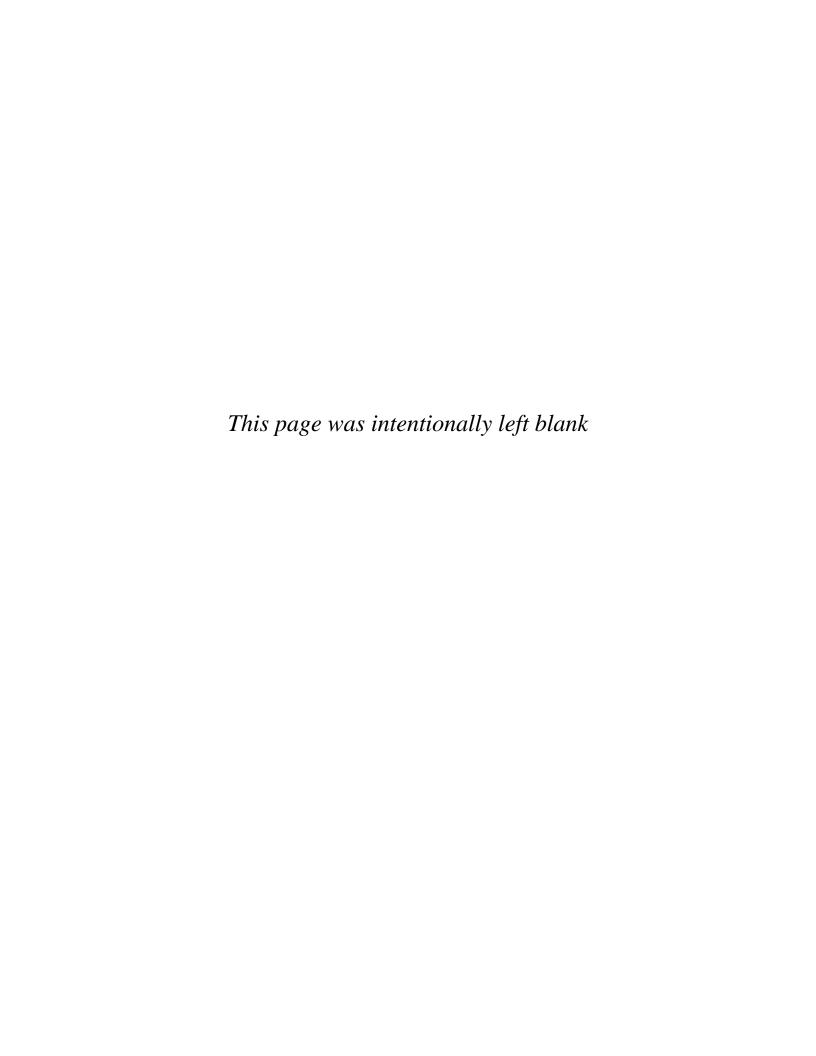


Appendix G – Construction Period Pollution Prevention

The project is covered under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which will be submitted in place of the Construction Period Pollution Prevention Plan, prior to any land disturbance.



Appendix H - Operation and Maintenance Plan



STORMWATER OPERATION & MAINTENANCE MANUAL

FOR

GROTON FARMS 500 MAIN STREET

IN

GROTON, MASSACHUSETTS

Prepared By: Dillis & Roy

CIVIL DESIGN GROUP, INC. 1 Main Street, Suite 1 Lunenburg, MA 01462

Prepared For: 500 MG LLC

6 Lyberty Way

WESTFORD, MA 01886

FEBRUARY 9TH, **2023**

CDG PROJECT #6842



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- 1.1 Overview of Drainage System
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1.0 Project Narrative

1.1 Proposed Stormwater Management System

The proposed stormwater management system was designed to reduce the peak rate of stormwater leaving the site, promote groundwater recharge, and increase the water quality. Runoff from the proposed development will be conveyed and treated using sedimentation forebays & infiltration/wet basins. Three proposed apartment buildings will utilize a drip line recharge trench along the building's perimeter.

<u>Infiltration Basin with Sediment Forebay</u>

Two infiltration basins with sediment forebays will treat the runoff. The volumes of the infiltration basins were designed to reduce runoff rates up to the 100-year storm event, infiltrate the require recharge volume and sized to handle the appropriate water quality volume. The basins are combined with sediment forebays. The sediment forebays are designed to reduce the velocity of flow which will increase the settlement of heavy solids before emptying to the basins. Riprap will also be installed at the inlet of the sediment forebays to reduce the potential for scouring.

Deep Sump Hooded Catch Basins

Deep sump hooded catch basins are proposed to convey the runoff from the proposed roadway & roofs to the infiltration basins. These catch basins will discharge to manholes and conventional storm drains.

Drip Line Recharge Trenches

Drip line recharge trenches are proposed along the foundations of each dwelling to collect and mitigate any stormwater runoff associated with the proposed roofs. The recharge trenches will consist of 3/4" trap stone laid on filter fabric to prevent sediment buildup. The recharge trenches have been designed to accommodate the runoff volume associated with the 100-year storm.

Wet Basin

The proposed reconstructed wet basin utilizes a permanent pool of water as the primary mechanism to treat stormwater runoff. The pool allows sediments to settle (including fine sediments) and removes soluble pollutants. The wet basin has been designed to provide additional dry storage capacity to control peak discharge rates. The wet basin allows incoming stormwater to displace the water present in the pool. This stormwater remains until displaced by runoff from another storm event. Increased retention time allows particulates, including fine

sediments, to settle out of the water column. The permanent pool also serves to protect deposited sediments from resuspending during large storm events. Sediment forebays designed at the entrance of the basin was included to decrease the velocity of flow and increase the settlement of heavy solids prior to the infiltration basin. Riprap will also be installed at the inlet of the sediment forebays and the outlet of the basin to control the overflow of stormwater into the adjacent wetlands and will reduce the potential for scouring.

Grassed Swales

The grassed channels have been designed with a relatively flat (2.0%) slope to reduced runoff velocity and increase hydraulic residency time to promote particulate settling. The grassed channel has been provided with a sediment forebay for stormwater pretreatment. The grass swales will receive runoff from the proposed roofs along the townhomes & sheet flow from the entrance road. The entrance road has been designed with a 2% cross-slope to pitch towards a grassed swale system to convey the runoff to Infiltration Basin #1's sediment forebay for additional treatment.

1.2 Operation & Maintenance Tasks

The following activities should be performed routinely to allow for proper functioning of the stormwater system. The following are guidelines referring to each major component of the stormwater management system.

1.2.1 Street Sweeping

Street sweeping should be performed at least annually. For most effective results, sweeping should be preformed by a vacuum style truck in the early spring before spring rain events can wash silt and sediment into the stormwater system. Silt and sediment should be disposed of in accordance with local, state and federal guidelines for hazardous waste.

1.2.2 Infiltration Basin

The infiltration basins should be monitored and maintained regularly to ensure no obstructions in the system are present. The basin should be monitored for the buildup of sedimentation. If the depth of sedimentation begins to impair the basin's ability to infiltrate water, the basin will need to be cleaned out.

The riprap used for the spillway and sediment forebay should be inspected regularly for sediment build up, clogging or other unwanted materials such as trash. The riprap should be cleaned as required.

1.2.3 Sediment Forebay

A sediment forebay is required as a pretreatment device prior to discharging stormwater to the infiltration basin. The sediment forebay will provide pretreatment by slowing stormwater runoff and increasing settlement of the sediment. The sediment forebay should be inspected monthly and cleaned of accumulated sediment on a quarterly basis. After sediment removal, repair any damaged vegetation by reseeding or resodding. Grass should be maintained at a height of 4-6 inches.

1.2.4 Deep Sump Catch Basins

Deep sump catch basins shall be inspected at least semi-annually for signs of wear, settling, cracking or other fatigue. Catch basin castings should be inspected for signs of root intrusion or significant water infiltration. Catch basin sump should be check for silt/sediment buildup and cleaned as necessary. Cleaning should be performed by a vacuum truck. Catch basins should be resealed as required and outlets should be inspected incidentally with all structure inspections.

1.2.5 Storm Drain Lines

Storm drainage inlets and outlets should be inspected incidentally with all structure inspections. Evidence of debris intrusion or excessive siltation or sedimentation could result in the need to clean a storm drain line. Flushing or jetting should be performed as required. All flushing and jetting should be performed in the direction away from any outlet devices. A vacuum truck should be used at the opposite end of the flushing or jetting to remove any silt or sediment that is cleaned from the storm drain.

1.2.6 Drip Line Recharge Trenches

Perform preventive maintenance at least twice a year. Inspect and clean pretreatment BMPs every six months and after every major storm event (2-year return frequency). Remove accumulated sediment, trash, debris, leaves, and grass clippings from mowing. Remove tree seedlings, before they become firmly established. Inspect the infiltration trench after the first several rainfall events, after all major storms, and on regularly scheduled dates twice a year. If the top of the trench is grassed, it must be mowed on a seasonal basis. Grass height must be maintained to be no more than four inches. Routinely remove grass clippings leaves and accumulated sediment from the surface of the trench. Inspect the trench 24 hours or several days after a rain event, to look for ponded water. If there is ponded water at the surface of the trench, it is likely that the trench surface is clogged. To address surface clogging, remove and replace the topsoil or first layer of stone aggregate and the filter fabric. If water is

ponded inside the trench, it may indicate that the bottom of the trench has failed. To rehabilitate a failed trench, all accumulated sediment must be stripped from the bottom, the bottom of the trench must be scarified and tilled to induce infiltration, and all the stone aggregate and filter fabric or media must be removed and replaced.

1.2.7 Wet Basin

Inspect the wet basin at least once per year to ensure it is operating as designed. Inspect the outlet structure for evidence of clogging or excessive outflow releases. Potential problems to check include: subsidence, erosion, cracking or tree growth on the embankment, damage to the emergency spillway, sediment accumulation around the outlet, inadequacy of the inlet/outlet channel erosion control measures, changes in the condition of the pilot channel, erosion within the basin and banks, and the emergence of invasive species. Make any necessary repairs immediately. During inspections, note any changes to the wet basin or the contributing watershed area because these may affect basin performance. At least twice a year, mow the upper-stage, side slopes, embankment and emergency spillway. At this time, also check the sediment forebay for accumulated material, sediment, trash, and debris and remove it. Remove sediment from the basin as necessary, and at least once every 10 years. Providing an on on-site sediment disposal area will reduce the overall sediment removal costs.

The riprap used for the sediment forebay should be inspected regularly for sediment build up, clogging or other unwanted materials such as trash. The riprap should be cleaned as required.

Infiltration structures should be inspected on a routine basis (at least semiannually) and after a major storm event. Important items to examine include: differential settlement, cracking, erosion, leakage or tree growth on the embankment, and sediment accumulation and the density of grass. Site design should be reevaluated should clogging occur to determine the factors responsible for the problem.

These inspections should be used to determine the effectiveness of the regular maintenance schedule as well as to determine the timing of corrective maintenance procedures.

Buffers, side slopes, and basin floors should be mowed at least twice a year. A routine should be developed for the removal of trash and debris. Grading and landscaping around facility inlets shall be designed to facilitate mowing, trimming, removal and other general maintenance. Grass clippings and accumulated organic matter must be removed to prevent the formation of an impervious organic layer or mat. Trees, shrubs and other vegetative cover also

February 1st, 2023 500 MG LLC

require periodic maintenance such as fertilizing, pruning and pest control to maintain healthy growth.

O&M Schedule

	:M Task	Monthly	Quarterly	Spring	Fall	2-years	As-required
1.	Infiltration Basin						
	Inspection			X	X		X
	Mowing	3-4 1	imes du	ring the	e growir	ng seaso	n
	Remove Debris			X	X		X
	Remove Sediment						X
	Re-seed						X
2.	Sediment Forebay						
	Inspection	X		X	X		X
	Mowing	3-4 times during the growing season					
	Remove Debris	_	X				X
	Remove Sediment		X				X
	Re-seed						X
3.	Stone Rip Rap						
	Inspection			X			
	Remove Debris			X			X
	Remove Silt/Sediment					X	X
	Repair		1				X
4.	Storm Drain Lines						
	Inspection			X			X
	Clean						X
5.	Catch Basin						
	Inspection		1	X	X		
	Remove Debris						X
	Remove Silt/Sediment						X
7.	Drain Manholes						
	Inspect Rims						
	Inspect inside/inlet and outlet pipes		1	X	X		
	Remove sediment					X	X
8.	Wet Basin						
	Inspection		<u> </u>	X	X		X
	Remove Debris		<u> </u>	X	X		X
	Remove Sediment]				X

February 1st, 2023 500 MG LLC

APPENDIX A

Stormwater Management System Owners/Operators

1. Stormwater Management System Owners: To be determined

2. Current and future operators: To be determined

3. Emergency contact information: To be determined

4. Change of trustee: To be determined

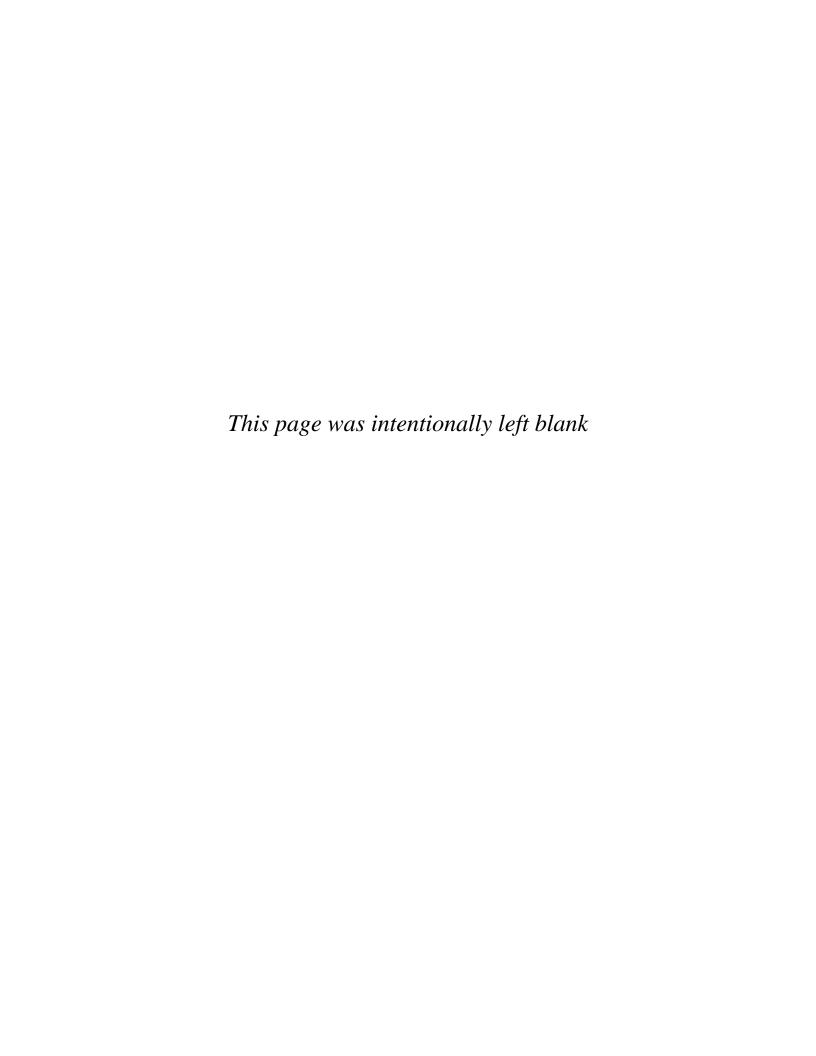
5. Financial Responsible Party: To be determined

6. Routine Maintenance: To be determined

7. O&M activities: To be determined

8. Record keeping To be determined

Appendix I - Long Term Pollution Prevention Plan



LONG-TERM POLLUTION PREVENTION PLAN

FOR

GROTON FARMS 500 MAIN STREET

IN

GROTON, MASSACHUSETTS

Prepared By: Dillis & Roy

CIVIL DESIGN GROUP, INC. 1 Main Street, Suite 1 Lunenburg, MA 01462

PREPARED FOR: 500 MG LLC

6 Lyberty Way

WESTFORD, MA 01886

FEBRUARY 9TH, **2023**

CDG PROJECT #6842



1.0 Summary

This Long-Term Pollution Prevention Plan (LTPPP) has been prepared by Dillis & Roy Civil Design Group, Inc. pursuant to the Massachusetts Stormwater Regulations. The applicant 500 MG LLC is proposing the construction of a mixed-use development on the north side of Route 119 just northerly of the intersection of Mill Street & Main Street. The proposed development consists of 16 quadplex units (1,220 SF ea.), 16 quadplex units (643 SF ea.), 3 apartment buildings (17,818 sf ea.), and clubhouse building (4,950 sf). The proposed work is located on Assessor's Map 216- Block 94, 95, & 96. The proposed scope of construction also includes a private roadway, on-site parking, clubhouse area with associated amenities, stormwater management systems, and new utility connections with their associated appurtenances.

The layout of the proposed site has been carefully planned to reduce the amount of stormwater leaving the site. The stormwater management system has been designed in accordance with the Massachusetts Stormwater Regulations to provide pretreatment of the stormwater prior to discharge.

2.0 Spill Prevention Plan

No hazardous materials other than normal cleaning items are expected to be stored on site after the construction period has ended.

It is expected that normal DEP notification procedures would be triggered for major spills such as heating oil or propane and natural gas leaks.

3.0 Stormwater System O&M

A Stormwater Operation & Maintenance plan has been prepared for the proposed stormwater management system. Refer to this document for details pertaining to the required inspections, routine maintenance and operation details.

4.0 Fertilizers, herbicides, and pesticides

Application of fertilizer, herbicides and pesticides shall be performed in a manner consistent with the industry standards for the application.

No application of chemicals is to be performed within the stormwater management areas on the site.

5.0 Snow/Salt Management

5.1 Snow Plowing

It is expected that the site will be plowed by the Groton DPW once the road is

accepted.

5.2 Salt/Sand Usage

It is expected that sanding and salting will be performed on an infrequent basis during times when unusually icy conditions persist for periods of time.

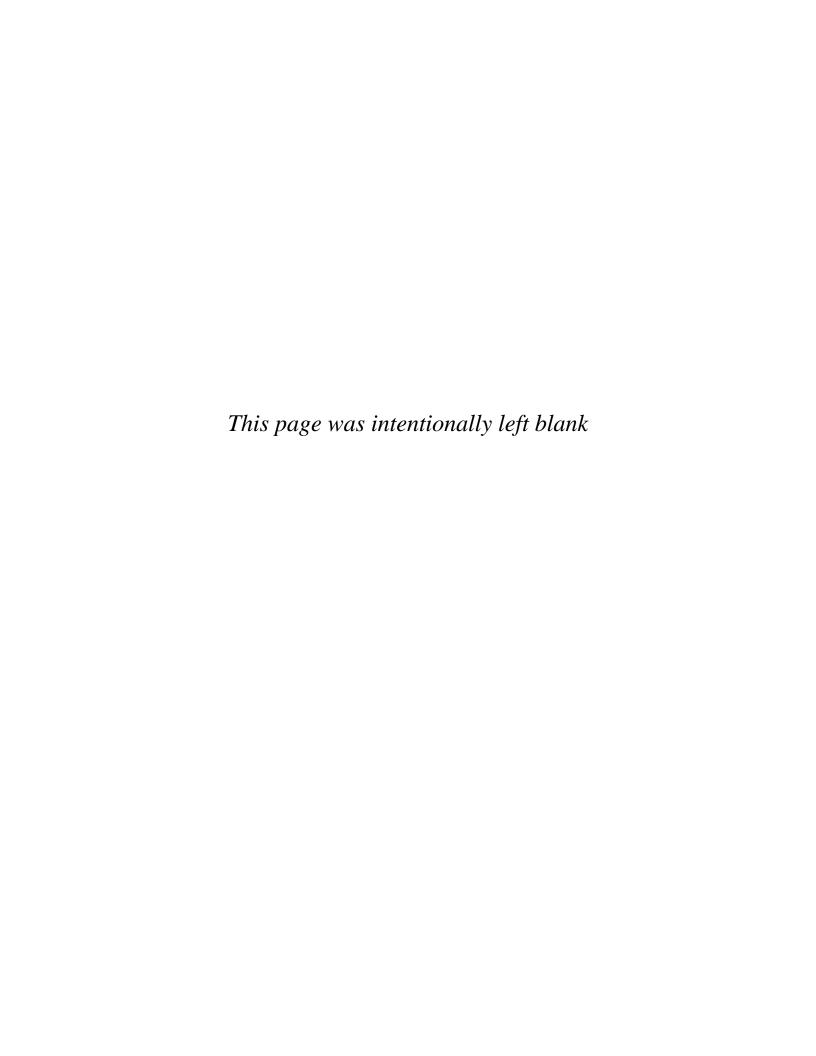
5.3 Street Sweeping

The Stormwater Operation & Maintenance Plan calls for the road and parking areas to be swept in the spring, after the threat of winter precipitation has passed.

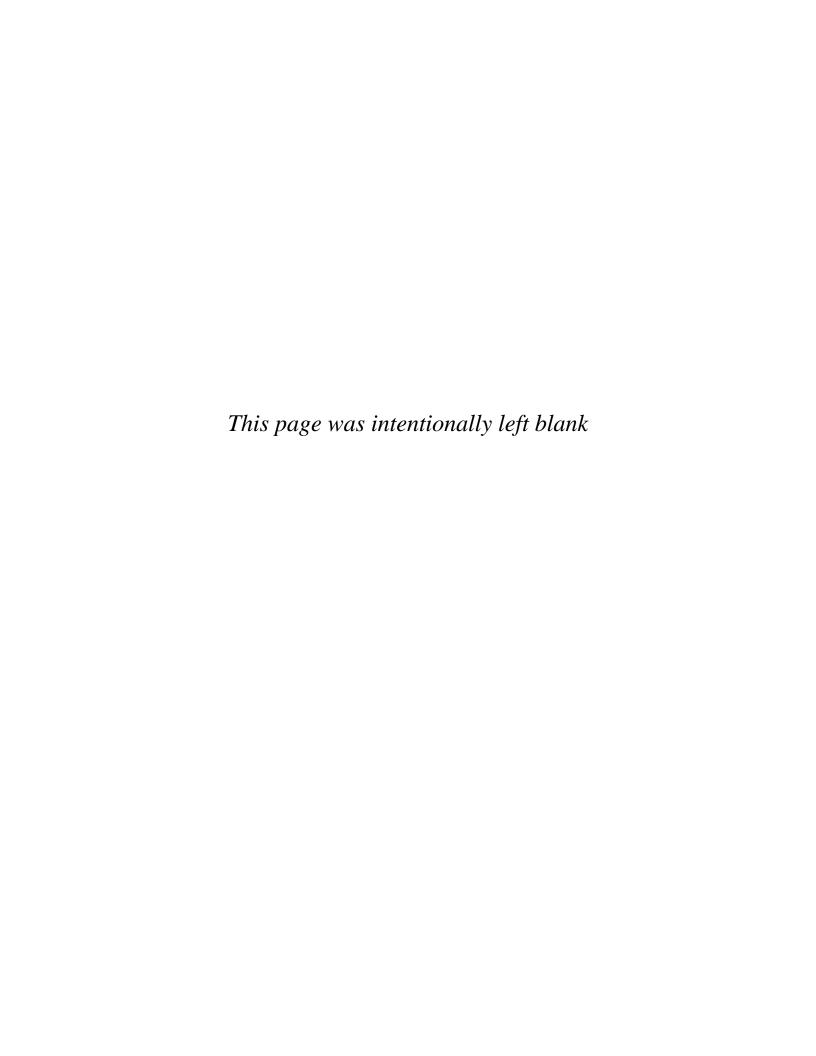
6.0 Waste Management

6.1 Solid Waste

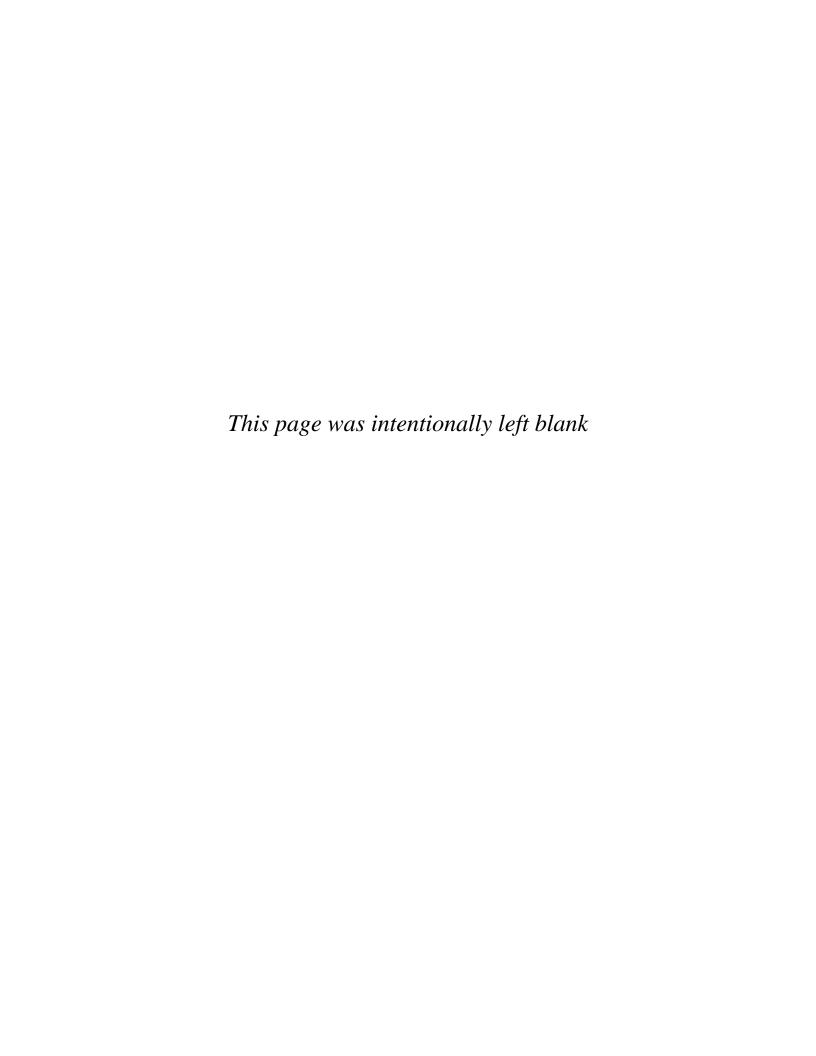
A dumpster will be located on the site during construction. This area will be the primary area for the on-site storage of solid waste prior to pick-up by a waste management company.

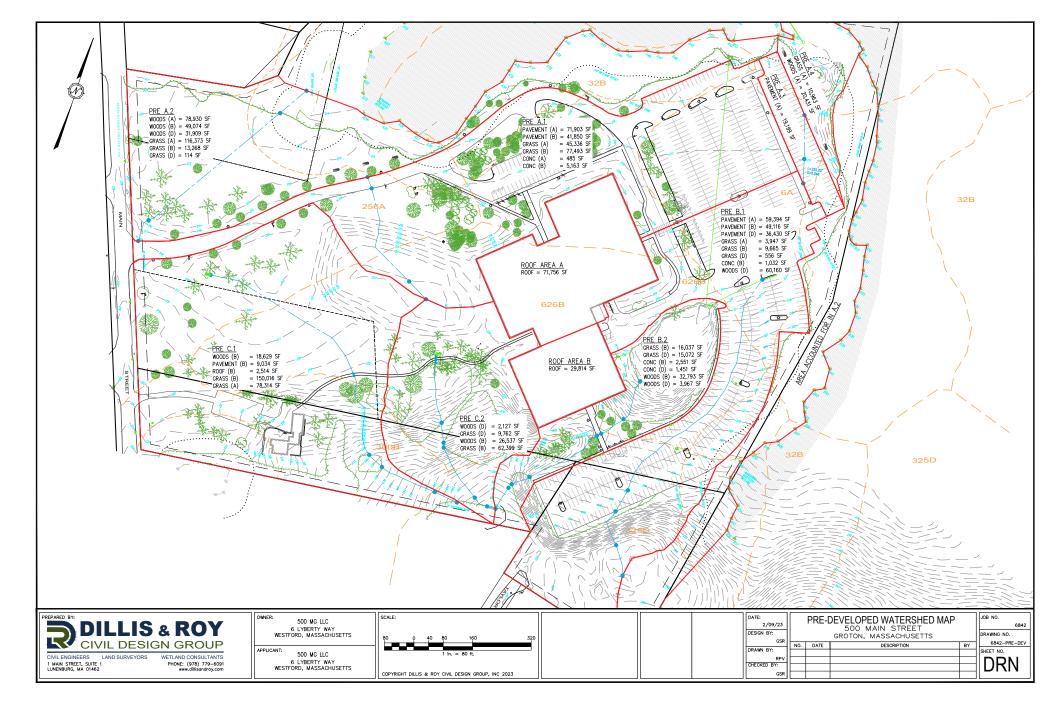


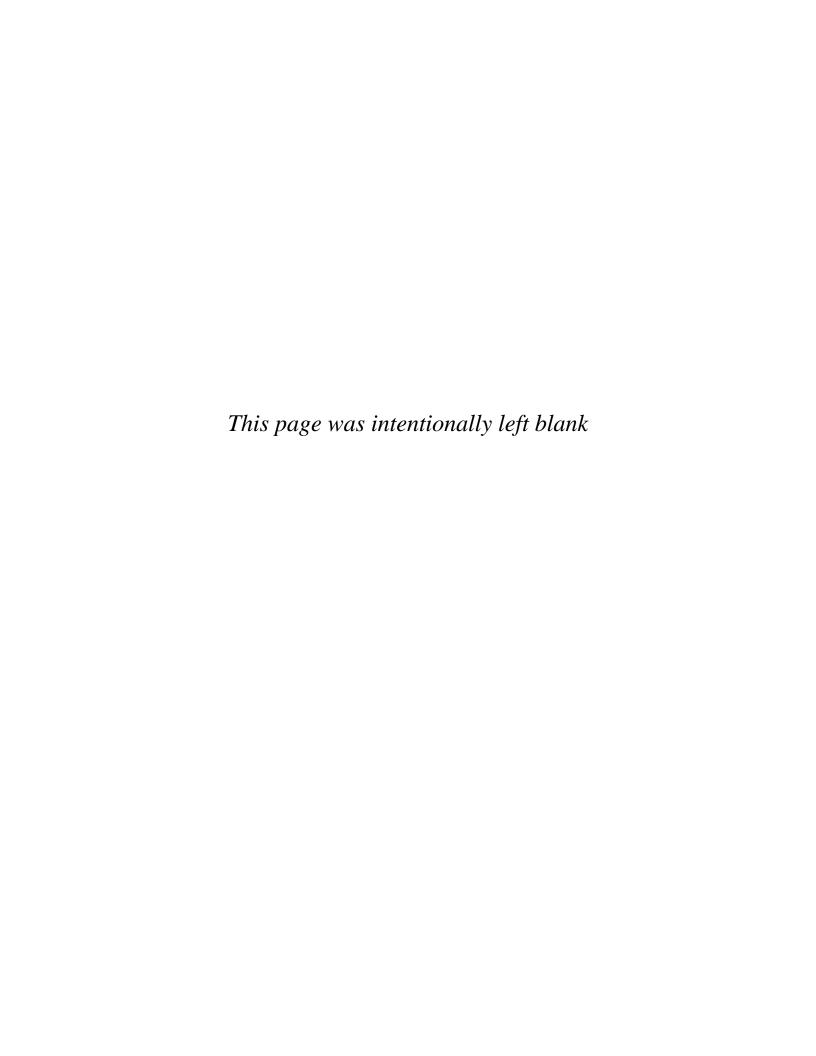
4.0 Plans



Pre-development Watershed Plan







Post-development Watershed Plan

