Appendix A: NYSDEC SPDES General Permit GP-0-20-001

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Department of Environmental Conservation	. STATE MENTAL CONSERVATION &AL PERMIT R DISCHARGES		N ACTIVITY	- 0-20-001 , Titles 7, 8 and Article 70	Conservation Law	Expiration Date: January 28, 2025		02-22-1	Date	<u>9</u>
NEW YORK	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES	From	CONSTRUCTION ACTIVITY	Permit No. GP- 0-20-001 Issued Pursuant to Article 17, Titles 7, 8 and Article 70	of the Environmental Conservation Law	Effective Date: January 29, 2020	John J. Ferguson Chief Permit Administrator	( A A	Authorized Signature	Address: NYS DEC Division of Environmental Permits 625 Broadway, 4th Floor Albany, N.Y. 12233-1750

#### PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An owner or operator of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

\*Note: The italicized words/phrases within this permit are defined in Appendix A.

#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part 1. PERMIT COVERAGE AND LIMITATIONS	(Part I.B.1) deviation or alternative design and provide information which demonstrates that
A. Permit Application	the deviation or alternative design is <i>equivalent</i> to the technical standard.
This permit authorizes stormwater <i>discharges</i> to <i>surface waters of the State</i> from the following <i>construction activities</i> identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(i), provided all of the eligibility provisions of this permit are met:	<ul> <li>Erosion and Sediment Controls. Design, install and maintain effective erosion and sediment controls to <i>minimize</i> the <i>discharge</i> of <i>pollutants</i> and prevent a violation of the <i>water quality standards</i>. At a minimum, such controls must be designed, installed and maintained to:</li> </ul>
1. <i>Construction activities</i> involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a <i>larger common</i>	(i) <i>Minimize</i> soil erosion through application of runoff control and soil stabilization control measure to <i>minimize pollutant discharges</i> ;
plan of development or sale that will ultimately disturb one or more acres of land; excluding <i>routine maintenance activity</i> that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;	<ul> <li>Control stormwater <i>discharges</i>, including both peak flowrates and total stormwater volume, to <i>minimize</i> channel and <i>streambank</i> erosion and scour in the immediate vicinity of the <i>discharge</i> points;</li> </ul>
2. Construction activities involving soil disturbances of less than one (1) acre where the Department has determined that a <i>SPDES</i> permit is required for	(iii) Minimize the amount of soil exposed during construction activity,
stormwater <i>discharges</i> based on the potential for contribution to a violation of a water quality standard or for significant contribution of <i>pollutants</i> to <i>surface</i> waters of the State	(iv) Minimize the disturbance of steep slopes;
	(v) Minimize sediment discharges from the site;
<ol> <li>Construction activities located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.</li> </ol>	(vi) Provide and maintain <i>natural buffers</i> around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce <i>pollutant discharges</i> , unless <i>infeasible</i> ;
B. Effluent Limitations Applicable to Discharges from Construction Activities	(vii) Minimize soil compaction. Minimizing soil compaction is not required
<i>Discharges</i> authorized by this permit must achieve, at a minimum, the effluent limitations in Part I B 1 (a) – (f) of this permit These limitations represent the derived of	where the intended function of a specific area of the site dictates that it be compacted;
effluent reduction attainable by the application of best practicable technology currently available.	(viii) Unless <i>infeasible</i> , preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
<ol> <li>Erosion and Sediment Control Requirements - The <i>owner or operator</i> must select, design, install, implement and maintain control measures to <i>minimize</i> the <i>discharge</i> of <i>pollutants</i> and prevent a violation of the <i>water quality</i> <i>standards</i>. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent</li> </ol>	(ix) Minimize dust. On areas of exposed soil, minimize dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.

(Part I)

fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments b. Soil Stabilization. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within

included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* ("SWPPP") the reason(s) for the

limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria New York State Standards and Specifications for Erosion and Sediment

(Part I.B. 1.b)
listed in Appendix E or is located in one of the watersheds listed in
Appendix C, the application of soil stabilization measures must be initiated
by the end of the next business day and completed within seven (7) days
from the date the current soil disturbance activity ceased. See Appendix A
for definition of <i>Temporarily Ceased</i> .

- c. Dewatering. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, must be managed by appropriate control measures.
- d. Pollution Prevention Measures. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
- Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;
- (ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use); and
- (iii) Prevent the *discharge of pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.
- e. Prohibited Discharges. The following discharges are prohibited:
- Wastewater from washout of concrete;
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(Part I.B. 1.e.iii)

- (iv) Soaps or solvents used in vehicle and equipment washing; and
- Toxic or hazardous substances from a spill or other release.
- Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

# C. Post-construction Stormwater Management Practice Requirements

- The owner or operator of a construction activity that requires post-construction stormwater management practices pursuant to Part III. C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standard.
- The owner or operator of a construction activity that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable sizing criteria in Part I.C.2.a., b., c. or d. of this permit.

## a. Sizing Criteria for New Development

- (i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQV") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible. In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year. 24-hour storm event: remaining after runoff reduction. The Cpv requirement does not apply when:
  - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or (2) The site disordered site of under a field under a field.
- (2) The site discharges directly to tidal waters, or fifth order or larger streams.
- (iv) Overbank Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
   (1) the site discharges directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that overbank control is not required.
- (v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
   (1) the site discharges directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.
- b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watershed
- (i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

(Part IC2bi) calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible. In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
  (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
  (2) The site *discharges* directly to tidal waters, or fifth order or larger
- (iv) Overbank Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
   (1) the site *discharges* directly to tidal waters or fifth order or larger

streams.

- streams, or (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
  (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.

	(Part LC.2.c)	(Part I.C.2 d)
c. Sizi	Sizing Criteria for Redevelopment Activity	<ul> <li>d. Sizing Criteria for Combination of Redevelopment Activity and New Development</li> </ul>
Ξ	Water Quality Volume (WQv): The WQv treatment objective for redevelopment activity shall be addressed by one of the following options. Redevelopment activities located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other redevelopment activities shall calculate the WQv in accordance with Section 4.2 of the Design Manual.	Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.
	(1) Reduce the existing impervious cover by a minimum of 25% of the total disturbed, impervious area. The Soil Restoration criteria in	D. Maintaining Water Quality
	Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or (2) Capture and treat a minimum of 25% of the WQv from the disturbed, <i>impervious area</i> by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, <i>impervious area</i> by the application of RR techniques or standard SMPs with RRv capacity.	The Department expects that compliance with the conditions of this permit will control <i>discharges</i> necessary to meet applicable <i>water quality standards</i> . It shall be a violation of the <i>ECL</i> for any discharge to either cause or contribute to a violation of <i>water quality standards</i> as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:
	(3) Capture and treat a minimum of 75% of the WOV from the disturbed, <i>impervious area</i> as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3	<ol> <li>There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;</li> </ol>
	and 9.4 of the Design Manual., or (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application	<ol><li>There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and</li></ol>
	of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.	<ol><li>There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.</li></ol>
	If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the <i>impervious area</i> that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.	If there is evidence indicating that the stormwater <i>discharges</i> authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the <i>water quality standards</i> ; the <i>owner or operator</i> must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the <i>water quality standard</i> violation the <i>owner or operator</i> may need to provide additional information.
(ii)	Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the <i>discharge</i> rate from the project site.	include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit. If there is avidence indicating that despite compliance with the terms and conditions of
	<i>Overbank</i> Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the <i>discharge</i> rate from the project site.	In under its evidence inductanty that despite compliance with the terms and condutors of this general permit it is demonstrated that the stormwater <i>discharges</i> authorized by this permit are causing or contributing to a violation of <i>water quality standards</i> , or if the Department determines that a modification of the permit is necessary to prevent a violation of <i>water quality standards</i> , the authorized <i>discharges</i> will no longer be eligible
(iv)	Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the <i>discharge</i> rate from the project site	for coverage under ruis permit. The Department may require the owner or operator to obtain an individual SPDES permit to continue discharging.

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- This permit may authorize all *discharges* of stormwater from *construction* activity to surface waters of the State and groundwaters except for ineligible *discharges* identified under subparagraph F. of this Part.
- Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from construction activities.
- 3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
- 4. The owner or operator must maintain permit eligibility to discharge under this permit. Any discharges that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the owner or operator must either apply for a separate permit to cover those ineligible discharges or take steps necessary to make the discharge eligible for coverage.
- F. Activities Which Are Ineligible for Coverage Under This General Permit
- All of the following are not authorized by this permit:
- Discharges after construction activities have been completed and the site has undergone final stabilization;
- Discharges that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
- Discharges that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
- Construction activities or discharges from construction activities that may adversely affect an endangered or threatened species unless the owner or

(Part I.E)

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

(Part I.F.4)

- Discharges which either cause or contribute to a violation of water quality standards adopted pursuant to the ECL and its accompanying regulations;
- 6. Construction activities for residential, commercial and institutional projects:
- Where the discharges from the construction activities are tributary to waters of the state classified as AA or AA-s; and
- b. Which are undertaken on land with no existing impervious cover; and
- c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.
- 7. Construction activities for linear transportation projects and linear utility projects:
- Where the discharges from the construction activities are tributary to waters of the state classified as AA or AA-s; and
- b. Which are undertaken on land with no existing impervious cover; and

c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

(Part LF.8.c)	<ul><li>(i) No Affect</li><li>(ii) No Adverse Affect</li><li>(iii) Executed Memorandum of Agreement, or</li></ul>	d. Documentation that:	<ul> <li>SHPA Section 14.09 has been completed by NYS DEC or another state agency.</li> </ul>	<ol> <li>Discharges from construction activities that are subject to an existing SPDES individual or general permit where a SPDES permit for construction activity has been terminated or denied; or where the owner or operator has failed to renew an expired individual bermit.</li> </ol>	Part II. PERMIT COVERAGE	A. How to Obtain Coverage	1. An <i>owner or operator</i> of a <i>construction activity</i> that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.	2. An <i>owner or operator</i> of a <i>construction activity</i> that is subject to the requirements of a <i>regulated, traditional land use control MS4</i> must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the <i>regulated, traditional land use control MS4</i> prior to submitting the NOI to the Department. The <i>owner or operator</i> shall have the "WS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.	<ol> <li>The requirement for an owner or operator to have its SWPPP reviewed and accepted by the <i>regulated, traditional land use control MS4</i> prior to submitting the NOI to the Department does not apply to an owner or operator that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of Owner or Operator) or where the owner or operator of the construction activity is the regulated, traditional land use control MS4. This</li> </ol>	exemption does not apply to <i>construction activities</i> subject to the New York City Administrative Code.
(Part IF.6)	8. Construction activities that have the potential to affect an historic property, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this provincement shall be prointing on a bin in proceedings with Dot II 0 of this	requirements shall be maintained on sue in accordance with Fart n.D.z. of this permit and made available to the Department in accordance with Part VII.F of this permit:	a. Documentation that the <i>construction activity</i> is not within an archeologically sensitive area indicated on the sensitivity map, and that the <i>construction</i>	activity is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the construction site within the following distances from a building.	object that is more than 50 years old, or if there is such a new permanent building on the <i>construction site</i> within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic	Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or	<ul> <li>object more than 50 years old is not historically/archeologically significant.</li> <li>1-5 acres of disturbance - 20 feet</li> <li>5-20 acres of disturbance - 50 feet</li> <li>20+ acres of disturbance - 100 feet, or</li> </ul>	<ul> <li>b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and</li> <li>(i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or</li> <li>(ii) documentation from OPRHP that the <i>construction activity</i> will result in No Impact; or</li> <li>(iii) documentation from OPRHP providing a determination of No Adverse</li> </ul>	Impact; or (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this <i>construction activity</i> to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or	<ul> <li>Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:</li> </ul>

(Part ILB)	(Part II.C.2.b)
B. Notice of Intent (NOI) Submittal	must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other
<ol> <li>Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website</li> </ol>	necessary <i>UPA</i> permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the <i>construction activity</i> qualifies for authorization under this permit,
(http://www.dec.ny.gov/ ). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:	c. the final SWPPP has been prepared, and
NOTICE OF INTENT NYS DEC, Bureau of Water Permits	<ul> <li>a complete NOI has been submitted to the Department in accordance with the requirements of this permit.</li> </ul>
625 Broadway, 4 <sup>th</sup> Floor Albany, New York 12233-3505	3. An owner or operator that has satisfied the requirements of Part II.C.2 above will be authorized to discharge stortwater from their construction activity in
2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the <i>owner or operator</i> must submit the NOI electronically using the <i>Department's</i> online NOI.	accordance with the following schedule: a. For <i>construction activities</i> that are <u>not</u> subject to the requirements of a <i>regulated, traditional land use control MS4</i> :
<ol><li>The owner or operator shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.</li></ol>	<ul> <li>Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for <i>construction activities</i> with a CWDBD that has been prepared in conference with the design</li> </ul>
4. As of the date the NOI is submitted to the Department, the <i>owner or operator</i> shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.	criteria in the technical standard referenced in Part III.B.1 and the criteria in the technical standard referenced in Part III.B.1 and the <i>performance criteria</i> in the technical standard referenced in Parts III.B., 2 or 3, for <i>construction activities</i> that require post-construction stormwater management practices pursuant to Part III.C.; or
C. Permit Authorization	(ii) Sixty (60) business days from the date the Department receives a
1. An owner or operator shall not commence construction activity until their authorization to discharge under this permit goes into effect.	
2. Authorization to <i>discharge</i> under this permit will be effective when the <i>owner or operator</i> has satisfied <u>all</u> of the following criteria:	<i>construction activities</i> that require post-construction stormwater management practices pursuant to Part III.C., the <i>performance criteria</i> in the technical standard referenced in Parts III.B., 2 or 3, or;
<ul> <li>a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (<u>http://www.dec.nv.gov/</u>) for more information,</li> </ul>	(iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for <i>construction activities</i> with a SWPPP that has been menared in conformance with the design
b. where required, all necessary Department permits subject to the Uniform Procedures Act ("UPA") (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). Owners or operators of construction activities that are required to obtain UPA permits	criteria in the technical standard referenced in Part III.B.1 and the <i>performance criteria</i> in the technical standard referenced in Parts III.B., 2 or 3, for <i>construction activities</i> that require post-construction stormwater management practices pursuant to Part III.C.

(Part ILD.3	use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity). At a minimum, the owner or operator must comply with	<ul> <li>(5) acres of soil at any one time:</li> <li>(5) acres of soil at any one time:</li> <li>a. The <i>owner or operator</i> shall have a <i>qualified inspector</i> conduct <b>at least</b> two</li> </ul>		b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.	<ul> <li>The owner or operator shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.</li> </ul>	d. The <i>owner or operator</i> shall install any additional site-specific practices needed to protect water quality.	e. The <i>owner or operator</i> shall include the requirements above in their SWPPP.	4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an <i>owner's or operator's</i> coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K	5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the <i>owner or operator</i> .	
(Part II.C.3.b)	<ul> <li>For construction activities that are subject to the requirements of a regulated, traditional land use control MS4:</li> </ul>	<ul> <li>Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "MS4 SWPPP Acceptance" form, or</li> </ul>	<ul><li>(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.</li></ul>	4. Coverage under this permit authorizes stormwater <i>discharges</i> from only those areas of disturbance that are identified in the NOI. If an <i>owner or operator</i> wishes to have stormwater <i>discharges</i> from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The <i>owner or operator</i> shall not <i>commence construction activity</i> on the future or additional areas until their authorization to <i>discharge</i> under this permit goes into effect in accordance with Part II.C. of this permit.	D. General Requirements For Owners or Operators With Permit Coverage 1. The owner or operator shall ensure that the provisions of the SWPPP are	implemented from the <i>commencement of construction activity</i> until all areas of disturbance have achieved <i>final stabilization</i> and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of	this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.	<ol> <li>The owner or operator shall maintain a copy of the General Permit (GP-0-20-001), NOI, NOI, NOI, Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate elicibility with this nermit at the <i>construction site</i> until all disturbed areas have</li> </ol>	achieved <i>final stabilization</i> and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.	

five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land* The owner or operator of a construction activity shall not disturb greater than с.

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6. For construction activities that are subject to the requirements of a regulated, traditional land use control MS4, the owner or operator shall notify the

(Part II.D.6)

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control* MS4 prior to commencing construction of the post-construction stormwater management practice.

## E. Permit Coverage for Discharges Authorized Under GP-0-15-002

 Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of a *construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20. 001, unless otherwise notified by the Department.

An owner or operator may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

### F. Change of Owner or Operator

- 1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original owner or operator must notify the new owner or operator, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For construction activities subject to the requirements of a regulated, traditional land use control MS4, the original owner or operator must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
- 2. Once the new owner or operator obtains permit coverage, the original owner or operator shall then submit a completed NOT with the name and permit identification number of the new owner or operator to the Department at the address in Part II.B.1. of this permit. If the original owner or operator maintains ownership of a portion of the construction activity and will disturb soil, they must maintain their coverage under the permit.
- Permit coverage for the new owner or operator will be effective as of the date the Department receives a complete NOI, provided the original owner or

(Part ILF.3) (Part ILF.3) operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new owner or operator.

## Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

### A. General SWPPP Requirements

- A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submitted of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.
- 2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
- All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
- 4. The owner or operator must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the owner or operator shall amend the SWPPP, including construction drawings:
- whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the site;

b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants;

(Part III.A.4.b)

- c. to address issues or deficiencies identified during an inspection by the qualified inspector, the Department or other regulatory authority; and
- d. to document the final construction conditions.
- 5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's *or operator's* coverage under this permit or require the *owner or operator* to be permit or require the *owner or operator* to be partment in accordance with Part II.D.4, of this permit.
- 6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP? and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP? The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall neuse that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity:* 

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

(Part III.A.6) the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of

fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner* or operator shall attach the construction site. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

 For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

### B. Required SWPPP Contents

- Erosion and sediment control component All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
- Background information about the scope of the project, including the location, type and size of project

(Part III.B.1.b)

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s).
- A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

(Part III.B.1.i)

- A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
- k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
- Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standard.
- 2. Post-construction stormwater management practice component The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

The post-construction stormwater management practice component of the SWPPP shall include the following:  Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

(Part III.B.2.b)	<ul> <li>A site map/construction drawing(s) showing the specific location and size of</li> </ul>	each post-construction stormwater management practice;	
	à		

- A Stormwater Modeling and Analysis Report that includes:
   (i) Map(s) showing pre-development conditions, including
- watershed/subcatchments boundaries, flow paths/routing, and design points;
- Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;
- (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and postdevelopment runoff rates and volumes for the different storm events;
- (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the sizing criteria included in the Design Manual;
- (v) Identification of any sizing criteria that is not required based on the requirements included in Part I.C. of this permit; and
- (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

(Part III.B.3) (Part III.B.3) 3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable sizing criteria in Part I.C.2. b., c. or d. of this permit and the *performance criteria*,

Enhanced Phospherus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

## C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

## Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

# A. General Construction Site Inspection and Maintenance Requirements

- The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
- The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

## B. Contractor Maintenance Inspection Requirements

 The owner or operator of each construction activity identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

(Part IV.B.1) (Part IV.B.1) begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

- For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
- 3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

## C. Qualified Inspector Inspection Requirements

The owner or operator shall have a qualified inspector conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
- A qualified inspector shall conduct site inspections for all construction activities identified in Tables 1 and 2 of Appendix B, with the exception of:
- a. the construction of a single family residential subdivision with 25% or less impervious cover at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is <u>not</u> located

(Part IV.C.1.a) (Part IV.C.1.a) in one of the watersheds listed in Appendix C and  $\underline{not}$  directly discharging to one of the 303(d) segments listed in Appendix E;

- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E;
- c. construction on agricultural property that involves a soil disturbance of one
   (1) or more acres of land but less than five (5) acres; and
- d. construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
- Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
- a. For construction sites where soil disturbance activities are on-going, the qualified inspector shall conduct a site inspection at least once every seven (7) calendar days.
- b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
- c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

Stormwater Management Practice" certification statements on the NOT. The (Part IV.C.2.d) Program contact at the Regional Office (see contact information in Appendix For construction sites where soil disturbance activities have been shut down owner or operator shall then submit the completed NOT form to the address the construction activity) in writing prior to the shutdown. If soil disturbance with partial project completion, the qualified inspector can stop conducting control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of operational. The owner or operator shall notify the DOW Water (SPDES) measures have been removed; and that all post-construction stormwater activities are not resumed within 2 years from the date of shutdown, the management practices required for the completed portion of the project management practices have been constructed in conformance with the stabilization, and all temporary, structural erosion and sediment control F) or, in areas under the jurisdiction of a regulated, traditional land use inspections if all areas disturbed as of the project shutdown date have SWPPP by signing the "Final Stabilization" and "Post-Construction owner or operator shall have the qualified inspector perform a final have been constructed in conformance with the SWPPP and are inspection and certify that all disturbed areas have achieved final achieved final stabilization and all post-construction stormwater n Part II.B.1 of this permit. ъ.

- For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
- 3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
- The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

(Part IV.C.4.a)

- b. Name and title of person(s) performing inspection;
- A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;
- Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
- Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
- Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the postconstruction stormwater management practice(s);
- Identification and status of all corrective actions that were required by previous inspection; and

<ol> <li>Planned shutdown with partial project completion - All soil disturbance activities have ceased; <u>and</u> all areas disturbed as of the project shutdown date have achieved <i>final stabilization</i>: <u>and</u> all temporary, structural erosion and sediment control measures have been rannoved; <u>and</u> all post- construction stomwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operator has obtained coverage under this permit in accordance with Part II.F. of this permit.</li> <li>C. A new <i>owner or operator</i> has obtained coverage under this permit in accordance with Part II.F. of this permit.</li> <li>The <i>owner or operator</i> shall have the <i>qualified inspector</i> perform a final site inspection prior to submitting the NOT. The <i>qualified inspector</i> shall, by signing the <i>Final</i> <i>Stabilization</i><sup>a</sup> and Pest-Construction Stomwater Management Practice estification and the secontrol MS4 and meet subdivision 2a. or 2b. of this Part, the <i>operator</i> stalements on the NOT. Certify that all the requirements in Part V.A.2.a. or b. of this permit there equirements of a regulated, traditional land use control MS4 and meet subdivision 2a. or 2b. of this Part, the <i>owner or operator</i> shall have the <i>regulated traditional land use</i> <i>control MS4</i> official, by signing this statement on the NOT in accordance with the requirements in Part VIIH. of this permit. The <i>regulated, traditional land use</i> <i>control MS4</i> official, by signing this statement, has determined that it is accepting the qualified inspector's final site inspection certification(s) required in Part V.A.3. of this permit.</li> <li>For <i>construction activities</i> that are subject to submit the NOT in accordance with the requirements of this permit. The <i>regulated, traditional land use</i> <i>control MS4</i> official, by signing this statement on the NOT in accordance with the requirements of this permit.</li> <li>For <i>construction activities</i> statement on the NOT in accordance with</li></ol>
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practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

(Part IV.C.4.I)

Digital photographs, with date stamp, that clearly show the condition of all

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- 5. Within one business day of the completion of an inspection, the *qualified* inspector shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
- All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

## Part V. TERMINATION OF PERMIT COVERAGE

### A. Termination of Permit Coverage

- An owner or operator that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.
- An owner or operator may terminate coverage when one or more the following conditions have been met:
- a. Total project completion All *construction activity* identified in the SWPPP has been completed; <u>and</u> all areas of disturbance have achieved *final stabilization*; <u>and</u> all temporary, structural erosion and sediment control measures have been removed; <u>and</u> all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

#### an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s), . o

- operation and maintenance plan, such as a deed covenant in the owner or for post-construction stormwater management practices that are privately owned, the owner or operator has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operator's deed of record, പ
- for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the owner or operator has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan. ъ.

## Part VI. REPORTING AND RETENTION RECORDS

#### A. Record Retention

The owner or operator shall retain a copy of the NOI, NOI

years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit. Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5)

#### B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

## Part VII. STANDARD PERMIT CONDITIONS

#### A. Duty to Comply

The owner or operator must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

(Part V.A.5.b)

Act (CWA) and the ECL and is grounds for an enforcement action against the owner or operator and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant noncompliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in

detail, and shall be sent to the owner or operator.

(RWE). Construction activity shall not resume until written permission to do so has been the owner or operator must immediately cease, or cause to cease, all construction activity in the area of the remains and notify the appropriate Regional Water Engineer If any human remains or archaeological remains are encountered during excavation, received from the RWE.

## B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

#### C. Enforcement

Failure of the owner or operator, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense. associated with violating the provisions of this permit. Fines of up to \$37,500 per day

## D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an owner or operator in an enforcement action that it would have been necessary to halt or reduce the construction activity in order to maintain compliance with the conditions of this permit.

(Part VII.A)

#### E. Duty to Mitigate

The owner or operator and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

### F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

#### G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice(s) changes there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Ubepartment, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

#### H. Signatory Requirements

- 1. All NOIs and NOTs shall be signed as follows:
- a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(Part VII.E)

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
- (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
- e. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
- the chief executive officer of the agency, or
- a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part VII.H.1. of this permit,
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

(Part VII.H.21b) superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

- The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
- All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
- The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated*, *traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

#### I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

#### J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

## K. Requirement to Obtain Coverage Under an Alternative Permit

 The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Tritle.

(Part VII.K.1)

 When an individual SPDES permit is issued to a discharger authorized to discharge under a general SPDES permit for the same discharge(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

### L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

#### M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

- Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

(Part VII.M.3)

 Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

#### N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

#### O. Definitions

Definitions of key terms are included in Appendix A of this permit.

#### P. Re-Opener Clause

- If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
- Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

## Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

#### R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

(Part VII.R)

## APPENDIX A – Acronyms and Definitions

Acronyms

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et CPESC – Certified Professional in Erosion and Sediment Control NPDES – National Pollutant Discharge Elimination System OPRHP - Office of Parks, Recreation and Historic Places SPDES – State Pollutant Discharge Elimination System SEQRA - State Environmental Quality Review Act USDA – United States Department of Agriculture MS4 – Municipal Separate Storm Sewer System SWPPP – Stormwater Pollution Prevention Plan EPA – U. S. Environmental Protection Agency SEQR – State Environmental Quality Review EAF – Environmental Assessment Form ECL - Environmental Conservation Law SHPA – State Historic Preservation Act TMDL – Total Maximum Daily Load APO – Agency Preservation Officer BMP – Best Management Practice Cpv – Channel Protection Volume RWE – Regional Water Engineer RRv – Runoff Reduction Volume UPA – Uniform Procedures Act HSG – Hydrologic Soil Group WQv – Water Quality Volume NOT – Notice of Termination DOW – Division of Water NOI – Notice of Intent Qp – Overbank Flood Qf – Extreme Flood seq)

Definitions

<u>All definitions in this section are solely for the purposes of this permit.</u> <u>Agricultural Building</u> – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public. Agricultural Property –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

**Alter Hydrology from Pre to Post-Development Conditions** - means the postdevelopment peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both "sewage" and "stormwater". Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "Construction Activity(ies)" also.

**Construction Activity(ies)** - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. **Construction Site** – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities*" and "Larger *Common Plan of Development or Sale*" also.

**Dewatering** – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

**Direct Discharge (to a specific surface waterbody) -** means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

Appendix A

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Appendix A

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or point source.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements. Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

performance, longevity, maintenance, and safety objectives of the technical standard Equivalent (Equivalence) – means that the practice or measure meets all the and will provide an equal or greater degree of water quality protection.

applied on all disturbed areas that are not covered by permanent structures, concrete or pervious surface has been established; or other equivalent stabilization measures, such uniform, perennial vegetative cover with a density of eighty (80) percent over the entire as permanent landscape mulches, rock rip-rap or washed/crushed stone have been Final Stabilization - means that all soil disturbance activities have ceased and a pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or Groundwater(s) - means waters in the saturated zone. The saturated zone is a interstices filled with fluids other than water, it is still considered saturated **Historic Property** – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, Impervious Area (Cover) - means all impermeable surfaces that cannot effectively driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds. Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Appendix A defined as any announcement or piece of documentation (including a sign, public notice documents, zoning request, computer design, etc.) or physical demarcation (including multiple separate and distinct construction activities are occurring, or will occur, under Environmental Quality Review Act (SEQRA) environmental assessment form or other one plan. The term "plan" in "larger common plan of development or sale" is broadly Larger Common Plan of Development or Sale - means a contiguous area where boundary signs, lot stakes, surveyor markings, etc.) indicating that construction or hearing, marketing plan, advertisement, drawing, permit application, State activities may occur on a specific plot.

utility project that is part of the same "common plan" is not concurrently being disturbed. development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or For discrete construction projects that are located within a larger common plan of

measures (including best management practices) that are technologically available and Minimize – means reduce and/or eliminate to the extent achievable using control economically practicable and achievable in light of best industry practices. Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- association, or other public body (created by or pursuant to State law) having flood control district or drainage district, or similar entity, or an Indian tribe or jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, Owned or operated by a State, city, town, borough, county, parish, district, management agency under section 208 of the CWA that discharges to an authorized Indian tribal organization, or a designated and approved surface waters of the State; Ξ
  - Designed or used for collecting or conveying stormwater;
  - Which is not a combined sewer; and EEZ
- Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

system for the issuance of wastewater and stormwater permits under the Federal Water National Pollutant Discharge Elimination System (NPDES) - means the national Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix Appendix A

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Appendix A

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

**Nonpoint Source** - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

**Overbank** –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the *construction* plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational ontrol of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQV, RRV, CpV, Qp and Qf ) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoll, fliter backwash, solld waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer. **Qualified Professional -** means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, set defined by the NYS Education Law (see Article 145), shall be prepared by or Nork.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890). Routine Maintenance Activity - means construction activity that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
  - Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,

lined ditch)

- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
  - Long-term use of equipment storage areas at or near highway maintenance facilities.
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*.
- Existing use of Canal Corp owned upland disposal sites for the canal, and
   Replacement of curbs, gutters, sidewalks and guide rail posts.
- Site limitations means site conditions that prevent the use of an infiltration technique and or infiltration of the total WOv. Tvoical site limitations include: seasonal high

and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located. Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

**State Pollutant Discharge Elimination System (SPDES)** - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Appendix A

Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

**Streambank** – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction sile*; describes and shows the stormwater controls that will be used to control the pollution stie; describes and sediment controls; for many projects, includes post-construction stormwater management controls) and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Attantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or sait, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

**Temporarily Ceased** – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

**Temporary Stabilization** - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wastelbad allocations (NLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

Appendix A

Appendix A Conservation District, or other Department endorsed entity. After receiving the initial training, the trained contractor shall receive four (4) hours of training every three (3) training in proper erosion and sediment control principles from a Soil and Water years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, Landscape Architect, New York State Erosion and Sediment Control Certificate other Department endorsed entity).

The trained contractor is responsible for the day to day implementation of the SWPPP.

**Uniform Procedures Act (UPA) Permit** - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

#### Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls Table 1

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E
   Single family residential subdivisions with 25% or less impervious cover at total site build-out and <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E
  - Construction of a barn or other agricultural building, silo, stock yard or pen.

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

### The following construction activities that involve soil disturbances of one (1) or more acres of and:

- fiber-optic cable, cable TV, as gas lines, Installation of underground, linear utilities; such electric, telephone, sewer mains, and water mains
  - Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an Pond construction impervious cover
- Cross-country ski trails and walking/hiking trails
   Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
  - Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.
    - Slope stabilization projects
       Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Appendix B Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP

THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that alter hydrology from pre to post development conditions,
  - · Athletic fields (natural grass) that do not include the construction or reconstruction of impervious
    - area and do not after hydrology from pre to post development conditions
      Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent
  - access roads or parking areas surfaced with impervious cover
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- areas that will be restored to pre-construction conditions once the construction activity is complete Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES Table 2

POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of and:

- Single family home located in one of the watersheds listed in Appendix C or directly discharging to •
- •
- one of the 303(d) segments listed in Appendix E Single family home that disturbs five (5) or more acres of land Single family residential subdivisions located in one of the watersheds listed in Appendix C or •
  - directly discharging to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) •
- acres of land with greater than 25% impervious cover at total site build-out Single family residential subulvisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of leas than five (5) acres that are part of a larget common plan of development or sale that will ultimately disturb five or more •
  - acres of land Multi-family residential developments; includes duplexes, townhomes, condominiums, senior

•

- housing complexes, apartment complexes, and mobile home parks Airports . . .
- Amusement parks Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed • •
  - area) or alter the hydrology from pre to post development conditions
    - . . .
- Commercial developments Churches and other places of worship Construction of a barn or other agricultural building (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of impervious area, excluding projects
  - that involve soil disturbances of less than five acres. Golf courses •
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks . . . .
- Landfills Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
  - Office complexes

•

- Playgrounds that include the construction or reconstruction of impervious area •
  - Sports complexes Racetracks; includes racetracks with earthen (dirt) surface . . .
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

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Appendix B

#### Table 2 (Continued)

Appendix B

## CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1 construction or reconstruction of impervious area (>5% of disturbed area) or after the hydrology from pre to post development conditions Athletic fields with artificial turf Permanent access roads, parking areas, substations, compressor stations and well drilling pads, aurfaced with <i>impervious cover</i> , and constructed as part of an over-head electric transmission line project, round-power project, call ower project, oil or gas well drilling project, sewer or water main project or other linear utility projects. surfaced with an impervious cover, that are part of a scafeevalk. bike path or walking path projects, surfaced with an impervious cover, that are part of a fighway construction or reconstruction project. All other construction or reconstruction or fractions or more that are part of a highway construction or reconstruction project.	King lot construction or reconstruction, including parking lots constructed as part of the struction activities listed in Table 1 astruction activities listed in Table 1 disturbed area) or <i>alter the hydrology from pre to post development</i> conditions listed in the area (>5% disturbed area) or <i>alter the hydrology from pre to post development</i> conditions let fields with artificial turf manent access roads, parking areas, substations, compressor stations and well drilling pads, fremanent access roads, parking areas, substations, compressor stations and well drilling pads, if the area with "not-power project, cell tower project, oil or gas well drilling project, sever or water main oject or other linear utility project. Surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a dievalk process the hydrology from pre to post development conditions, <u>and</u> are not listed in Table 1.		ווני סווסידווים סוומנו מכוויונים מווני ווויסויכ סטו מומנו ממוכם מי סוב (ו) סו וווסיב מכובס סו land:
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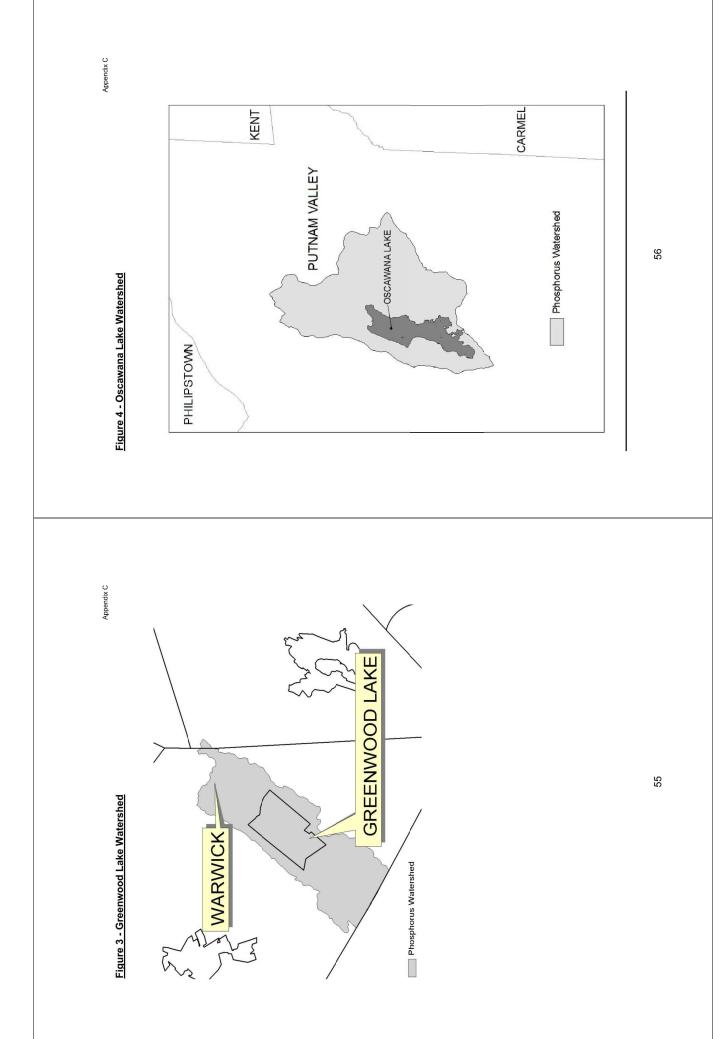
# APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

Entire New York City Watershed located east of the Hudson River - Figure 1
<ul> <li>Onondaga Lake Watershed - Figure 2</li> </ul>
<ul> <li>Greenwood Lake Watershed -Figure 3</li> </ul>

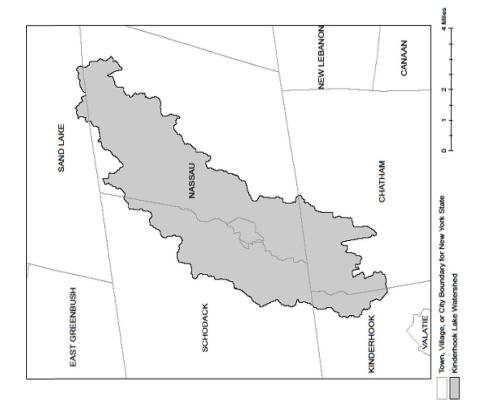
Oscawana Lake Watershed – Figure 4
 Kinderhook Lake Watershed – Figure 5





### Figure 5 - Kinderhook Lake Watershed

Appendix C



## APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

# APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

## 303(d) Segments Impaired by Construction Related Pollutant(s)

303(d) Segments Im	303(d) Segments Impaired by Construction Related Pollutant(s)	
Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

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Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Murirue	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

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3(d) Segments Impaired by

303(d) Segments Im	303(d) Segments Impaired by Construction Related Pollutant(s)	
Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Нопеоуе Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Im	303(d) Segments Impaired by Construction Related Pollutant(s	
Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Serreca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

## 303(d) Segments Impaired by Construction Related Pollutant(s)

#### ed Pollutant(s)

303(d) Segments Im	303(d) Segments Impaired by Construction Related Pollutant(s)	
Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

# APPENDIX F – List of NYS DEC Regional Offices

DIVISION OF WATER (DOW) <u>WATER (SPDES) PROGRAM</u>	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405	1 Нимтеле Ронкт Р. I. Z.A. 47-40 Z1st St. Long Island City, NY 11101-5407 TEL. (718) 482-4933	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045	232 GOLF COURSE ROAD WARRENBURC, NY 12885-1172 TEL. (518) 623-1200	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554	615 ERLE BLVD. WEST SYRACUSE, NY 1324-2400 TEL. (315) 426-7500	6274 EAST AVON-LIMA RD. 6274 EAST AVON-LIMA RD. AVON, NY 1414-9519 TEL. (585) 226-2466	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070
DIVISION OF ENVIRONMENTAL PERMITS (DEP) <u>PERMIT ADMINISTRATORS</u>	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	4 Нимтеле Роим Рыда, 47-40 21sr St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	1150 NORTH WESTCOTT ROAD Schenectady, NY 12306-2014 Tel. (518) 357-2069	1115 STATE ROUTE 86, PO BOX 296 Ray Brook, NY 12977-0296 TEL. (518) 897-1234	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	6274 EAST AVON-LIMA ROADAYON, NY 14414-9519 TEL. (585) 226-2466	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165
COVERING THE FOLLOWING COUNTIES:	NASSAU AND SUFFOLK	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	AL BANY, COLUMBIA, DELXWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	HERKIMER, JEFFERSON, Lewis, Oneida and St. Lawrence	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, DRLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING
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Appendix B: NYSDEC Forms

### NOI for coverage under Stormwater General Permit for Construction Activity

version 1.37

(Submission #: HQ0-DC7J-AWBCM, version 1)

### Details

Originally Started By Courtney Davis

Alternate Identifier Newburgh South Logistics Center

Submission ID HQ0-DC7J-AWBCM

Submission Reason New

Status Draft

### Form Input

### **Owner/Operator Information**

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.) IV5 Newburgh South Logistics Center, LLC

Owner/Operator Contact Person Last Name (NOT CONSULTANT) Drysdale

Owner/Operator Contact Person First Name Justin

**Owner/Operator Mailing Address** 1 Meadowlands Plaza, Suite 802

City East Rutherford

State New Jersey

**Zip** 07073 Phone 212-417-7173

Email justin.drysdale@brookfieldproperties.com

Federal Tax ID 87-3549802

If the owner/operator is an organization, provide the Federal Tax ID number, or Employer Identification Number (EIN), in the format xx-xxxxxx. If the owner/operator is an individual and not an organization, enter "Not Applicable" or "N/A" and do not provide the individual's social security number.

### Project Location

Project/Site Name Newburgh South Logistics Center

Street Address (Not P.O. Box) 700 South Street

Side of Street North

City/Town/Village (THAT ISSUES BUILDING PERMIT) City of Newburgh

State NY

**Zip** 12550

DEC Region

3

The DEC Region must be provided. Please use the NYSDEC Stormwater Interactive Map (https://gisservices.dec.ny.gov/gis/stormwater/) to confirm which DEC Region this site is located in. To view the DEC Regions, click on "Other Useful Reference Layers" on the left side of the map, then click on "DEC Administrative Boundary." Zoom out as needed to see the Region boundaries.

For projects that span multiple Regions, please select a primary Region and then provide the additional Regions as a note in Question 39.

County ORANGE

Name of Nearest Cross Street Pierces Road

**Distance to Nearest Cross Street (Feet)** 0

Project In Relation to Cross Street West

Tax Map Numbers Section-Block-Parcel 5-1-1

**Tax Map Numbers** NONE PROVIDED

> If the project does not have tax map numbers (e.g. linear projects), enter "Not Applicable" or "N/A".

#### 1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are: - Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates.

- The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates 41.51021272554753,-74.04110595662232

### **Project Details**

2. What is the nature of this project? New Construction

For the purposes of this eNOI, "New Construction" refers to any project that does not involve the disturbance of existing impervious area (i.e. 0 acres). If existing impervious area will be disturbed on the project site, it is considered redevelopment with either increase in impervious area or no increase in impervious area.

3. Select the predominant land use for both pre and post development conditions.

**Pre-Development Existing Landuse** Pasture/Open Land

Post-Development Future Land Use Industrial

3a. If Single Family Subdivision was selected in question 3, enter the number of subdivision lots. NONE PROVIDED

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage) within the disturbed area.

\*\*\* ROUND TO THE NEAREST TENTH OF AN ACRE. \*\*\*

Total Site Area (acres) 49.0

Total Area to be Disturbed (acres) 30.5

Existing Impervious Area to be Disturbed (acres) 0.0

Future Impervious Area Within Disturbed Area (acres) 20.7

5. Do you plan to disturb more than 5 acres of soil at any one time? Yes

6. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

<b>A (%)</b> 19.7
<b>B (%)</b> 0
<b>C (%)</b> 22.9
<b>D (%)</b> 57.4
7. Is this a phased project?

No

8. Enter the planned start and end dates of the disturbance activities.

Start Date 03/01/2024

End Date 03/31/2025

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge. Gidneytown Creek

Drainage ditches and storm sewer systems are not considered surface waterbodies. Please identify the surface waterbody that they discharge to. If the nearest surface waterbody is unnamed, provide a description of the waterbody, such as, "Unnamed tributary to Niagara River."

**9a. Type of waterbody identified in question 9?** Stream/Creek On Site

Other Waterbody Type Off Site Description NONE PROVIDED

9b. If "wetland" was selected in 9A, how was the wetland identified? NONE PROVIDED

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001?

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001?

No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? No

Please use the DEC Stormwater Interactive Map

(https://gisservices.dec.ny.gov/gis/stormwater/) to confirm if this site is located in one of the watersheds of an AA or AA-S classified water. To view the watershed areas, click on "Permit Related Layers" on the left side of the map, then click on "Class AA AAS Watersheds."

If No, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as D (provided the map unit name is inclusive of slopes greater than 25%), E or F on the USDA Soil Survey? NONE PROVIDED

If Yes, what is the acreage to be disturbed? NONE PROVIDED

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? No

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? Yes

16. What is the name of the municipality/entity that owns the separate storm sewer system? City of Newburgh

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? No

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?

19. Is this property owned by a state authority, state agency, federal government or local government? No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) No

### **Required SWPPP Components**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? Yes

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? Yes

If you answered No in question 22, skip question 23 and the Post-construction Criteria and Post-construction SMP Identification sections.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? Yes

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by: Professional Engineer (P.E.)

SWPPP Preparer LaBella Associates

Contact Name (Last, First) Kubow, Walter

Mailing Address 4 British American Boulevard

City Latham

State NY

**Zip** 12110

Phone 5182738391

Email wkubow@labellapc.com

**Download SWPPP Preparer Certification Form** 

Please take the following steps to prepare and upload your preparer certification form:

1) Click on the link below to download a blank certification form

2) The certified SWPPP preparer should sign this form

3) Scan the signed form

4) Upload the scanned document

Download SWPPP Preparer Certification Form

Please upload the SWPPP Preparer Certification NONE PROVIDED Comment NONE PROVIDED

#### **Erosion & Sediment Control Criteria**

25. Has a construction sequence schedule for the planned management practices been prepared? Yes

26. Select all of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural Dust Control Stabilized Construction Entrance Silt Fence Storm Drain Inlet Protection

Biotechnical None

#### **Vegetative Measures**

Mulching Seeding Sodding Topsoiling

#### Permanent Structural

Diversion Land Grading Retaining Wall Rock Outlet Protection

Other NONE PROVIDED

### **Post-Construction Criteria**

\* IMPORTANT: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project. Reduction of Clearing and Grading Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version). All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet) 2.205

29. Post-construction SMP Identification

7/15

Use the Post-construction SMP Identification section to identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity that were used to reduce the Total WQv Required (#28).

Identify the SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use the Post-Construction SMP Identification section to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet) 0.630

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28)? No

If Yes, go to question 36. If No, go to question 32.

32. Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P) (0.95) (Ai) / 12, Ai=(s) (Aic)] (acre-feet) 0.583

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)? Yes

If Yes, go to question 33.

Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

If No, sizing criteria has not been met; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

#### 33. SMPs

Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30).

Also, provide the total impervious area that contributes runoff to each practice selected.

NOTE: Use the Post-construction SMP Identification section to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question #29. (acrefect) 1.575

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - provided by the practice. (See Table 3.5 in Design Manual)

**34.** Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). 2.205

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? Yes

If Yes, go to question 36.

If No, sizing criteria has not been met; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv required and provided or select waiver (#36a), if applicable.

CPv Required (acre-feet) 2.584

CPv Provided (acre-feet) 2.584

36a. The need to provide channel protection has been waived because: NONE PROVIDED

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (#37a), if applicable.

**Overbank Flood Control Criteria (Qp)** 

Pre-Development (CFS) 54.74

Post-Development (CFS) 45.31

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS) 142.95

### Post-Development (CFS) 141.73

37a. The need to meet the Qp and Qf criteria has been waived because: NONE PROVIDED

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? Yes

If Yes, Identify the entity responsible for the long term Operation and Maintenance IV5 Newburgh South Logistics Center, LLC

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). (See question #32a) This space can also be used for other pertinent project information.

The project site has soils with an infiltration rate less than 0.5 in/hr, and contaminated soils which prevents reduction of the total WQv.

#### Post-Construction SMP Identification

Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs

Identify the Post-construction SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

#### **RR** Techniques (Area Reduction)

Round to the nearest tenth

Total Contributing Acres for Conservation of Natural Area (RR-1) NONE PROVIDED

Total Contributing Impervious Acres for Conservation of Natural Area (RR-1) NONE PROVIDED

Total Contributing Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2) NONE PROVIDED

Total Contributing Impervious Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2) NONE PROVIDED

Total Contributing Acres for Tree Planting/Tree Pit (RR-3) NONE PROVIDED Total Contributing Impervious Acres for Tree Planting/Tree Pit (RR-3) NONE PROVIDED

Total Contributing Acres for Disconnection of Rooftop Runoff (RR-4) NONE PROVIDED

**RR** Techniques (Volume Reduction)

Total Contributing Impervious Acres for Disconnection of Rooftop Runoff (RR-4) NONE PROVIDED

Total Contributing Impervious Acres for Vegetated Swale (RR-5) NONE PROVIDED

Total Contributing Impervious Acres for Rain Garden (RR-6) NONE PROVIDED

Total Contributing Impervious Acres for Stormwater Planter (RR-7) NONE PROVIDED

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8) NONE PROVIDED

Total Contributing Impervious Acres for Porous Pavement (RR-9) NONE PROVIDED

Total Contributing Impervious Acres for Green Roof (RR-10) NONE PROVIDED

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1) NONE PROVIDED

Total Contributing Impervious Acres for Infiltration Basin (I-2) NONE PROVIDED

Total Contributing Impervious Acres for Dry Well (I-3) NONE PROVIDED

Total Contributing Impervious Acres for Underground Infiltration System (I-4) NONE PROVIDED

Total Contributing Impervious Acres for Bioretention (F-5) 7.219

Total Contributing Impervious Acres for Dry Swale (O-1) NONE PROVIDED

Standard SMPs

11/15

Total Contributing Impervious Acres for Micropool Extended Detention (P-1) NONE PROVIDED

Total Contributing Impervious Acres for Wet Pond (P-2) 12.313

Total Contributing Impervious Acres for Wet Extended Detention (P-3) NONE PROVIDED

Total Contributing Impervious Acres for Multiple Pond System (P-4) NONE PROVIDED

Total Contributing Impervious Acres for Pocket Pond (P-5) NONE PROVIDED

Total Contributing Impervious Acres for Surface Sand Filter (F-1) NONE PROVIDED

Total Contributing Impervious Acres for Underground Sand Filter (F-2) NONE PROVIDED

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3) NONE PROVIDED

Total Contributing Impervious Acres for Organic Filter (F-4) NONE PROVIDED

Total Contributing Impervious Acres for Shallow Wetland (W-1) NONE PROVIDED

Total Contributing Impervious Acres for Extended Detention Wetland (W-2) NONE PROVIDED

Total Contributing Impervious Acres for Pond/Wetland System (W-3) NONE PROVIDED

Total Contributing Impervious Acres for Pocket Wetland (W-4) NONE PROVIDED

Total Contributing Impervious Acres for Wet Swale (O-2) NONE PROVIDED

Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Total Contributing Impervious Area for Hydrodynamic NONE PROVIDED

Total Contributing Impervious Area for Wet Vault NONE PROVIDED Total Contributing Impervious Area for Media Filter NONE PROVIDED

"Other" Alternative SMP? NONE PROVIDED

Total Contributing Impervious Area for "Other" NONE PROVIDED

Provide the name and manufaturer of the alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

Manufacturer of Alternative SMP NONE PROVIDED

Name of Alternative SMP NONE PROVIDED

### **Other Permits**

40. Identify other DEC permits, existing and new, that are required for this project/facility. None

If SPDES Multi-Sector GP, then give permit ID NONE PROVIDED

If Other, then identify NONE PROVIDED

41. Does this project require a US Army Corps of Engineers Wetland Permit? No

If "Yes," then indicate Size of Impact, in acres, to the nearest tenth NONE PROVIDED

42. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. NONE PROVIDED

#### MS4 SWPPP Acceptance

### 43. Is this project subject to the requirements of a regulated, traditional land use control $\mathsf{MS4?}$

Yes - Please attach the MS4 Acceptance form below

### If No, skip question 44

44. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? Yes

#### MS4 SWPPP Acceptance Form Download

Download form from the link below. Complete, sign, and upload. <u>MS4 SWPPP Acceptance Form</u>

#### MS4 Acceptance Form Upload

NONE PROVIDED Comment NONE PROVIDED

### **Owner/Operator Certification**

#### **Owner/Operator Certification Form Download**

Download the certification form by clicking the link below. Complete, sign, scan, and upload the form. <u>Owner/Operator Certification Form (PDF, 45KB)</u>

### Upload Owner/Operator Certification Form

NONE PROVIDED Comment NONE PROVIDED



Department of Environmental Conservation

# **Owner/Operator Certification Form**

### SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name:	lewburgh South L	ogistics Center		
eNOI Submission Number: HQ0-DC7J-AWBCM				
eNOI Submitted by:	Owner/Operator	SWPPP Preparer	Other	

### **Certification Statement - Owner/Operator**

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

**Owner/Operator First Name** 

M.I. Last Name

Signature

Date



# SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

### Project Site Information Project/Site Name

Newburgh South Logistics Center

### **Owner/Operator Information**

**Owner/Operator (Company Name/Private Owner/Municipality Name)** 

IV5 Newburgh South Logistics Center, LLC

### **Certification Statement – SWPPP Preparer**

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Walter	J	Kubow
First name	MI	Last Name

Date

NEW YORK STATE OF OPPORTUNITYDepartment of Environmental ConservationNYS Department of Environmental Conservation Division of Water 625 Broadway, 4th Floor Albany, New York 12233-3505				
MS4 Stormwate	r Pollution Prevention Plan (SWPPP) Acceptance Form			
	for ivities Seeking Authorization Under SPDES General Permit mpleted Form to Notice Of Intent and Submit to Address Above)			
I. Project Owner/Operato	or Information			
1. Owner/Operator Name:	IV5 Newburgh South Logistics Center, LLC			
2. Contact Person:	Justin Drysdale			
3. Street Address:	1 Meadowlands Plaza, Suite 802			
4. City/State/Zip:	East Rutherford, NJ 07073			
II. Project Site Information	on			
5. Project/Site Name:	Newburgh South Logistics Center			
6. Street Address:	700 South Street			
7. City/State/Zip:	Newburgh, NY 12550			
III. Stormwater Pollution	Prevention Plan (SWPPP) Review and Acceptance Information			
8. SWPPP Reviewed by:				
9. Title/Position:				
10. Date Final SWPPP Rev	10. Date Final SWPPP Reviewed and Accepted:			
IV. Regulated MS4 Information				
11. Name of MS4:				
12. MS4 SPDES Permit Identification Number: NYR20A				
13. Contact Person:				
14. Street Address:				
15. City/State/Zip:				
16. Telephone Number:				

### MS4 SWPPP Acceptance Form - continued

# V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

New York State Department of Environmental Conservation Division of Water 625 Broadway, 4th Floor Albany, New York 12233-3505 *(NOTE: Submit completed form to address above)* NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity				
Please indicate your permit identification number: NYF	R			
I. Owner or Operator Information				
1. Owner/Operator Name: IV5 Newburgh South Logistics (	Center, LLC			
2. Street Address: 1 Meadowlands Plaza, Suite 802				
3. City/State/Zip: East Rutherford, NJ 07073				
4. Contact Person: Justin Drysdale	4a.Telephone: 212-417-7173			
4b. Contact Person E-Mail: justin.drysdale@brookfieldpro	perties.com			
II. Project Site Information				
5. Project/Site Name: Newburgh South Logistics Center				
6. Street Address: 700 South Street				
7. City/Zip: Newburgh, NY 12550				
8. County: Orange County				
III. Reason for Termination				
9a. □ All disturbed areas have achieved final stabilization in acco SWPPP. <b>*Date final stabilization completed</b> (month/year): _	rdance with the general permit and			
9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR				
9c. □ Other (Explain on Page 2)				
IV. Final Site Information:				
10a. Did this construction activity require the development of a S stormwater management practices?  □ yes □ no ( If no,	WPPP that includes post-construction go to question 10f.)			
10b. Have all post-construction stormwater management practice constructed?				
10c. Identify the entity responsible for long-term operation and m	aintenance of practice(s)?			

# **NOTICE OF TERMINATION** for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? 

yes 
no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area?

(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4?  $\hfill\square$  yes  $\hfill\square$  no

(If Yes, complete section VI - "MS4 Acceptance" statement

### V. Additional Information/Explanation: (Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

# **NOTICE OF TERMINATION** for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:			
I hereby certify that all disturbed areas have achieved final stabilization a of the general permit, and that all temporary, structural erosion and sedir been removed. Furthermore, I understand that certifying false, incorrect of violation of the referenced permit and the laws of the State of New York a criminal, civil and/or administrative proceedings.	nent control measures have or inaccurate information is a		
Printed Name:			
Title/Position:			
Signature:	Date:		
VIII. Qualified Inspector Certification - Post-construction Stormwa	ter Management Practice(s):		
I hereby certify that all post-construction stormwater management practic conformance with the SWPPP. Furthermore, I understand that certifying information is a violation of the referenced permit and the laws of the Sta subject me to criminal, civil and/or administrative proceedings.	false, incorrect or inaccurate		
Printed Name:			
Title/Position:			
Signature:	Date:		
IX. Owner or Operator Certification			
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.			
Printed Name:			
Title/Position:			
Signature:	Date:		

(NYS DEC Notice of Termination - January 2015)

Appendix C: Contractor's Certification Form Subcontractor's Certification Form

### Stormwater Pollution Prevention Plan Contractor Certification Statement (Responsible for overall SWPPP Compliance)

Newburgh South Logistics Center 700 South Street, Orange County, New York

This is to certify that the following contracting firm will be responsible for installing, constructing, repairing, inspecting and/or maintaining the erosion and sediment control practices and post-construction stormwater management control practices required by the SWPPP.

Contracting Firm Information
Name:
Address:
Telephone & Fax:
Trained Contractor(s) <sup>1</sup> Responsible for SWPPP Implementation (Provide name, title, and date of last training)

### Prior to commencement of construction activity, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.

Printed Name:	
Title/Position:	
Signature:	Date:

#### Upon completion of construction activities, the following certification shall be issued, prior to issuance of the NOT:

I hereby certify that that all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents. I further certify that all temporary erosion and sediment control measures have been removed from the site, and that the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction".

Printed Name:	
Title/Position:	
Signature:	Date:

<sup>1</sup> "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

<sup>2</sup> Signatory Requirements:

a. For a corporation, this form shall be signed by (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principle business function, or any other person who performs similar policy or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship, this form shall be signed by a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency, this form shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

### Stormwater Pollution Prevention Plan Subcontractor Certification Statement (whose work involves soil disturbance)

### Newburgh South Logistics Center 700 South Street, City of Newburgh, Orange County, New York

Each Subcontractor whose work will involve soil disturbance of any kind is required to complete and sign this Certification Statement before commencing any construction activity at the site. This completed Certification Statement(s) shall be maintained at the construction site in the Site Log Book.

### **Subcontracting Firm Information**

Name:		
Address:		
Telephone & Fax:		

Trained Contractor(s)<sup>2</sup> Responsible for SWPPP Implementation (Provide name, title, and date of last training)

### Prior to commencement of construction activities, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.

Printed Name:	
Title/Position:	
Signature:	Date:

<sup>&</sup>lt;sup>2</sup> "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control certificat Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

<sup>&</sup>lt;sup>2</sup> Signatory Requirements:

a. For a corporation, this form shall be signed by (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principle business function, or any other person who performs similar policy or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship, this form shall be signed by a general partner or the proprietor, respectively.

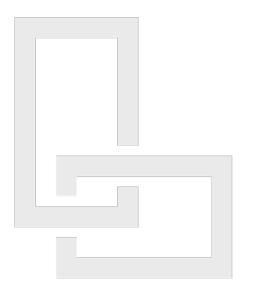
c. For a municipality, State, Federal, or other public agency, this form shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

Appendix D: SWPPP Inspection Report (Sample Form)

Prepared by: LaBella Associates 4 British American Boulevard Latham, NY 12110 (518) 439-8235



## SWPPP INSPECTION REPORT NUMBER XX IV5 Newburgh South Logistics Center, LLC Newburgh South Logistics Center 700 South Street, City of Newburgh, Orange County, NY



Performed: Report Issued: 9/29/2021 @ 12:00 AM 9/29/2021

Status: SATISFACTORY (All erosion control measures are installed and in working order)

Qualified Inspector (name and title)	Qualified Professional (name and title)
Date	Date
Signature	Signature

### **NYSDEC Documentation and SWPPP Forms**

NYSDEC Issued Permit Identification Number: NYRXXXXX

5-Acre Waiver: N/A (No 5-acre waiver for this project - Contractor not authorized to disturb >5 acres)

303d Status: Project does not directly discharge to a 303d impaired waterbody

Number of Inspections required: 1 / week

Location of SWPPP and Site Log Book on-site:

YES	NO	N/A	CONTAINED IN SITE LOG BOOK?
			Preconstruction Assessment
			NOI Acknowledgement letter
			Copy of eNOI
			Owner / Operator Certification
			SWPPP Preparer Certification
			MS4 SWPPP Acceptance Form
			Contractor and Subcontractor Certifications
			SPDES General Permit
			5 Acre Waiver
			NOT

Comments:

### Site Conditions

Approximate Disturbed Area at Time of Inspection: XX Acres							
Allowable Disturbed Area Per	Allowable Disturbed Area Per NOI and/or 5-acre waiver: XX Acres						
Current Status of Constructio	Current Status of Construction: Description						
Weather Conditions: Conditions		Temperature: XX °F		Soil Conditions: Choose an item.			
Description of Discharge Point/Natural Surface Waterbody	Condition of Runoff	f Sediment Discharge Noted Y / N		Corrective Action			

### **Erosion and Sediment Control Deficiencies and Corrective Actions**

SWPPP Component	Functional Y / N / NA	Deficiency (See Checklist and/or note)	Deficiency Location	Initial Date	Corrective Action	Corrected Y / N
General Site Conditions						
Silt Fence						
Stabilized Construction Access						
Compost Filter Sock						
Inlet Protection						
Soil Stockpiles						
Temporary Stabilization						
Permanent Stabilization						
Dewatering Operations						
Stone Check Dams						
Rock Outlet Protection						
Sediment Traps and Basins						
Temporary Stream Crossing						
Pavement Sweeping						
Concrete Washout						
Filter Strips						
Slope Protection Measures						
Temporary Swales and Berms						
Temporary Parking Areas						
Fiber Roll						
Permanent Turf Reinforcement						
Water Bars						
Flow Diffusers						
Other:						

### SWPPP Inspection Checklist and Deficiency Numbers

### 1 General Site Conditions

- 1A Adjoining properties are not protected from erosion and sediment deposition
- 1B Downstream waterways are not protected from erosion and sediment deposition
- 1C All E&SC measures have not been constructed as detailed in the SWPPP
- 1D Dust is not adequately controlled
- 1E Storage areas contain spills, leaks, or harmful materials
- $1 \mathsf{F} \qquad \mathsf{Garbage} \text{ and waste building materials are not being managed properly}$
- $1 G \qquad \text{Temporary control measures that are no longer needed have not been removed} \\$
- 1H Permanent SWM practices not constructed per plans

### 2 Silt Fence

- 2A Silt fence not installed on contour
- 2B Silt fence not across conveyance channels
- 2C Silt fence not at least 10 feet from toe of slope
- 2D Silt fence not at appropriate spacing intervals based on slope
- 2E Silt fence ends are not wrapped for continuous support
- 2F Silt fence fabric is loose or contains rips or frayed areas
- 2G Silt fence posts are unstable
- 2H Silt fence is not buried 6 inches minimum
- 2I Silt fence contains bulges or material buildup

### 3 Stabilized Construction Access

- 3A Temporary construction access not installed or not per NYS standards
- 3B Other access areas have not been stabilized immediately as work takes place
- 3C Sediment has tracked onto public streets and is not being cleaned daily
- 3D Stone is not clean enough to effectively remove mud from vehicles
- 3E Adequate drainage not provided to prevent ponding

### 4 Compost Filter Sock

- 4A Filter sock not installed on contour
- 4B  $\,$  Filter sock terminal ends do not extended 8' upslope at 45  $^\circ$  angle
- 4C Inappropriate diameter based on slope steepness and slope length
- 4D Filter sock not anchored at 10' intervals
- 4E More than 50% sediment has built up

### 5 Inlet Protection

- 5A Inlet protection not installed or installation is not per SWPPP or Blue Book specifications
- 5B Incorrect type(s) of inlet control installed or is inappropriate for location
- 5C Drainage area for inlet protection is greater than 1 acre
- 5D Sediment has not been removed when 50% of storage volume has been achieved
- 5E A 2" x 4" wood frame and wood posts has not been installed
- 5F Filter fabric is not buried a minimum of 1 foot below ground or secured to frame/posts
- 5G Posts are unstable, fabric is loose, and contains rips or frayed areas
- 5H Post spacing exceeds maximum 3' spacing

### 6 Soil Stockpiles

6A No sediment controls at downhill slope

### 7 Temporary Stabilization

- 7A Areas inactive for 14 days or more have not been stabilized (If <5 acres disturbed)
- 7B Areas inactive for 7 days or more have not been stabilized (If >5 acres disturbed or 303d)
- 7C Soil preparation has not been applied as specified in the SWPPP or the Blue Book
- 7D Rolled EC products specified for steep slopes or channels have not been installed

### 8 Permanent Stabilization

- 8A Lawn in disturbed areas has not been established to 80% germination
- 8B Soil preparation has not been applied as specified in the SWPPP or the Blue Book
- 8C Rolled EC products specified for steep slopes or channels have not been installed

### 9 Dewatering Operations

- 9A Upstream and downstream berms are not installed or functioning poorly
- 9B Clean water from upstream pool is not being pumped to the downstream pool
- 9C Sediment laden water from work area is not being discharged to a silt-trapping device
- 9D Groundwater from excavations managed improperly (No sumps/sediment control)

### 10 Stone Check Dam

- 10A Not installed per standards
- 10B Channel is unstable (flow is eroding soil underneath or around the structure)
- 10C Check dam in poor condition (rocks not in place or lack of geotextile fabric)
- 10D Sediment needs to be removed

### 11 Rock Outlet Protection

- 11A Rock outlet protection not installed per plan or Blue Book
- 11B Rock outlet protection not installed concurrently with pipe installation

### 12 Sediment Traps and Basins

- 12A Outlet structure constructed improperly
- 12B Geotextile fabric has not been placed beneath rock fill
- 12C Depth of sediment in basin has exceeded allowable threshold
- 12D Basin and outlet structure not constructed per the approved plan
- 12E Basin side slopes are not stabilized with seed/mulch
- 12F More than 50% capacity has built up

### 13 Temporary Stream Crossing

13A Construction crossings at concentrated flow areas have not been culverted

### 14 Pavement Sweeping

14A Pavement has not been swept daily and sediment has traveled into road

### Stormwater Management Practice Deficiencies and Corrective Actions

Practice	Sign Y/N	Current Phase of Construction	Items Not in Conformance with SWPPP	Deficiency Location	Initial Date	Corrective Action	Corrected Y / N
Practice 1:							
Practice 2:							
Practice 3:							
Practice 4:							
Practice 5:							
Practice 6:							

### Photo Log

Photo 1	Photo 1A
Data Itam in need of renair or maintenance	Date – Corrected Action:
Date – Item in need of repair or maintenance:	Dale - Corrected Action.
Photo 2	Photo 2A
Date – Item in need of repair or maintenance:	Date – Corrected Action:
Dhata 2	Dhata 24
Photo 3	Photo 3A
Date – Item in need of repair or maintenance:	Date – Corrected Action:

#### Photo Log (continued)

Photo 1	Photo 11
Photo 4	Photo 4A
Date – Item in need of repair or maintenance:	Date – Corrected Action:
Dhata 5	Dhata 54
Photo 5	Photo 5A
Date – Item in need of repair or maintenance:	Date – Corrected Action:
Photo 6	Photo 6A
Data them is used of	Data Dama ta di Astis
Date – Item in need of repair or maintenance:	Date – Corrected Action:
	1

Appendix E: NYSDEC "Deep-Ripping and Decompaction," April 2008



Division of Water

## Deep-Ripping and Decompaction

April 2008

Document Prepared by: John E. Lacey, Land Resource Consultant and Environmental Compliance Monitor (Formerly with the Division of Agricultural Protection and Development Services, NYS Dept. of Agriculture & Markets)

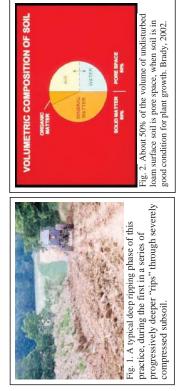
> New York State Department of Environmental Conservation

Alternative Stormwater Management Deep-Ripping and Decompaction

## Description

The two-phase practice of 1) "Deep Ripping;" and 2) "Decompaction" (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site after the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil drainage (rainfall infiltration), from the surface downward. In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soli when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.



# Recommended Application of Practice

The objective of Deep Ripping and Decompaction is to effectively fracture of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the "two-phase" practice of Deep Ripping and Decompaction first became established as a "best management practice" through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).



Soil permeability, soil drainage and cropland productivity were restored. For broader

productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground postructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

## Benefits

Aggressive "deep ripping" through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by "decompaction," i.e.: "sub-soiling," through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area's direct surface infiltration of rainfall by providing the open site's mitigated soil condition and lowers the demand on concentrated runoff control structures
- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures
- Decreases runoff volume generated and provides hydrologic source control
- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

 Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

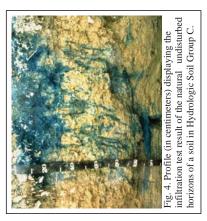
## Feasibility/Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (unisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

#### Soil

In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology. Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water turoff potential depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow

rates of infiltration and transmission of soilwater, and high runoff potential. In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot



lawn/ground cover to help maintain the restored subsoil structure. Infiltration after constructioninduced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils. Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, welldrained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep inpping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered. The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account. Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

#### Slope

The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

## Local Weather/Timing/Soil Moisture

Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a "plastic" or "liquid" state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the "slicing and smearing" of the material or added "squeezing and compression" instead of the necessary fracturing. Ample drying time is needed for a "rippable" soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

Ш Conversely, as shown in Figure 5, if the rolled The "poor man's Atterberg field test" for soil plasticity is a simple "hand-roll" method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or decompaction. sample stretches out in increments greater than apart respective soil sample crumbles and replacement), topsoil



rug. 3. Augered from a depth of 12 incress below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time. 3/8 of an inch long before crumbling, it is in a "plastic" state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.

## **Design Guidance**

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

 Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and 2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, "decompaction," mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area's soil permeability and

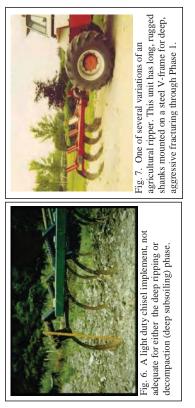
rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

## Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only "scarify" the uppermost surface portion of the mass of compacted subsoil material. The term "chisel plow" is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).



Use a "heavy duty" agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsical layer by delivering a momentary, wave-like "fifting and shattering" action up through the soil layers as it is pulled.

## Pulling-Power of Equipment

Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

(see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are topsoil and the upper 12 inches of the areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in by the tractor and the implement performing the Referring to Figure 8, the "chained up" so that only four legs will be less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this previously deep-ripped subsoil. In constricted Figure 9 pulling a 3-shank deep ripper, may be this slow and managed rate of operating speed, maximum functional performance is sustained engaged (at the maximum depth), requiring no unobstructed, former construction access area simultaneously through 11 inches of replaced more maneuverable. fracturing. soil

and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and the materials industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are shanks or "teeth" of these rippers are too short to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable not recommended. Typically, soil for turns and patterns than the tractor. the fracturing of generally necessary vertical Some



graded on top of the ripped subsoil. s.



120 hp tractor is more maneuverable for Phase construction access corridor is narrow, and the shank deep ripper. The severely compacted 1 deep ripping (subsoil fracturing), here.

## **Depth and Patterns of Movement**

As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

e.g.: 12 inches, rather than deep. This can be verified by using a  $\frac{3}{4}$  inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of There may be construction sites where the depth of the exposed subsoil's compression is moderate, increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.



here, incrementally reaching 18 of the needed 22 inches of subsoil fracture. along the same patterned pass area as Fig. 9; Fig. 11. A repeat run of the 3-shank ripper

6

Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing pass of the implement's legs or shanks evenly staggered between those from the previous pass actuated every 12 to 15 inches across the densely compressed soil mass.

## Large, Unobstructed Areas

For larger easy areas, use the standard patterns of movement:

- spread of the site; gradually progressing across the site's width, with each • The first series (pattern) of passes is applied lengthwise, parallel with the longest successive pass.
- of • The second series runs obliquely, crossing the first series at an angle about 45 degrees.
- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a 34inch cone penetrometer.)





soiling), of the replaced topsoil and the upper

## Corridors

In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

First, apply the same initial lengthwise, parallel series of passes described above. •

• A second series of passes makes a broad "S" shaped pattern of rips, continually and gradually alternating the "S" curves between opposite edges inside the compacted corridor. • The third and final series again uses the broad, alternating S pattern, but it is "flip-flopped" to continually cross the previous S pattern along the corridor's centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

## Maintenance and Cost

essential for maintaining a site's soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Once the two-phase practice of Deep Ripping and Decompation is completed, two items are Figure 15); and keeping the site free of traffic or other weight loads.

practice of landscaping, i.e. surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final weight-bearing force of soil compaction is applied.



before deep ripping, topsoil replacement, and temporary construction yard used daily by Fig. 14. The severely compacted soil of a heavy equipment for four months; shown decompaction.



Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil topsoil and upper subsoil and final surface replacement, decompaction through the tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland. The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one are may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at \$1800 per day, the net cost is \$900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs \$675 per acre for a combined total of \$1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

## Resources

## Publications:

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- Brady, N.C., and R.R. Weil. 2002. The Nature and Properties of Soils. 13th ed. Pearson Education, Inc.
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- Carpachi, N. 1987 (1995 fifth printing). Excavation and Grading Handbook, Revised. 2<sup>nd</sup> ed. Craftsman Book Company
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- Harpstead, M.I., T.J. Sauer, and W.F. Bennett. 2001. Soil Science Simplified. 4th ed. Iowa State University Press.
- Magdoff, F., and H. van Es. 2000. Building Soils for Better Crops. 2<sup>nd</sup> ed. Sustainable Agricultural Networks
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- Union Gas Limited, Ontario, Canada. 1984. *Rehabilitation of Agricultural Lands, Dawn-Kerwood Loop Pipeline; Technical Report.* Ecological Services for Planning, Ltd.; Robinson, Merritt & Devries, Ltd. and Smith, Hoffman Associates, Ltd.
- US Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station. Various years. Soil Survey of (various names) County, New York. USDA.

## Internet Access: • Examples of implements:

- <u>V-Rippers</u> Access by internet search of John Deere Ag -New Equipment for 915 (larger-frame model) V-
- Ripper, and., för 913 (smaller-frame model) V-Ripper. <u>Deep. angled-leg subsoiler</u>. Access by internet search of: Bighum Brothers Shear Bolt Paratil-Subsoiler.
  Intp://salesmanual.deec.com/sales/salesmanual/en\_N/mimary.illage/2008/feature/rippers/915v.pattern.frame.htm?4bu=a pklink=protect.last visited March MS
- Soils data of USDA Natural Resources Conservation Service. NRCS Web Soil Survey, <u>http://websoilsurvey.nrcs.usda.gov/app/</u> and USDA-NRCS Official Soil Series Descriptions; View by Name. <u>http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi</u>. Last visited Jan. 08.
- Soil penetrometer information. Access by internet searches of: Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension; as well as Dickey-john Soil Compaction Tester. http://www.dickey-johnproducts.com/pdf/SoilCompactIonTest.pdi and http://cropsoil.psu.edu/Extension/Facts/ucr18pdf Last visited Sept. 07

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Appendix F: Post-Construction Inspections and Maintenance

#### POST CONSTRUCTION INSPECTIONS AND MAINTENANCE

The site is in the City of Newburgh's designated MS4 area and this project will be subject to inspection and oversight by the City in accordance with the MS4 Permit, including annual reporting due to NYSDEC by June 1<sup>st</sup>. The reporting period is March 10<sup>th</sup> through March 9<sup>th</sup> of the following year. Third party inspections of the post-construction stormwater management practices shall be performed on an annual basis by a qualified professional with the inspection report and reports of annual maintenance sent to the City within the annual MS4 reporting period.

#### 1. SITE COVER

#### a. Fertilizer

As of January 1, 2012, the NYSDEC restricts the use of phosphorous fertilizer on lawns or non-agricultural turf. It is recommended that a soil test be conducted in order to ensure the use of an appropriate fertilizer. Additionally, fertilizer should not be applied within twenty (20) feet of a water body or on paved surfaces. The application rate shall be in accordance with the manufacturer's recommendations and should be applied in the following spring planting season.

#### b. Inspections

Site cover and associated structures and embankments should be inspected periodically for the first few months following construction and then on a biannual basis. Site inspections should also be performed following all major storm events. Items to check for include (but are not limited to):

- i. Differential settlement of embankments, cracking or erosion.
- ii. Lack of vigor and density of grass turf.
- iii. Accumulation of sediments or litter on lawn areas, paved areas, or within catch basin sumps.
- iv. Accumulation of pollutants, including oils or grease, in catch basin sumps.
- v. Damage or fatigue of storm sewer structures or associated components.

#### c. Mowing and Sweeping

Vegetated areas and landscaping should be maintained to promote vigorous and dense growth. Lawn areas should be mowed at least three times a year (more frequent mowing may be desired for aesthetic reasons). Resultant yard waste shall be collected and disposed of off-site.

Paved areas should be swept at least twice a year. Additional sweeping may be appropriate in the early spring for removal of deicing materials

#### d. Debris and Litter Removal

Accumulation of litter and debris should be removed during each mowing or sweep operation.

#### e. Structural Repair or Replacement

Components of the system which require repair or replacement should be addressed immediately following identification.

#### f. Catch Basins

Catch basins should be cleaned out on an annual basis, post snow melt, and prior to spring rains. In the event cleanout is not conducted, the level of sediment in the sump shall be documented via pictures and included in an annual report to the City's Engineering Department.

Disposal of material from catch basins sumps, drainage manholes, and trench drains shall be in accordance with local, state, and federal guidelines.

#### g. Rip-rap Dissipation structures

Riprap used to dissipate energy from pipe outfalls shall be cleaned or replaced when it becomes overburdened with silt or sediment.

#### h. Winter Maintenance

To prevent impacts to storm water management facilities, the following winter maintenance limitations, restrictions, or requirements are recommended:

- i. Remove snow and ice from inlet structures, basin inlet and outlet structures and away from culvert end sections.
- ii. Snow removed from paved areas should not be piled at inlets/outlets of the storm water management basin.
- iii. Use of deicing materials should be limited to sand and "environmentally friendly" chemical products. Use of salt mixtures should be kept to a minimum.
- iv. Sand used for deicing should be clean, course material free of fines, silt, and clay.
- v. Materials used for deicing should be removed during the early spring by sweeping and/ or vacuuming.

#### 2. VEGETATED SWALES

#### a. Inspection Schedule

Conveyance swales should be inspected periodically for the first few months following construction and then on a biannual basis.

#### b. Inspection of Uphill Drainage Area

Look for areas that are uphill from the swale:

i. Areas of bare soil should be seeded and mulched or sodded to establish vegetation.

- ii. Areas of erosion should be filled in with soil. compacted and seed and straw added to establish vegetation.
- iii. Water flowing to formed rills or small channels should eb redirected utilizing a small berm or adding topsoil to areas that are heavily compacted.
- iv. Piles of grass clippings, mulch, dirt, etc. should be removed or covered.
- v. Open containers of oil, grease, paint, or other substances should be covered or properly disposed.
- vi. Seed and mulch should be applied to dying grass areas at the edge of the road.

#### c. Inspection of Inlets

Stand in the swale and look for all the places where water flows in:

- i. Grit and debris (especially at curb inlets or openings) should be flattened.
- ii. Growing grass or weeds should be removed as well as the soil associated.
- iii. Grass clippings, leaves, sticks, and other debris at the inlets or along the edge of the swale should be removed.
- iv. Sediment and debris blocking pipes or ditch openings should be removed.
- v. Materials removed should be disposed in such a way where it may not re-enter the swale.
- vi. Small areas of erosion should be smoothed out and rock or stone applied to prevent further erosion. Erosion control matting can be applied to further prevent erosion.

#### d. Inspection of Surface Area

Examine the entire swale surface and side slopes:

- i. Minor areas of sediment or grit should be removed and disposed of in such a way where it cannot re-enter the swale. If removal of the material creates a hole or low area, fill in with good topsoil and add seed and straw to re-vegetate.
- ii. Trash, vegetative debris, and other undesirable materials should be removed.
- iii. Eroded areas should be filled with clean topsoil, and then seeded and mulched to establish vegetation. If erosion is on a side slope, fill in with soil and cover with erosion-control mattering or at minimum straw mulch after reseeding.
- iv. In areas where water flows unevenly down the length of the swale and ponds in certain areas for extended periods of time, the area should be raked to create a more even flow path.
- v. In areas where water flows around the edges of check dams, creating erosion or sinkholes on the uphill or downhill side, or the check dams are breaking apart or breaching, move stone around, fill and compact soil, or add new material so that the water will be directed to the center of the check dam.

#### e. Inspection of Vegetation

Examine the swale vegetation:

i. Overgrown vegetation should be mowed or bush-hogged. Resultant yard waste shall be collected and disposed of off-site. Application of fertilizers and pesticides should be restricted or limited.

As of January 1, 2012, the NYSDEC restricts the use of phosphorous fertilizer on lawns or non-agricultural turf. It is recommended that a soil test be conducted in order to ensure the use of an appropriate fertilizer. Additionally, fertilizer should not be applied within twenty (20) feet of a water body or on paved surfaces. The application rate shall be in accordance with the manufacturer's recommendations and should be applied in the following spring planting season.

ii. Weeds or invasive plants should be removed by bush-hogging before the spring. The root mat should be removed manually or with appropriate herbicides.

#### f. Inspection of Outlets

Examine outlets that release water out of the swale:

- i. Debris should be removed.
- ii. Areas of erosion should be filled in with soil. compacted and seed and straw added to establish vegetation.

#### **3. BIORETENTION FILTERS**

#### a. Inspection Schedule

Bioretention filters should be inspected periodically for the first few months after construction and then on a monthly basis. Bioretention filters should be inspected after all major storm events.

#### b. Inspection of Uphill Drainage Area

Inspect areas that are uphill from the Bioretention filter.

- i. Bare soil and/or erosion of the ground should be seeded and mulched to establish vegetation. Areas of erosion should be filled with soil, compacted, and seeded and mulched to establish vegetation.
- ii. If a small channel(s) is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted.
- iii. Piles of grass clippings, mulch, dirt, salt or other materials should be removed.
- iv. Open containers of oil, grease, paint, or other substances should be covered and properly disposed of.

#### c. Inspection of Inlets

Stand in the Bioretention filter itself and inspect each location where water flows in.

- i. Inlets should have a clear pathway for water to flow into the filter. Grit and debris or grass/weeds should be removed at curb inlets or openings.
- ii. Clumps of growing grass or weeds and the associated soil or grit should be removed.
- iii. Grass clippings, leaves, sticks, and other debris collecting at inlets should be removed.
- iv. For pipes and ditches, sediment and debris partially blocking the pipe or ditch opening into the Bioretention filter should be removed.
- v. All materials removed should be properly disposed in such a way that it may not re-enter the Bioretention filter.
- vi. Small areas of erosion should be smoothed out and rock or stone applied to prevent further erosion. Reseeding and applying erosion-control matting can be used to prevent further erosion.

#### d. Inspection of Ponding Area

Examine the entire Bioretention surface and side slopes:

- In areas where the mulch layer has decomposed or is less than 1-inch thick, new mulch should be added to a total depth of 2 to 3 inches. The mulch should be a shredded hardwood mulch that is less likely to float away during rainstorms. Avoid adding too much mulch so that inlets are obstructed, or certain areas become higher than the rest of the Bioretention surface.
- ii. Excess sediment, grit, trash, or other debris that has accumulated on the bottom should be removed and disposed of in such a way that it cannot reenter the Bioretention filter. If removing the material creates a hole or low area, fill in with a soil mix that matches the original mix and cover with mulch to create a flat surface.
- iii. Eroded areas in the bottom or on the side slopes should be filled with clean topsoil or sand and covered with mulch. If the problem reoccurs, stone can be used to fill in the areas. If the erosion is on a side slope, fill in with clay that can be compacted and seed and mulch the area.
- iv. The bottom of the Bioretention filter should be flat. The surface should be raked or mulch added to low spots to create a more level surface.

#### e. Inspection of Vegetation

Examine all Bioretention filter vegetation:

- i. Weeds and dead and/or diseased plants should be removed and the mulch surrounding these replaced. Plants should be added to fill in areas that are not well vegetated.
- ii. If bioretention filter utilized a vegetated seed mix, then grass areas shall be mowed to ensure that grass height does not exceed 6-inches.
- iii. Undesirable trees and shrubs should be removed. Resultant yard wastes shall be collected and disposed of off-site

#### f. Inspection of Outlets

Examine the outlets that release water out of the Bioretention filter:

- i. Stone should be added in areas of erosion at the outlet to reduce the impact from the water flowing out of the outlet pipe or weir during storms.
- ii. Outlet obstructions should be removed and disposed of where it cannot reenter the Bioretention filter.

#### g. Debris, Trash and Litter Control

Removal of debris and litter shall be accomplished during mowing operations. Inlet structures should be cleared of all debris and litter.

#### h. Structural Repairs and Replacement

Components of the bioretention filter, which require repair or replacement, should be addressed immediately following identification. This includes treating and or replacing diseased trees and shrub, fertilizing as necessary, replacing mulch where bare spots appear, replacing clogged underdrains and filter beds.

#### i. Erosion and Sediment Control

Sources of sedimentation, specifically eroded areas in upland drainage areas, should be stabilized immediately upon identification. Stabilization should be with vegetative practices or other erosion control practices when vegetative measures do not prove effective.

Soil slumpage, erosion of the embankments or around inlets/outlets, and cracking should be stabilized and repaired immediately upon identification.

#### j. Sediment Removal

Sediments that accumulate in the bioretention filter should be removed annually to prevent clogging of inlet or outlet structures. Disposal of material removed from bioretention filter shall be in accordance with local, state, and federal guidelines.

#### 4. SURFACE DETENTION BASINS

#### a. Inspection Schedule

Detention Basins should be inspected periodically for the first few months after construction and then on an annual basis. Detention Basins should be inspected after major storm events to ensure inlets and outlets remain clear.

#### b. Inspection Items

Items to check for include (but are not limited to):

- i. Differential settlement of embankments.
- ii. Cracking, erosion, or seepage through embankments.
- iii. Evidence of clogging at inlets or outlets.

- iv. Erosion of the flow path through the detention basin.
- v. Brush, shrub, or tree growth on embankments.
- vi. Condition of the overflow spillway.
- vii. Lack of vigor and density of grass turf on the basin embankments.

#### c. Mowing

The side slopes, embankments, inlets, and overflow spillways of the detention basin and bioretention area should be mowed at least three times a year.

Meadow areas shall be mowed, typically with a brush hog, no more than once a year at the end of the growing season. The mowed materials shall not be collected so that the mowing process disperses the seed for germination the following growing season. Additionally, periodic removal of individual invasive species and/or woody plant material is required.

#### d. Debris and Litter Control

Removal of debris and litter should be accomplished during mowing operations. Inlet and outlet structures should be cleared of all debris and litter.

#### e. Structural repairs and Replacement

Components of the detention basin, which require repair or replacement, should be addressed immediately following identification.

#### f. Erosion Control

Sources of sedimentation, specifically eroded areas in upland drainage areas, should be stabilized immediately upon identification. Stabilization should be with vegetative practices or other erosion control practices when vegetative measures do not prove effective.

Soil slumpage, erosion of the basin embankment or around inlets/outlets, and cracking should be stabilized and repaired immediately upon identification. Repair, replacement, or addition of rip-rap aprons, channels or embankments should be pursued as required.

#### g. Sediment removal

Sediments, which accumulate in the detention basin, should be removed periodically to prevent clogging of inlet or outlet structures. A typical clean-out cycle should be between 5 to 10 years with more frequent cleanings near inlet and outlet structures.

#### 5. FOREBAYS AND WET POOLS

#### a. Inspection Schedule

Forebays and Wet Pools should be inspected periodically for the first few months after construction and then on an annual basis. Forebays and Wet Pools should be inspected following all major storm events.

#### b. Inspection of Uphill Drainage Area

Look for areas that are uphill from the forebay/pond:

- i. Bare soil should be seeded and strawed to establish vegetation. Areas of erosion should be filled in with soil, compacted, and seeded and mulched to establish vegetation.
- Piles of grass clippings, mulch, dirt, salt, or other materials should be removed.
   Excess vegetation or woody debris that can block drainage systems should be removed.
- iii. Open containers of oil, grease, paint, or other substances exposed to rain in the drainage area should be covered or properly disposed.

#### c. Inspection of Forebay/Pond Inlets

Look for all areas where water flows into the pond during storms. There may be multiple points of inflow and types of structures:

i. Silt, debris, or trash or excessive vegetation that is blocking or burying an inlet should be removed with hand tools.

#### d. Inspection of Forebay/Pond Areas and Embankments

Examine both the interior and exterior forebay/pond banks as well as the forebay/pond body. Observe from the inlet pipes to the outfall structure and emergency overflow:

- Sediment, trash, vegetation or other debris built up in the pretreatment area(s), forebay(s) choking the flow of the water, and/or algae and aquatic plants in the pond area(s) should be removed.
- ii. Minor rills or gullies on the side slopes of the pond that have become unstable, eroding and/or have areas of bare dirt should be filled in with topsoil, compacted, and seeded and mulches. Alternatively, herbaceous plugs can be used.
- iii. In areas where the dam/embankment is slumping, sinking, settling, or eroding, clean material (clay and topsoil) should be added and seeded and mulched. Embankments should periodically be mowed to enable inspection and minimize the establishment of woody vegetation. Any woody vegetation that has already established on embankments should be removed.
- iv. Emergency spillways or outfalls should be cleared of light debris and vegetation.

#### e. Inspection of Forebay/Pond Outlets

Examine the outlet of the pipe on the downstream side of the dam/embankment where it empties into a stream, channel, or drainage system.

i. Minor sediment, trash, debris, or vegetation blockages should be removed. Accumulated trash at the outlet should be removed.

#### f. Mowing

Tree and brush growth must be prevented on basin embankments, side slopes, bottoms, and around inlets and the overflow spillway(s). Mowing of the embankments shall be at least three times a year unless more frequent mowing is required to control vegetative growth. Resultant yard waste shall be collected and disposed of off-site.

Meadow areas shall be mowed, typically with a brush hog, no more than once a year at the end of the growing season. The mowed materials shall not be collected so that the mowing process disperses the seed for germination the following growing season. Additionally, periodic removal of individual invasive species and/or woody plant material is required.

#### g. Debris and Litter Removal

Removal of debris and litter shall be accomplished during mowing operations. Inlet structures should be cleared of all debris and litter.

#### h. Structural Repairs and Replacement

Components of the forebay or wet pool, which require repair or replacement, should be addressed immediately following identification.

#### i. Erosion Control

Sources of sedimentation, specifically eroded areas in upland drainage areas, should be stabilized immediately upon identification. Stabilization should be with vegetative practices or other erosion control practices when vegetative measures do not prove effective.

Soil slumpage, erosion of the basin embankment or around inlets or overflow outlets, and cracking should be stabilized and repaired immediately upon identification. Repair, replacement or addition of rip-rap aprons, channels or embankments should be pursued as required.

#### j. Sediment Removal

Cleanout frequency of Forebays and Wet Pools is dependent upon bottom cover, storage capacity, volume of inflow, and sediment load.

Sediment shall be removed from the Forebays and Wet Pools every 5 to 6 years or when accumulations reach 12 inches in depth. Monitoring the depth of sediments can be measured by installing permanent markers in the newly constructed facilities with a mark 12 inches above the permanent water surface. Markers should not be spaced more than 50 feet apart along the flow path through the facility. A log should be kept indicating the date that the facility was inspected and the distance to the bottom.

When sediment removal is required, the original grades depicted on the project drawings should be reestablished by a qualified contractor. If any of the impermeable material used in the construction of the basin bottom is removed it must be replaced with clean material consistent with the original material specifications.

#### 6. AQUATIC BENCHES

#### a. Inspection Schedule

Aquatic Benches should be inspected periodically for the first few months after construction and then on an annual basis. Aquatic Benches should be inspected after all major storm events.

#### b. Inspection Items

Items to check for include (but are not limited to):

- i. Checking basin embankments for subsidence, erosion, cracking, tree growth, and the presence of burrowing animals.
- ii. Health and vigor of wetland vegetation.
- iii. Accumulation of sediment.

#### c. Mowing

Mowing is not desirable nor allowed in the Aquatic Benches. Trees and shrubs should be removed from around inlet and outlet structures. Removal should be biannual.

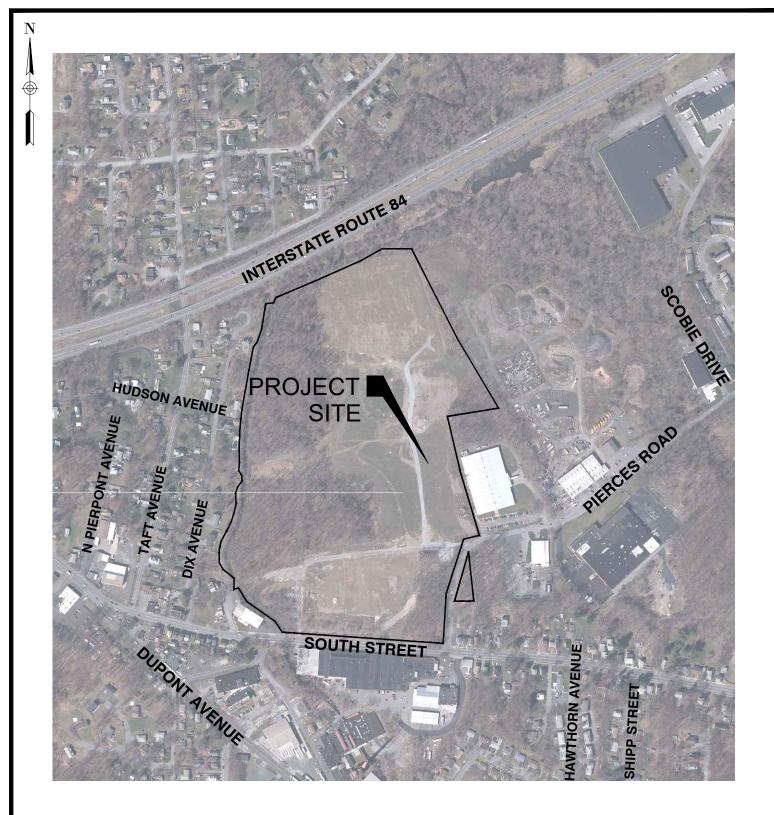
#### d. Debris, Trash and Litter Control

Debris, trash, and litter should be removed from the Aquatic Benches immediately upon discovery.

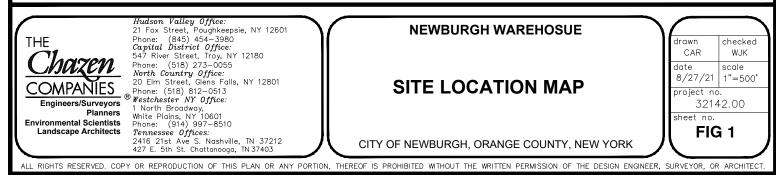
#### e. Erosion Control

Soil slumpage, erosion of the Aquatic Bench embankment or around inlets or outlets, and cracking should be stabilized and repaired immediately upon identification.

Appendix G: Figures



ALTERATION OF THIS DRAWING, EXCEPT BY A LICENSED P.E. IS ILLEGAL. ANY ALTERATION BY A P.E. MUST BE INDICATED AND BEAR THE APPROPRIATE SEAL, SIGNATURE AND DATE OF ALTERATION.

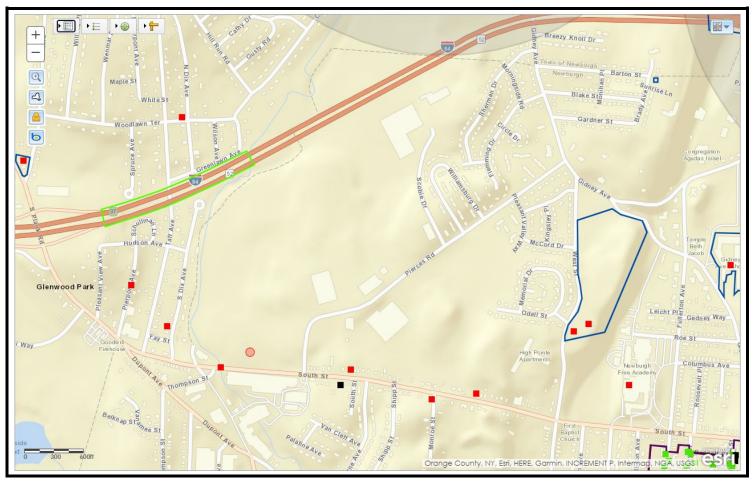


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**Conservation Service** 

Web Soil Survey National Cooperative Soil Survey



#### LEGEND

Consultation Projects (View)

Survey Archaeology Areas (View)

LPC Historic Districts

Archeologically Sensitive Areas

National Register Building Sites (View)

Survey Building Areas (View) USN Building Districts (View)

LPC Landmarks

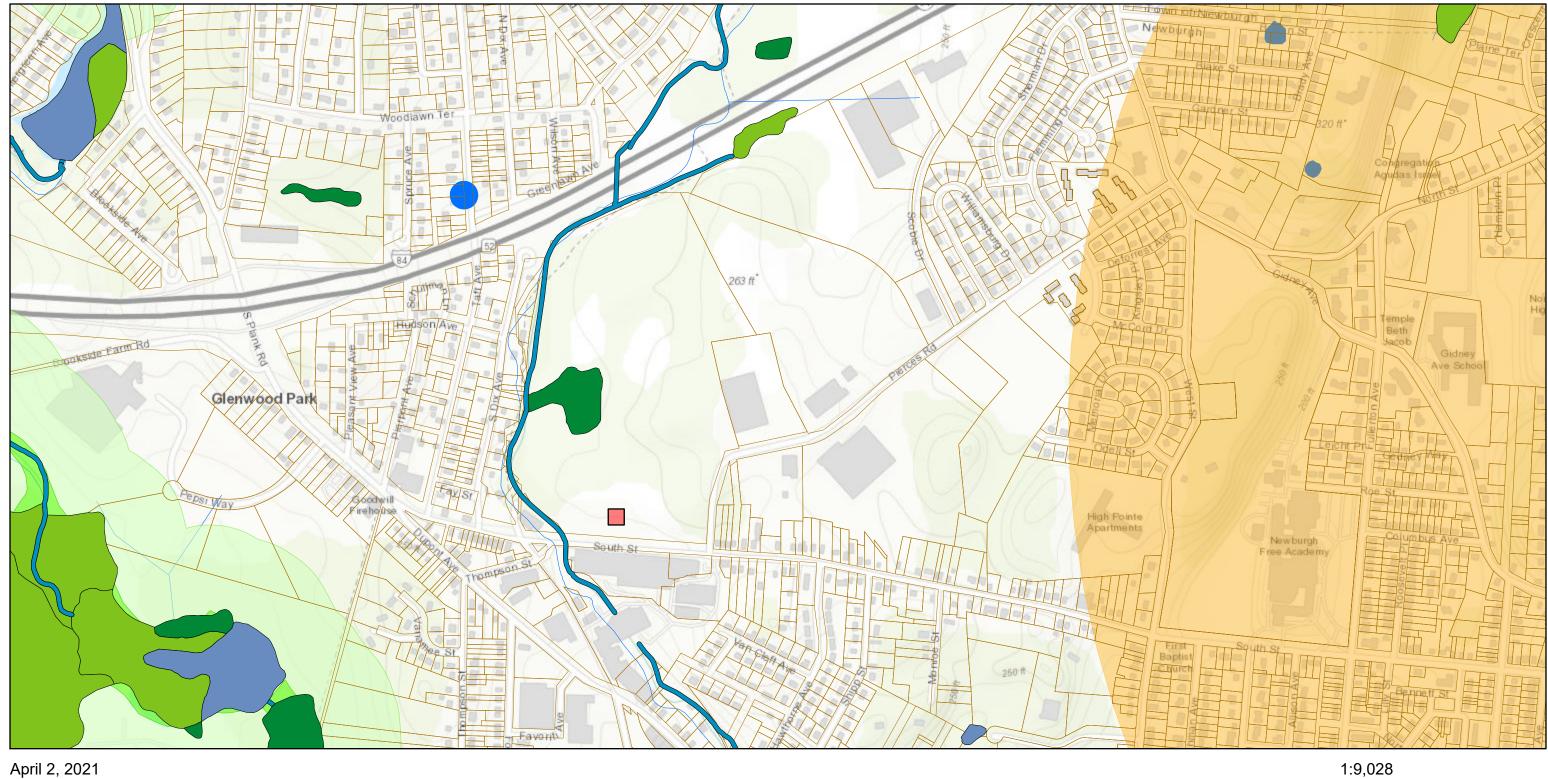
USN Building Points (View)

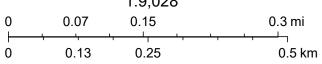
- Eligible
  - Listed
- Not Eligible
- Not Eligible Demolished
- Undetermined

#### Cemeteries

Ê

### Figure 4: Environmental Resource Mapper





Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

#### NOTES TO USERS

p is for use in administering the National Flood Insurance Program. It t necessarily identify all areas subject to flooding, particularly from local sources of small size. The community map repository should be d for possible updated or additional flood hazard information.

e detailed information in areas where Base Flood Elev loodways have been determined, users are encouraged to a noor floadways have been determined, uses are not one of events of Arriles and Floadways have been determined uses are not accompanies ontained within the Flood Insurance Study (FIS) report that accompanies that Muses should be aware that BEFS aboven on the FRM represent urposes only and should not be used as the sole source of flood in information. Accounting, flood elevation data presented in the FIS hould be utilized in conjunction with the FIRM for purposes of loss and/or floodpate management.

I Base Flood Elevations shown on this map apply only landward of h American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should e that coastal flood elevations are also provided in the Summary of Elevations tables in the Flood Insurance Study report for this jurisdiction. is shown in the Summary of Stillwater Elevations tables should be used for tion and/or floodplain management purposes when they are higher than tions shown on this FIRM.

es of the **floodways** were computed at cross sections and interpolated cross sections. The floodways were based on hydraulic considerations rat to requirements of the National Flood Insurance Program. Floodway and other pertinent floodway data are provided in the Flood Insurance port for this jurisdiction.

areas not in Special Flood Hazard Areas may be protected by **flood** structures. Refer to Section 2.4 "Flood Protection Measures" of the surance Study report for information on flood control structures for this n.

Letton used in the presention of this may use Universal Transverse (UTD) note it The horizontal datum was NAS 0.56580 uphroid, es in datum, spheroid, projection or UTM zones used in the production of a valacent jurisdictions may result in slight positional differences in map across jurisdiction boundaries. These differences do not affect the of this FIRM.

evations on this map are referenced to the North American Vertical Datum These flood elevations must be compared to structure and ground is referenced to the same vertical datum. For information regarding on between the National Geodetic Vertical Datum of 1952 and the merican Vertical Datum of 1988 visit the National Geodetic Survey at http://www.nss.nosa.gov.or.contact.the National Geodetic Survey at ming address:

rmation Services I/NGS12 Geodetic Survey #9202 st-West Highway rring, Maryland 20910-3282 3-3242

n current elevation, description, and/or location information for bench shown on this map, please contact the Information Services Branch National Geodetic Survey at (301) 713-3242, or visit its website at w.ngs.noaa.gov.

ap information shown on this FIRM was derived from digital cography provided by the New York Sate Office of Cyber Security & Infrastructure Contination. This information was provided as 30-er and 60-centimeter resolution natural color ortholmagery from phy dated ApriMay 2004.

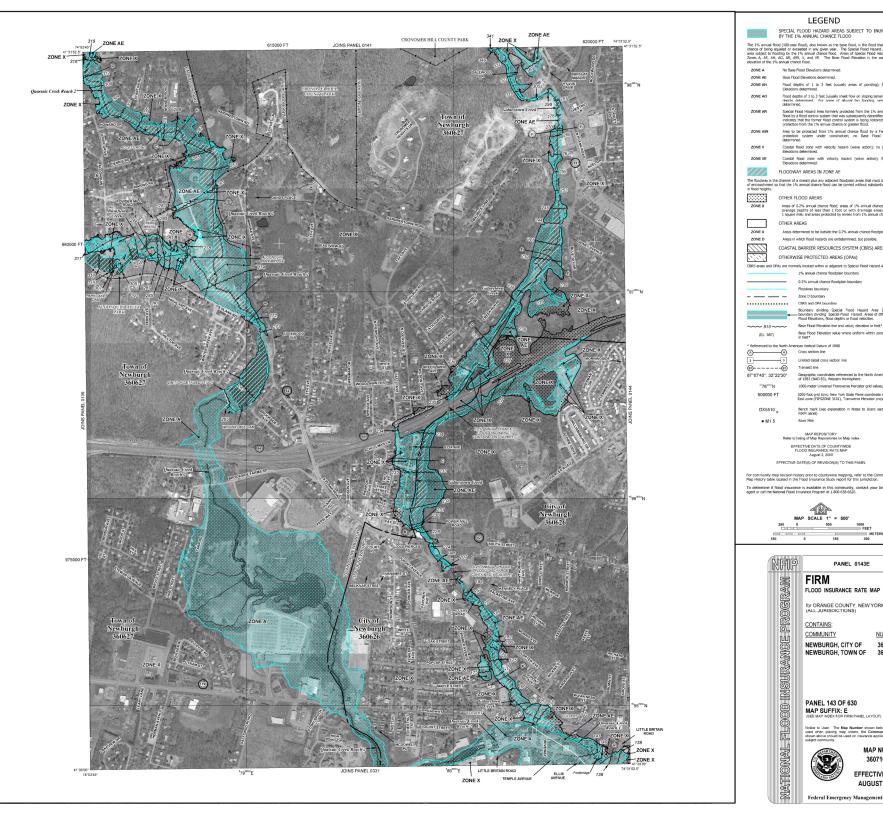
n updated topographic information, this map reflects more detailed and e stream channel configurations and floodplain delineations than own on the previous FRM for this jurisdicion. As a result, the Flood and Floodway Data tables in the Flood Insurance Study Report (which authoritative hydrauic data) may reflect stream channel distances that m what is shown on this map. Also, the road to floodplain relationships for datemasm any differ from what is shown on previous maps.

te limits shown on this map are based on the best data available at the ublication. Because changes due to annexations or de-annexations may urred after this map was published, map users should contact appropriate ity officials to verify current corporate limit locations.

efer to the separately printed **Map Index** for an overview map of the howing the layout of map panels; community map repository addresses; sting of Communities table containing National Flood Insurance Program r each community as well as a listing of the panels on which each try is located.

the FEMA Map Service Center at 1-800-358-9616 for information on products associated with this FIRM. Available products may include ly issued Letters of Map Change, a Flood Insurance Study report, and/or risons of this map. The FEMA Map Service Center may also be reached 1-800-358-9620 and its website at http://msc.fema.gov.

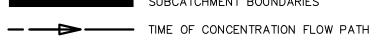
ve questions about this map or questions concerning the National Flood e Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or FEMA website at <u>http://www.fema.gov.</u>





Drawing Name: B:\GLOBAL\Projects\Brookfield Properties\2222335.01 - Newburgh Warehouse Civil Eng\06\_Drawings\Civil\99\_FIG6-7\_32142-00\_PRE-POST-DEVELOP.dwg Xref's Attached: XBASE\_AS-BUILT-CLIENT\_32142-00; XBASE\_GIS\_32142-00; XTB-24X36\_32142-00; XLAYOUT\_32142-00; XSTORM\_32142-00; XBASE-ENG\_32142-00\_CHAZEN\_rev1 Date Printed: Jan 04, 2024, 1:09pm

### LEGEND:



SUBCATCHMENT BOUNDARIES





DESIGN POINT

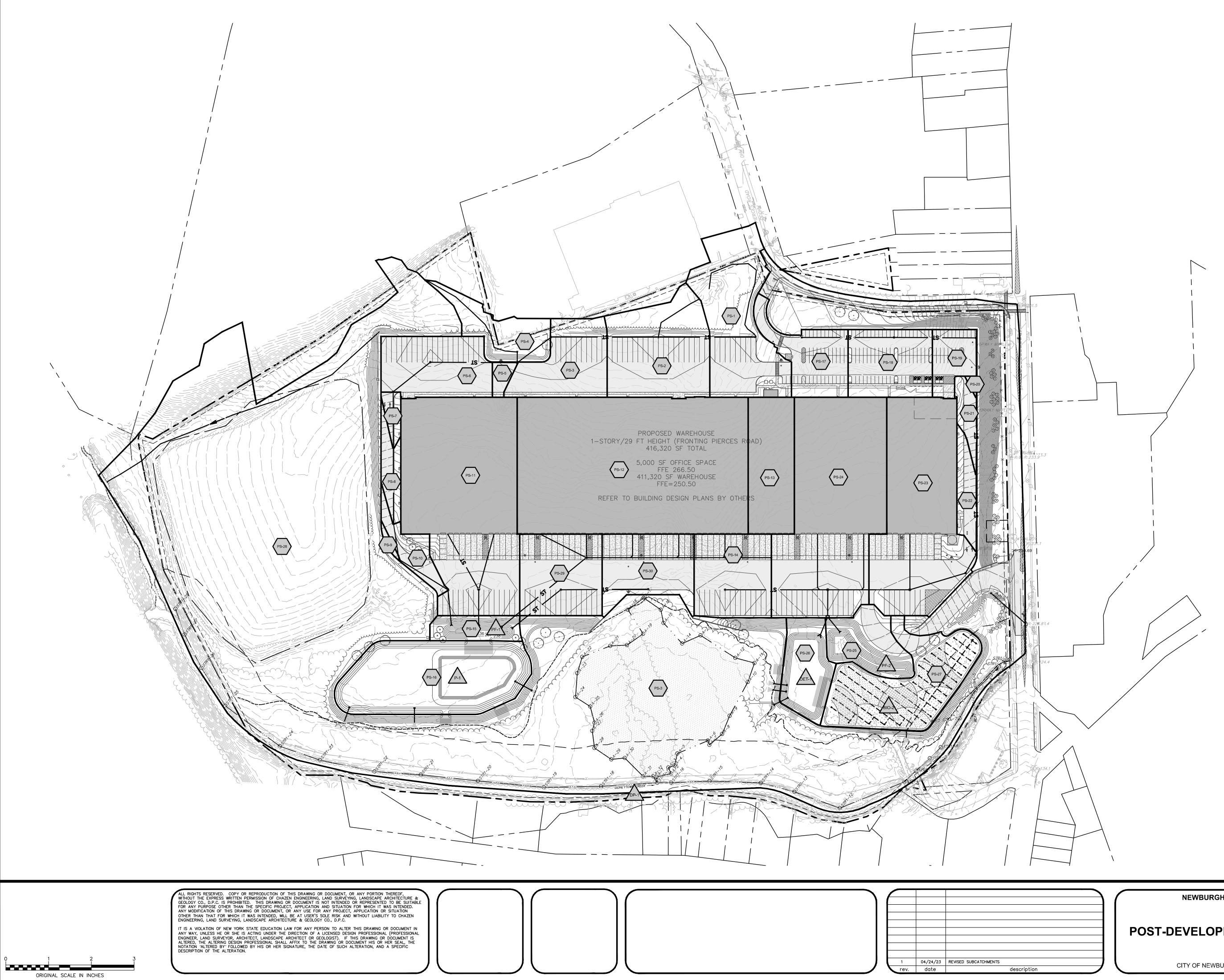
**PROGRESS SET - NOT FOR CONSTRUCTION** 

NEWBURGH SOUTH LOGISTICS CENTER

PRE-DEVELOPMENT STORMWATER MAP

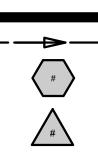
designed checked CAR WJK Jate scale 11/10/23 1"=100' roject no. 2220679 eet no. FIG 6

CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK



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### LEGEND:



SUBCATCHMENT BOUNDARIES

SUBCATCHMENT

STORMWATER MANAGEMENT PRACTICE OR STRUCTURE

**PROGRESS SET - NOT FOR CONSTRUCTION** 

NEWBURGH SOUTH LOGISTICS CENTER

**POST-DEVELOPMENT STORMWATER MAP** 

designed CAR WJK date 11/10/23 1"=100' project no. 2220679 sheet no. FIG 7

CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

Appendix H: Chazen Certifying Professionals Letter

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February 17, 2022

## RE: LaBella Certifying Professionals for NYSDEC SPDES GP-20-001

To Whom it May Concern:

In accordance with the NYSDEC SPDES General Permit GP 0-20-001, part VII.H.2, the New York State licensed Professional Engineers employed by LaBella Associates and listed on the attachment to this letter are duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), NOIs, and NOTs prepared under their direct supervision.

Respectfully submitted,

LaBella Associates

Steven P. Metzger, PE Chief Executive Officer

## LaBella Professional Engineers duly authorized to sign and seal SWPPPs, NOIs, and NOTs:

Name:	Title:
Kyle Ahearn, PE	Senior Civil Engineer
Jody Allen, PE	Senior Civil Engineer
Anthony Bernardi, PE	Senior Civil Engineer
Brendan Bystrak, PE	Vice President
Steven Calocerinos, PE	Senior Civil Engineer
Jason Ebbs, PE	Municipal Group Leader
Michael Flanagan, PE	Senior Civil Engineer
Don Hoefler, PE	Senior Project Engineer
Reuben Hull, PE	Senior Civil Engineer
Eric Johnson, PE	Senior Civil Engineer
Roger Keating, PE	Senior Civil Engineer
Walter Kubow, PE	Senior Civil Engineer
Christopher Lapine, PE	Senior Civil Engineer
Joseph Lanaro, PE	Vice President
Michael Mishook, PE	Vice President
Lauren Rodriquez, PE	Civil Engineer
Jonathan Spurr, PE	Civil Engineer
Mary Steblein, PE	Senior Civil Engineer
Robert Steehler, PE	Vice President
Timothy Webber, PE	Vice President
Kristopher Winkler, PE	Senior Civil Engineer

Signature: Date: ( Al

2/9/22 2/24/2022

2/9/2022



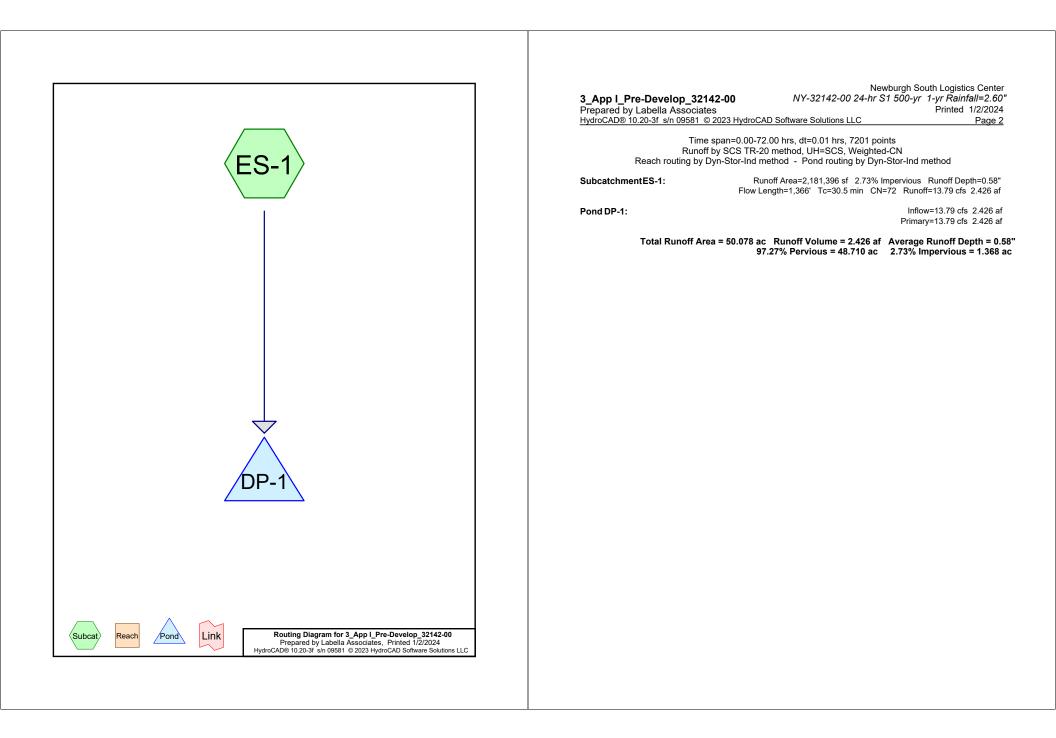
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Appendix I: Pre-Development Stormwater Modeling

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			ociates	<b>)0</b> 3 HydroCAE	NY-32 Software Sol		0-yr 1-yr Rainfall=2.60 Printed 1/2/2024 Page 3
			Sun	nmary for	Subcatch	ment ES-1:	
noff Route	= ed to Pon		s@ 12.4	4 hrs, Volu	me=	2.426 af, Depth= 0.5	8"
				CS, Weigh ainfall=2.60		e Span= 0.00-72.00 h	rs, dt= 0.01 hrs
	rea (sf)		Description				
	26,577			od, HSG A			
	00,220 12.083		-75% Gras Gravel road		od, HSG A		
	5.025				sewers, HS	GΔ	
	1.122			ace, HSG A			
8	21.555			od, HSG D			
	71.183				ood, HSG D		
	08,907				od, HSG D		
	81,271		Gravel road				
	32,120				sewers, HS	G D	
	21,333			ace, HSG D			
	81,396		Veighted A				
	21,796			vious Area	_		
	59,600	2	2.73% Impe	ervious Area	a		
Тс	Length	Slope	Velocity	Capacity	Description		
min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	Description		
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						<v= 16.1="" fps<="" td=""><td></td></v=>	
7.0	597	0.0410	1.42			oncentrated Flow,	
					Short Grass	s Pasture Kv= 7.0 fps	3
16.4	604	0.0150	0.61			oncentrated Flow,	
					Woodland	Kv= 5.0 fps	
30.5	1,366						

#### Summary for Pond DP-1:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	50.078 ac,	2.73% Impervious, Inflow D	epth = 0.58" for 1-yr event
Inflow =	13.79 cfs @	12.44 hrs, Volume=	2.426 af
Primary =	13.79 cfs @	12.44 hrs, Volume=	2.426 af, Atten= 0%, Lag= 0.0 min

Prepared by Labella Associate HydroCAD® 10.20-3f s/n 09581 ©	es 2023 HydroCAD Software Solutions LLC	Printed 1/2/2024 Page 4
Runoff	span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points by SCS TR-20 method, UH=SCS, Weighted-CN Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind me	hod
SubcatchmentES-1:	Runoff Area=2,181,396 sf 2.73% Impervious R Flow Length=1,366' Tc=30.5 min CN=72 Runoff=	
Pond DP-1:		54.74 cfs  8.188 af 54.74 cfs  8.188 af
Total Runoff Are	ea = 50.078 ac Runoff Volume = 8.188 af Average R 97.27% Pervious = 48.710 ac 2.73% Imp	unoff Depth = 1.96 ervious = 1.368 ac

	d by Lab	ella Ass			NY-32142-00 24-hr S1 500-yr         10-yr Rainfall=4.69"           Printed         1/2/2024           Software Solutions LLC         Page 5	
			Sun	nmary for	r Subcatchment ES-1:	
lunoff Route	= d to Pon		fs @ 12.40	0 hrs, Volu	me= 8.188 af, Depth= 1.96"	
			thod, UH=S 0-yr 10-yr∣		ted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs 69"	
Ar	ea (sf)	CN E	Description			
4 8 7 2,1 2,1	26,577 00,220 12,083 5,025 1,122 21,555 71,183 08,907 81,271 32,120 21,333 81,396 21,796 59,600 Length	39         >           76         0           98         F           98         V           77         V           80         >           91         0           98         V           98         V           97         V           98         V           91         0           98         V           72         V           2         2	Gravel road Paved road Nater Surfa Noods, Goo Noods/gras >75% Grass Gravel road	s cover, Gc s, HSG A s w/curbs & ace, HSG A od, HSG D ss comb., G s cover, Gc ls, HSG D s w/curbs & ace, HSG D verage vious Area ervious Area	Sood, HSG D sod, HSG D & sewers, HSG D	
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)		
6.8	100	0.0500	0.24		Sheet Flow, Grass: Short n= 0.150 P2= 3.15"	
0.3	65	0.0650	4.10		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps	
7.0	597	0.0410	1.42		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps	
	604	0.0150	0.61		Shallow Concentrated Flow,	
16.4	604				Woodland Kv= 5.0 fps	

#### Summary for Pond DP-1:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	50.078 ac,	2.73% Impervious, Inflow D	epth = 1.96" for 10-yr event
Inflow =	54.74 cfs @	12.40 hrs, Volume=	8.188 af
Primary =	54.74 cfs @	12.40 hrs, Volume=	8.188 af, Atten= 0%, Lag= 0.0 min

HydroCAD® 10.20-3f s/n 09581	© 2023 HydroCAD Software Solutions LLC	Page 6
Runo	e span=0.00-72.00 hrs, dt=0.01 hrs, 7201 poi ff by SCS TR-20 method, UH=SCS, Weightec Dyn-Stor-Ind method - Pond routing by Dyn-	I-CN
SubcatchmentES-1:	Runoff Area=2,181,396 sf 2.73% lr Flow Length=1,366' Tc=30.5 min CN=7	npervious Runoff Depth=2.90"
Pond DP-1:		Inflow=82.53 cfs 12.117 af Primary=82.53 cfs 12.117 af
Total Runoff Are	ea = 50.078 ac Runoff Volume = 12.117 af 97.27% Pervious = 48.710 ac	Average Runoff Depth = 2.90 2.73% Impervious = 1.368 ac

		oella Ass 3f_s/n 09			NY-32142-00 24-hr S1 500-yr 25-yr Rainfa Printed D Software Solutions LLC				
			Sun	nmary fo	r Subcatchment ES-1:				
noff Route	= ed to Pon		s@ 12.3	7 hrs, Volu	me= 12.117 af, Depth= 2.90"				
				SCS, Weigh Rainfall=5.	nted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs 89"				
Α	rea (sf)	CN D	escription						
	26,577			od, HSG A					
	00,220				ood, HSG A				
	12,083 76 Gravel roads, HSG A								
	5,025								
	1,122			ace, HSG A					
	21,555			od, HSG D					
	71,183 '08,907				Good, HSG D Dod, HSG D				
	81,271		ravel road		000, HSG D				
	32,120				& sewers, HSG D				
	21,333			ace, HSG D					
	81,396		/eighted A	,					
	21,796			vious Area					
	59,600	2	.73% Impe	ervious Are	а				
Tc min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
6.8		0.0500	0.24	(0.0)	Sheet Flow,				
0.0	100	0.0000	0.24		Grass: Short n= 0.150 P2= 3.15"				
0.3	65	0.0650	4.10		Shallow Concentrated Flow,				
					Unpaved Kv= 16.1 fps				
7.0	597	0.0410	1.42		Shallow Concentrated Flow,				
					Short Grass Pasture Kv= 7.0 fps				
16.4	604	0.0150	0.61		Shallow Concentrated Flow,				
10.4					Woodland Kv= 5.0 fps				
30.5	1,366	T-4-1			•				

#### Summary for Pond DP-1:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	50.078 ac,	2.73% Impervious, Inflow I	Depth = 2.90"	for 25-yr event
Inflow =	82.53 cfs @	12.37 hrs, Volume=	12.117 af	-
Primary =	82.53 cfs @	12.37 hrs, Volume=	12.117 af, Atte	en= 0%, Lag= 0.0 min

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Runo	ne span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points off by SCS TR-20 method, UH=SCS, Weighted-CN v Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind me	thod		
SubcatchmentES-1:         Runoff Area=2,181,396 sf         2.73% Impervious         Runoff De           Flow Length=1,366'         Tc=30.5 min         CN=72         Runoff=142.95 cfs				
Pond DP-1:		2.95 cfs  20.804 af 2.95 cfs  20.804 af		
Total Runoff Are	ea = 50.078 ac Runoff Volume = 20.804 af Average R 97.27% Pervious = 48.710 ac 2.73% Imp			

	I_Pre-D d by Lab		_ <b>32142-(</b> sociates	00	Newburg NY-32142-00 24-hr S1 500-y	h South Logistics Center <i>r 100-yr Rainfall=8.33</i> Printed 1/2/2024
				3 HydroCA	O Software Solutions LLC	Page 9
			Sun	nmary fo	r Subcatchment ES-1:	
unoff Route	= ed to Pon		īs @ 12.3	7 hrs, Volu	me= 20.804 af, Depth= 4.8	99"
				SCS, Weigh r Rainfall=8	nted-CN, Time Span= 0.00-72.00 h 3.33"	rs, dt= 0.01 hrs
	rea (sf)		Description			
	26,577			od, HSG A		
	00,220				ood, HSG A	
	12,083		Gravel road			
	5,025 1,122			s w/curbs a ace, HSG A	& sewers, HSG A	
0	21,555			od, HSG D		
	71,183				Good, HSG D	
	08,907				ood, HSG D	
	81,271		Gravel road		500, 1180 D	
	32,120				& sewers, HSG D	
	21,333			ace, HSG D		
	81,396		Veighted A	,		
	21,796			vious Area		
	59,600	2	2.73% Impe	ervious Are	а	
Тс	Length	Slope	Velocity	Capacity	Description	
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·	
6.8	100	0.0500			Sheet Flow,	
					Grass: Short n= 0.150 P2= 3.1	5"
0.3	65	0.0650	4.10		Shallow Concentrated Flow,	
					Unpaved Kv= 16.1 fps	
7.0	597	0.0410	1.42		Shallow Concentrated Flow,	
					Short Grass Pasture Kv= 7.0 fps	6
16.4	604	0.0150	0.61		Shallow Concentrated Flow,	
	1 366	Total			Woodland Kv= 5.0 fps	
20 E						

30.5 1,366 Total

#### Summary for Pond DP-1:

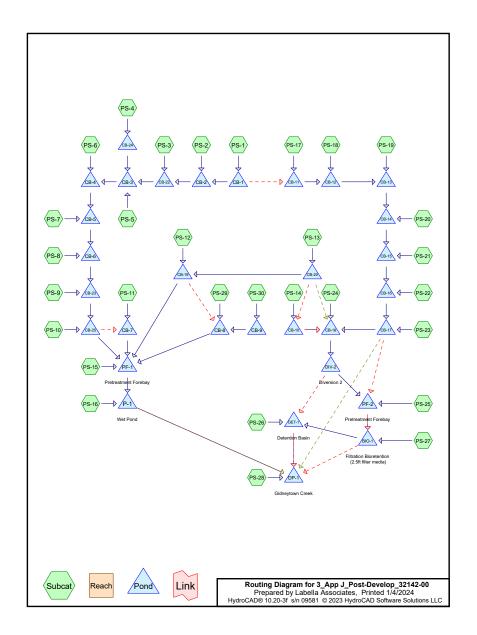
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	=	50.078 ac,	2.73% Impervious, Inflow I	Depth = 4.99"	for 100-yr event
Inflow =		142.95 cfs @	12.37 hrs, Volume=	20.804 af	-
Primary =		142.95 cfs @	12.37 hrs, Volume=	20.804 af, Atte	en= 0%, Lag= 0.0 min

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Appendix J: Post-Development Stormwater Modeling

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3_App J_Post-Develop_32142 Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 202	Printed 1/4/2024
Runoff by S	n=0.00-72.00 hrs, dt=0.01 hrs, 7201 points SCS TR-20 method, UH=SCS, Weighted-CN Stor-Ind method - Pond routing by Dyn-Stor-Ind method
SubcatchmentPS-1:	Runoff Area=59,320 sf 46.38% Impervious Runoff Depth=1.01" Flow Length=321' Tc=14.2 min CN=81 Runoff=1.30 cfs 0.115 af
SubcatchmentPS-10:	Runoff Area=11,265 sf 67.79% Impervious Runoff Depth=0.91" Tc=6.0 min CN=79 Runoff=0.31 cfs 0.020 af
SubcatchmentPS-11:	Runoff Area=124,140 sf 99.06% Impervious Runoff Depth=2.26" Tc=6.0 min CN=97 Runoff=8.55 cfs 0.537 af
SubcatchmentPS-12:	Runoff Area=172,728 sf 100.00% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=12.16 cfs 0.783 af
SubcatchmentPS-13:	Runoff Area=34,560 sf 100.00% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=2.43 cfs 0.157 af
SubcatchmentPS-14:	Runoff Area=35,140 sf 97.85% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=2.47 cfs 0.159 af
SubcatchmentPS-15:	Runoff Area=12,293 sf 0.00% Impervious Runoff Depth=1.26" Tc=6.0 min CN=85 Runoff=0.50 cfs 0.030 af
SubcatchmentPS-16:	Runoff Area=68,931 sf 0.00% Impervious Runoff Depth=1.33" Tc=6.0 min CN=86 Runoff=2.96 cfs 0.175 af
SubcatchmentPS-17:	Runoff Area=26,060 sf 83.73% Impervious Runoff Depth=2.06" Tc=6.0 min CN=95 Runoff=1.69 cfs 0.103 af
SubcatchmentPS-18:	Runoff Area=31,224 sf 79.46% Impervious Runoff Depth=1.97" Tc=6.0 min CN=94 Runoff=1.95 cfs 0.117 af
SubcatchmentPS-19:	Runoff Area=13,991 sf 95.15% Impervious Runoff Depth=2.26" Tc=6.0 min CN=97 Runoff=0.96 cfs 0.061 af
SubcatchmentPS-2:	Runoff Area=52,401 sf 62.82% Impervious Runoff Depth=1.70" Flow Length=139' Tc=7.8 min CN=91 Runoff=2.62 cfs 0.171 af
SubcatchmentPS-20:	Runoff Area=777 sf 100.00% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af
SubcatchmentPS-21:	Runoff Area=6,993 sf 69.58% Impervious Runoff Depth=1.87" Tc=6.0 min CN=93 Runoff=0.42 cfs 0.025 af
SubcatchmentPS-22:	Runoff Area=10,506 sf 66.97% Impervious Runoff Depth=1.79" Tc=6.0 min CN=92 Runoff=0.61 cfs 0.036 af
SubcatchmentPS-23:	Runoff Area=92,825 sf 95.28% Impervious Runoff Depth=2.26" Tc=6.0 min CN=97 Runoff=6.39 cfs 0.402 af

_App J_Post-Develop_3	
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ydrocad® 10.20-3f s/n 09581 @	© 2023 HydroCAD Software Solutions LLC Page 3
ubcatchmentPS-24:	Runoff Area=112,817 sf 98.41% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=7.94 cfs 0.512 af
ubcatchmentPS-25:	Runoff Area=23,503 sf 23.00% Impervious Runoff Depth=1.47" Tc=6.0 min CN=88 Runoff=1.12 cfs 0.066 af
ubcatchmentPS-26:	Runoff Area=23,847 sf 0.00% Impervious Runoff Depth=0.96"
ubcatchmentr 3-26.	Tc=6.0 min CN=80 Runoff=0.71 cfs 0.044 at
ubcatchmentPS-27:	Runoff Area=54,566 sf 4.64% Impervious Runoff Depth=1.01" Tc=6.0 min CN=81 Runoff=1.74 cfs 0.106 at
ubcatchmentPS-28:	Runoff Area=1,035,126 sf   6.64% Impervious   Runoff Depth=0.50" Flow Length=735'   Tc=22.4 min   CN=70   Runoff=7.06 cfs  0.998 af
ubcatchmentPS-29:	Runoff Area=36,671 sf 100.00% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=2.58 cfs 0.166 at
ubcatchmentPS-3:	Runoff Area=32,215 sf 78.33% Impervious Runoff Depth=1.87"
	Tc=6.0 min CN=93 Runoff=1.94 cfs 0.115 at
ubcatchmentPS-30:	Runoff Area=33,056 sf 85.37% Impervious Runoff Depth=2.06" Tc=6.0 min CN=95 Runoff=2.14 cfs 0.130 af
ubcatchmentPS-4:	Runoff Area=22,641 sf 0.00% Impervious Runoff Depth=0.43' Flow Length=284' Tc=12.3 min CN=68 Runoff=0.16 cfs 0.019 af
ubcatchmentPS-5:	Runoff Area=3,406 sf 94.86% Impervious Runoff Depth=2.26" Tc=6.0 min CN=97 Runoff=0.23 cfs 0.015 at
ubcatchmentPS-6:	Runoff Area=35,574 sf 96.53% Impervious Runoff Depth=2.26" Tc=6.0 min CN=97 Runoff=2.45 cfs 0.154 at
ubcatchmentPS-7:	Runoff Area=4,143 sf 59.04% Impervious Runoff Depth=0.96" Tc=6.0 min CN=80 Runoff=0.12 cfs 0.008 af
ubcatchmentPS-8:	Runoff Area=8,693 sf 67.40% Impervious Runoff Depth=0.91" Tc=6.0 min CN=79 Runoff=0.24 cfs 0.015 af
ubcatchmentPS-9:	Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.37" Tc=6.0 min CN=98 Runoff=0.14 cfs 0.009 af
and DIO 4. Filtration Discustor	
	ttion (2.5ft         Peak Elev=236.10'         Storage=25,569 cf         Inflow=21.90 cfs         1.589 af           y=5.06 cfs         0.610 af         Secondary=0.00 cfs         0.000 af         Outflow=5.31 cfs         1.589 af
ond CB-1:	Peak Elev=260.39' Storage=5 cf Inflow=1.30 cfs 0.115 af rv=1.30 cfs 0.115 af Secondarv=0.00 cfs 0.000 af Outflow=1.30 cfs 0.115 af
ond CB-10:	Peak Elev=241.87' Storage=34 of Inflow=2.47 cfs 0.159 a
	ry=2.37 cfs 0.159 af Secondary=0.00 cfs 0.000 af Outflow=2.37 cfs 0.159 af

<b>3_App J_Post-De</b> Prepared by Labella HydroCAD® 10.20-3f s			Newburgh Sc 2142-00 24-hr S1 LLC	outh Logistic 1-yr Rainf Printed	all=2.60"
Pond CB-11:	18.0" Round Culvert		2' Storage=6 cf Infle ' S=0.0100 '/' Outfle		
Pond CB-12:	18.0" Round Culvert		' Storage=13 cf Infle ' S=0.0100 '/' Outfle		
Pond CB-13:	18.0" Round Culvert		Storage=15 cf Infle S=0.0100 '/' Outfle		
Pond CB-14:		Peak Elev=254.84'	Storage=15 cf Infle Outfl	ow=4.66 cfs ow=4.66 cfs	
Pond CB-15:		Peak Elev=251.23'	Storage=16 cf Infle Outfl	ow=5.08 cfs ow=5.08 cfs	
Pond CB-16:		Peak Elev=243.56	Storage=19 cf Infle Outfl	ow=5.68 cfs ow=5.68 cfs	
<b>Pond CB-17:</b> Primary=11.81 cfs 0.747 a	F af Secondary=0.00 cfs 0.000		Storage=65 cf Inflo cfs 0.000 af Outflov		
Pond CB-18:	F	Peak Elev=241.83'	Storage=95 cf Inflo Outflo	w=22.08 cfs w=21.95 cfs	
Pond CB-19:	F Primary=14.58 cfs  0.940 af		Storage=50 cf Inflo cfs 0.000 af Outflov		
Pond CB-2:		Peak Elev=258.57'	Storage=12 cf Infle Outfl	ow=3.56 cfs ow=3.56 cfs	
<b>Pond CB-20:</b> Primary=2.43 cfs 0.157	af Secondary=0.00 cfs 0.00		8' Storage=9 cf Infle cfs 0.000 af Outflo		
Pond CB-22:		Peak Elev=256.40	Storage=16 cf Infle Outfl	ow=5.32 cfs ow=5.32 cfs	
Pond CB-23:		Peak Elev=244.74	Storage=28 cf Infle Outfl	ow=8.47 cfs ow=8.47 cfs	
Pond CB-24:	12.0" Round Culve		2' Storage=1 cf Infle ' S=0.0100 '/' Outfle		
Pond CB-25:	Primary=8.77 cfs 0.640 a	Peak Elev=243.16 f Secondary=0.00	Storage=29 cf Inflo cfs 0.000 af Outflo	ow=8.78 cfs ow=8.77 cfs	0.640 af 0.640 af
Pond CB-3:		Peak Elev=255.48	Storage=29 cf Infle Outfl	ow=5.63 cfs ow=5.63 cfs	
Pond CB-4:	18.0" Round Culvert		' Storage=26 cf Infle ' S=0.0100 '/' Outfle		

<b>3_App J_Post-Develop_32142-00</b> Prepared by Labella Associates	NY-32142-00 24-hr S1 1	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCA	AD Software Solutions LLC	Page 5
Pond CB-5:	Peak Elev=251.80' Storage=26 cf Inflo	w=8.10 cfs 0.596 af
		w=8.10 cfs 0.596 af
Pond CB-6:	Peak Elev=247.69' Storage=21 cf Inflo	
	Outflo	w=8.33 cfs 0.611 af
Pond CB-7:	Peak Elev=240.51' Storage=32 cf Inflo	w=8.55 cfs 0.537 af
Folia CB-7.		w=8.54 cfs 0.537 af
Pond CB-8:	Peak Elev=240.79' Storage=15 cf Inflo	
	Outflo	w=4.72 cfs 0.297 af
David OD 0:	Peak Elev=241.46' Storage=8 cf Inflo	w=0.14 efc. 0.120 ef
Pond CB-9:		w=2.14 cfs 0.130 af
	Outio	W 2.14 010 0.100 ul
Pond DET-1: Detention Basin	Peak Elev=233.61' Storage=19,575 cf Inflo	w=5.25 cfs 0.654 af
Primary=0.30 cfs 0.6	54 af Secondary=0.00 cfs 0.000 af Outflow	<i>w</i> =0.30 cfs 0.654 af
		04.05 6 4.440 6
Primary=22.02 cfs 1.411	Peak Elev=240.46' Storage=106 cf Inflow 8 af Secondary=0.00 cfs 0.000 af Outflow	
Filling y=22.02 CIS 1.4 IC		-22.02 015 1.410 81
Pond DP-1: Gidneytown Creek	Inflo	w=7.52 cfs 3.582 af
2	Prima	ry=7.52 cfs 3.582 af
	eak Elev=237.99' Storage=89,854 cf Inflow 31 af Secondary=0.00 cfs 0.000 af Outflov	
Filling -0.39 CIS 1.9	ST al Secondary=0.00 cls 0.000 al Outlion	N=0.39 CIS 1.931 al
Pond PF-1: Pretreatment Forebay	Peak Elev=238.93' Storage=1,703 cf Inflow	/=36.90 cfs 2.443 af
· ····,		v=36.57 cfs 2.443 af
Pond PF-2: Pretreatment Forebay	Peak Elev=236.11' Storage=4,478 cf Inflow	
	Outriow	v=20.19 cfs 1.483 af
Total Runoff Area = 50.078 ac	Runoff Volume = 5.249 af Average	Runoff Depth = 1.26

Total Runoff Area = 50.078 acRunoff Volume = 5.249 afAverage Runoff Depth = 1.26"57.85% Pervious = 28.971 ac42.15% Impervious = 21.108 ac

3_App					-00		Newburgh South Logistics NY-32142-00 24-hr S1 1-yr Rainfa	11=2.6
Prepare						0-4	Printed 1	
HydroCA	J® 10.20	-31 s/n u	19581 ©	2023	8 HydroCAL	Software S	olutions LLC	Page
			\$	Sum	mary fo	Subcate	chment PS-1:	
Runoff Route	= ed to Pon			2.16	i hrs, Volu	me=	0.115 af, Depth= 1.01"	
Runoff by NY-3214						ted-CN, Tir	me Span= 0.00-72.00 hrs, dt= 0.01 hrs	
A	rea (sf)	CN	Descrip	tion				
	21,713	80				od, HSG D		
	20,423 10.094				ng, HSG D s cover Go	od, HSG A		
	7,090				ng, HSG A			
	59,320	81	Weighte					
	31,807 27,513				vious Area ervious Are			
	27,515		40.5070	mp	ei vious Ai	Ja		
Tc (min)	Length (feet)	Slope (ft/ft			Capacity (cfs)	Descriptio	n	
6.8	100	0.0500	0 0	.24		Sheet Flo	w, ort n= 0.150 P2= 3.15"	
7.4	221	0.0050	0	49			Concentrated Flow.	
		0.0000					ss Pasture Kv= 7.0 fps	
14.2	321	Total						
			s	um	mary for	Subcatcl	hment PS-10:	
Runoff Route	= ed to Pon			2.04	hrs, Volu	me=	0.020 af, Depth= 0.91"	
Runoff by NY-3214						ted-CN, Tir	ne Span= 0.00-72.00 hrs, dt= 0.01 hrs	
A	rea (sf)		Descrip					
	3,629					od, HSG A		
	7,636 11,265		Paved   Weighte		ng, HSG A			
	3,629 7,636		32.21%	Perv	vious Area ervious Ar			
Tc (min)	Length (feet)	Slope (ft/ft	e Velo ) (ft/s		Capacity (cfs)	Descriptio	n	
6.0	/					Direct En	Aug. 1	

Prepared by Lab	-Develop_32142- pella Associates 3f s/n 09581 © 2023		NY-32142-00 24-hr S1 1	uth Logistics Center <i>yr Rainfall=2.60</i> Printed 1/4/2024 Page 7
		•	atchment PS-11:	raye /
		-		
Runoff = Routed to Pon	8.55 cfs @ 12.04 d CB-7 :	hrs, Volume=	0.537 af, Depth= 2.26"	
	R-20 method, UH=S0 hr S1 1-yr  Rainfall=2		Time Span= 0.00-72.00 hrs, dt	= 0.01 hrs
Area (sf)	CN Description			
1,165 436	39 >75% Grass 98 Paved parkin	cover, Good, HSC	G A	
3,849	98 Roofs, HSG	D		
83,098 35,592	98 Roofs, HSG 98 Paved parkin			
124,140	97 Weighted Av			
1,165	0.94% Pervic	ous Area		
122,975	99.06% Impe	ervious Area		
Tc Length (min) (feet)	Slope Velocity (ft/ft) (ft/sec)	Capacity Descrij (cfs)	otion	
~ ~				
6.0		Direct	Entry,	
<b>б.</b> О	Sumn		Entry, atchment PS-12:	
		nary for Subca	atchment PS-12:	
6.0 Runoff = Routed to Pon	12.16 cfs @ 12.04	nary for Subca		
Runoff = Routed to Pon Runoff by SCS TF	12.16 cfs @ 12.04 d CB-19 :	nary for Subca hrs, Volume= CS, Weighted-CN,	atchment PS-12:	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS TF	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=S0 nr S1 1-yr Rainfall=2 <u>CN Description</u>	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60"	atchment PS-12: 0.783 af, Depth= 2.37"	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS TF IY-32142-00 24-1 <u>Area (sf)</u> 155,036	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=S0 nr S1 1-yr Rainfall=2 <u>CN Description</u> 98 Roofs, HSG	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60"	atchment PS-12: 0.783 af, Depth= 2.37"	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS Tf IY-32142-00 24- <u>Area (sf)</u> 155,036 17,692	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=SC nr S1 1-yr Rainfall=2 <u>CN Description</u> 98 Roofs, HSG 1 98 Roofs, HSG 1	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" D A	atchment PS-12: 0.783 af, Depth= 2.37"	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS TF IY-32142-00 24-1 <u>Area (sf)</u> 155,036	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=SC nr S1 1-yr Rainfall=2 <u>CN Description</u> 98 Roofs, HSG 1 98 Roofs, HSG 3 98 Weighted Av	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" D A	atchment PS-12: 0.783 af, Depth= 2.37"	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS TF NY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=SC nr S1 1-yr Rainfall=2 <u>CN Description</u> 98 Roofs, HSG 1 98 Roofs, HSG 3 98 Weighted Av	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" D A erage pervious Area	<b>Atchment PS-12:</b> 0.783 af, Depth= 2.37" Time Span= 0.00-72.00 hrs, dt	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS Tf IY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 Tc Length	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=SC nr S1 1-yr Rainfall=2 <u>CN Description</u> 98 Roofs, HSG 98 Weighted Av 100.00% Imp Slope Velocity	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" D A erage pervious Area Capacity Descrij	t <b>ichment PS-12:</b> 0.783 af, Depth= 2.37" Time Span= 0.00-72.00 hrs, dt	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS Tf YY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=S( nr S1 1-yr Rainfall=2 CN Description 98 Roofs, HSG 98 Roofs, HSG 98 Weighted Av 100.00% Imp Slope Velocity (ft/ft) (ft/sec)	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" D A erage pervious Area Capacity Descrij (cfs) Direct	htchment PS-12: 0.783 af, Depth= 2.37" Time Span= 0.00-72.00 hrs, dt	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS Tf YY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=S( nr S1 1-yr Rainfall=2 CN Description 98 Roofs, HSG 98 Roofs, HSG 98 Weighted Av 100.00% Imp Slope Velocity (ft/ft) (ft/sec)	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" D A erage pervious Area Capacity Descrij (cfs) Direct	t <b>ichment PS-12:</b> 0.783 af, Depth= 2.37" Time Span= 0.00-72.00 hrs, dt	= 0.01 hrs
Runoff = Routed to Pon Runoff by SCS Tf YY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	12.16 cfs @ 12.04 d CB-19 : R-20 method, UH=SC nr S1 1-yr Rainfall=2 <u>CN Description</u> 98 Roofs, HSG 98 Weighted Av 100.00% Imp Slope Velocity (ft/ft) (ft/sec) <b>Summ</b> 2.43 cfs @ 12.04	nary for Subca hrs, Volume= CS, Weighted-CN, 2.60" DA erage bervious Area Capacity Descrip (cfs) Direct nary for Subca	htchment PS-12: 0.783 af, Depth= 2.37" Time Span= 0.00-72.00 hrs, dt	= 0.01 hrs

			elop_32142 ssociates	2-00	NY		rgh South Logisti hr S1 1-yr Rain Printed	fall=2.6
				3 HydroCAI	Software Solution	ns LLC		Page
А	rea (sf)	CN	Description					
	34,560	98	Roofs, HSC					
	34,560		100.00% In	npervious A	rea			
Tc (min)	Length (feet)	Slop (ft/f		Capacity (cfs)	Description			
6.0					Direct Entry,			
			Sum	mary for	Subcatchme	nt PS-14:		
Runoff Route	= ed to Pon		cfs @ 12.0 10 :	4 hrs, Volu	me= 0.1	59 af, Depth=	2.37"	
			ethod, UH=S -yr_Rainfall=		ted-CN, Time Sp	oan= 0.00-72.00	) hrs, dt= 0.01 hrs	6
A	rea (sf)	CN	Description					
	755 34,385	80 98	>75% Gras Paved park					
	35,140	98	Weighted A					
	755		2.15% Perv					
	34,385		97.85% Imp	Dervious Ar	ea			
Tc (min)	Length (feet)	Slop (ft/f		Capacity (cfs)	Description			
6.0					Direct Entry,			
			Sum	mary for	Subcatchme	nt PS-15:		
Runoff Route	= ed to Pon		cfs @ 12.0 : Pretreatme			30 af, Depth=	1.26"	
NY-3214	2-00 24-1	hr S1 1	-yr Rainfall=	=2.60"	ted-CN, Time Sp	oan= 0.00-72.00	) hrs, dt= 0.01 hrs	6
A	rea (sf) 8.567	<u>CN</u> 80	Description >75% Gras		od HSG D			
	3,726	98	Water Surfa					
	12,293 12,293	85	Weighted A 100.00% Pe		a			
Tc (min)	Length (feet)	Slop (ft/f		Capacity (cfs)	· .			
$\rightarrow$					Direct Entry,			
6.0								
6.0								
6.0								
6.0								

<b>3_App J_Pos</b> Prepared by La HydroCAD® 10.20	bella As	ssociates		) Software So	NY-32142-00 24-		
		Sum	mary for	Subcatch	ment PS-16:		
Runoff = Routed to Po		cfs @ 12.04 Wet Pond	4 hrs, Volu	ime=	0.175 af, Depth=	1.33"	
Runoff by SCS 1 NY-32142-00 24				nted-CN, Tin	ne Span= 0.00-72.00	) hrs, dt= 0.01 hrs	5
Area (sf)	CN	Description					
45,151	80			od, HSG D			
23,780 68.931	<u>98</u> 86	Water Surfa Weighted A		D, HSG D			
68,931	00	100.00% Pe		а			
Tc Length	I Slop	e Velocity	Capacity	Description	ı		
(min) (feet)	(ft/fl	t) (ft/sec)	(cfs)				
<u>(min) (feet)</u> 6.0	) (ft/fl	<u> </u>		Direct Ent	ry, nment PS-17:		
6.0 Runoff = Routed to Po Runoff by SCS 1	1.69 nd CB-1 FR-20 m	<b>Sum</b> cfs @ 12.04 1 : ethod, UH=S	mary for 4 hrs, Volu SCS, Weigh	Subcatcl	•		3
6.0 Runoff = Routed to Po Runoff by SCS 1 NY-32142-00 24	1.69 nd CB-1 FR-20 m -hr S1 1	<b>Sum</b> cfs @ 12.04 1 : ethod, UH=S -yr Rainfall=	a <b>mary for</b> 4 hrs, Volu 6CS, Weigh =2.60"	Subcatcl	0.103 af, Depth=		5
6.0 Runoff = Routed to Po Runoff by SCS 1	1.69 nd CB-1 FR-20 m -hr S1 1	Sum cfs @ 12.04 1 : ethod, UH=S -yr Rainfall= Description	4 hrs, Volu CS, Weigh 2.60"	Subcatch me= nted-CN, Tin	0.103 af, Depth=		3
6.0 Runoff = Routed to Po Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819	1.69 nd CB-1 IR-20 m -hr S1 1 <u>CN</u> 80 98	Sum cfs @ 12.0 1 : ethod, UH=S -yr Rainfall= <u>Description</u> >75% Gras Paved park	mary for 4 hrs, Volu CCS, Weigh -2.60" s cover, Gc ing, HSG D	Subcatch me= nted-CN, Tin	0.103 af, Depth=		5
6.0 Runoff = Routed to Po Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060	1.69 nd CB-1 IR-20 m -hr S1 1 <u>CN</u> 80 98	Sum cfs @ 12.0 1 : ethod, UH=S -yr Rainfall= Description >75% Gras Paved park Weighted A	amary for 4 hrs, Volu €CS, Weigh =2.60" s cover, Gc ing, HSG D verage	Subcatch me= nted-CN, Tin pod, HSG D	0.103 af, Depth=		3
6.0 Runoff = Routed to Po Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819	1.69 nd CB-1 IR-20 m -hr S1 1 <u>CN</u> 80 98	Sum cfs @ 12.0 1 : ethod, UH=S -yr Rainfall= <u>Description</u> >75% Gras Paved park	amary for 4 hrs, Volu SCS, Weigh =2.60" s cover, Gc ing, HSG D verage vious Area	Subcatch me= nted-CN, Tin	0.103 af, Depth=		5
6.0 Runoff = Routed to Po Runoff by SCS 1 NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241	1.69 nd CB-1 IR-20 m -hr S1 1 <u>CN</u> 80 98 95	Sum cfs @ 12.0 1 : -yr Rainfall= Description >75% Gras Paved park Weighted A 16.27% Per 83.73% Imp e Velocity	amary for 4 hrs, Volu SCS, Weigh -2.60" s cover, Gc ing, HSG D verage vious Area pervious Area	Subcatch me= nted-CN, Tin pod, HSG D	ment PS-17: 0.103 af, Depth= ne Span= 0.00-72.00		5
6.0 Runoff = Routed to Po Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length	1.69 nd CB-1 IR-20 m -hr S1 1 <u>CN</u> 80 98 95	Sum cfs @ 12.0 1 : ethod, UH=S -yr Rainfall= Description >75% Gras Paved park Weighted A 16.27% Per 83.73% Imp e Velocity	amary for 4 hrs, Volu 6CS, Weigh -2.60" s cover, Gc ing, HSG D verage vious Area pervious Area capacity	Subcatch me= nted-CN, Tin pod, HSG D	nment PS-17: 0.103 af, Depth= ne Span= 0.00-72.00		5
6.0 Runoff = Routed to Po Runoff by SCS 1 NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length (min) (feet)	1.69 nd CB-1 IR-20 m -hr S1 1 <u>CN</u> 80 98 95	Sum cfs @ 12.04 1 : ethod, UH=S -yr Rainfall= Description >75% Gras: Paved park Weighted A Weighted A 16.27% Per 83.73% Imp e Velocity :) (ft/sec)	amary for 4 hrs, Volu SCS, Weigh =2.60" s cover, Gc ing, HSG D verage verage vious Area bervious Area bervious Area (cfs)	Subcatch me= nted-CN, Tin pod, HSG D ea Description Direct Ent	nment PS-17: 0.103 af, Depth= ne Span= 0.00-72.00		5
6.0 Runoff = Routed to Po Runoff by SCS 1 NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length (min) (feet)	1.69 nd CB-1 [R-20 m -hr S1 1 <u>CN</u> 80 98 95 95 Slop (ft/ff	Sum cfs @ 12.0- 1 : ethod, UH=S -yr Rainfall= Description >75% Gras Paved park Weighted A 16.27% Per 83.73% Imp e Velocity :) (ft/sec) Sum cfs @ 12.0-	amary for 4 hrs, Volu 5CS, Weigh -2.60" s cover, Gc ing, HSG D verage vious Area pervious Area pervious Area (cfs)	Subcatch me= nted-CN, Tin pod, HSG D ea Description Direct Ent Subcatch	nment PS-17: 0.103 af, Depth= ne Span= 0.00-72.00	) hrs, dt= 0.01 hrs	5

	st-Develop_32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 1-yr Rainfall=2.60 Printed 1/4/2024
	abella Associates 20-3f_s/n 09581_© 2023 HydroCAD Software S	
Area (sf)	CN Description	
6,412		)
24,812		
31,224		
6,412		
24,812	79.46% Impervious Area	
Tc Lengt (min) (fee		on
6.0	Direct Er	ntry,
	Summary for Subcate	hment PS-19:
Runoff = Routed to Po	0.96 cfs @ 12.04 hrs, Volume= ond CB-13 :	0.061 af, Depth= 2.26"
Area (sf) 678 13,313 13,991 678 13,313 Tc Lengt	80     >75% Grass cover, Good, HSG E       98     Paved parking, HSG D       97     Weighted Average       4.85% Pervious Area       95.15% Impervious Area       h     Slope       Velocity     Capacity	
(min) (fee 6.0	:) (ft/ft) (ft/sec) (cfs) Direct Er	atn.
0.0	Direct El	iu y,
	Summary for Subcate	chment PS-2:
Runoff = Routed to Pe	2.62 cfs @ 12.06 hrs, Volume= ond CB-2 :	0.171 af, Depth= 1.70"
	TR-20 method, UH=SCS, Weighted-CN, Ti 4-hr S1 1-yr Rainfall=2.60"	me Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf)		
19,091		)
32,920 390	<b>1 5</b> ,	
52,401		1
19,481	5 5	
32,920	62.82% Impervious Area	

			p_32142	2-00	NY-32142-00 24-hr S1 1-yr Rainfall=2.60
		ella Ass			Printed 1/4/2024
HydroCA	D® 10.20	-3f s/n 09	581 © 202	3 HydroCAL	D Software Solutions LLC Page 1
Тс	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
7.5	100	0.0400	0.22		Sheet Flow,
0.3	39	0.0967	2.18		Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow.
0.0	00	0.0007	2.10		Short Grass Pasture Kv= 7.0 fps
7.8	139	Total			
			Sum	mary for	Subcatchment PS-20:
Runoff	=	0.05 of	● 12.0	4 hrs, Volu	Ime= 0.004 af, Depth= 2.37"
		d CB-14		4 ms, voiu	ine- 0.004 al, Deptil- 2.37
Runoff b	y SCS TI	R-20 metł br S1 1-v	nod, UH=S r Rainfall=	SCS, Weigh	nted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
11-521-	2-00 24-	in or i-y	i itaiman-	-2.00	
A	rea (sf)		escription		
A	777	98 P	aved park	ing, HSG D	
A		98 P	aved park		
	777	98 P	aved park	ing, HSG D npervious A	vrea
Tc (min)	777 777 777	98 P 1	aved park 00.00% In	ing, HSG D npervious A	vrea
Тс	777 777 Length	98 P 1 Slope	aved park 00.00% Im Velocity	ing, HSG D pervious A Capacity	vrea
Tc (min)	777 777 Length	98 P 1 Slope	aved park 00.00% In Velocity (ft/sec)	ing, HSG D pervious A Capacity (cfs)	Area Description
Tc (min)	777 777 Length	98 P 1 Slope (ft/ft)	aved park 00.00% In Velocity (ft/sec) <b>Sum</b>	ing, HSG D ppervious A Capacity (cfs) mary for	Description Direct Entry, Subcatchment PS-21:
Tc (min) 6.0 Runoff	777 777 Length (feet)	98 P 1 Slope (ft/ft)	aved park 00.00% Im Velocity (ft/sec) Sum	ing, HSG D pervious A Capacity (cfs)	Description Direct Entry, Subcatchment PS-21:
Tc (min) 6.0 Runoff Route	777 777 Length (feet) = ed to Pon	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15	aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0	ing, HSG D pervious A Capacity (cfs) mary for 4 hrs, Volu	Description Direct Entry, Subcatchment PS-21: me= 0.025 af, Depth= 1.87"
Tc (min) 6.0 Runoff Route Runoff b	777 777 Length (feet) = ed to Pon y SCS TI	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15	aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0 : nod, UH=S	ing, HSG D apervious A Capacity (cfs) m <b>mary for</b> 4 hrs, Volu SCS, Weigh	Description Direct Entry, Subcatchment PS-21:
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TI 2-00 24-	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15 R-20 mett hr S1 1-yi	aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0- c nod, UH=5 r Rainfall=	ing, HSG D pervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh =2.60"	Description Direct Entry, Subcatchment PS-21: une= 0.025 af, Depth= 1.87"
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TI i2-00 24- rea (sf)	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15 R-20 mett hr S1 1-yı CN D	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0- c nod, UH=5 r Rainfall= escription	ing, HSG D pervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh =2.60"	Description Direct Entry, Subcatchment PS-21: Ime= 0.025 af, Depth= 1.87" Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TI 12-00 24- rea (sf) 2,127	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15 R-20 meth hr S1 1-yr <u>CN D</u> 80 >	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0- : nod, UH=S r Rainfall= vescription 75% Gras	ing, HSG D apervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh -2.60" s cover, Gc	Description         Direct Entry,         Subcatchment PS-21:         ime=       0.025 af, Depth= 1.87"         inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         bood, HSG D
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TI i2-00 24- rea (sf) 2,127 4,866	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15 R-20 mett hr S1 1-yr <u>CN D</u> 80 P	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0 cod, UH=S r Rainfall= escription 75% Gras aved park	ing, HSG D ppervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh =2.60" s cover, Gc ing, HSG D	Description         Direct Entry,         Subcatchment PS-21:         ime=       0.025 af, Depth= 1.87"         inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         bood, HSG D
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TI 12-00 24- rea (sf) 2,127	98 P 1: Slope (ft/ft) 0.42 cfs d CB-15 R-20 mett hr S1 1-yi <u>CN D</u> 80 > 98 P 93 V	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0 aved park r Rainfall= rescription 75% Gras aved park Velocity for aved park	ing, HSG D ppervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh =2.60" s cover, Gc ing, HSG D	Description Direct Entry, Subcatchment PS-21: Ime= 0.025 af, Depth= 1.87" Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Dod, HSG D
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TI i2-00 24- rea (sf) 2,127 4,866 6,993	98 P 1: Slope (ft/ft) 0.42 cft d CB-15 R-20 mett hr S1 1-yi CN D 80 > 98 P 98 P 93 Y 3	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0- cod, UH=Sr r Rainfall= escription 75% Gras aved park Velogithed A 0.42% Per	ing, HSG D apervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh -2.60" s cover, Gc ing, HSG D verage	varea         Description         Direct Entry,         r Subcatchment PS-21:         ime=       0.025 af, Depth= 1.87"         inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         pood, HSG D         pood
Tc (min) 6.0 Runoff Runoff NY-3214 A	777 777 Length (feet) = ed to Pon y SCS TI 2-00 24- rea (sf) 2,127 4,866 6,993 2,127 4,866	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15 R-20 mett hr S1 1-yr <u>CN D</u> 80 P 98 P 93 W 3 6	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0 aved park r Rainfall= escription 75% Gras aved park /eighted A 0.42% Per 9.58% Imp	ing, HSG D ppervious A Capacity (cfs) amary for 4 hrs, Volu SCS, Weigh =2.60" s cover, Gc ing, HSG D verage vious Area pervious Area	Description Direct Entry, Subcatchment PS-21: Ime= 0.025 af, Depth= 1.87" Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Dood, HSG D
Tc (min) 6.0 Runoff Route Runoff b NY-3214	777 777 Length (feet) = ed to Pon y SCS TH 2-00 24- rea (sf) 2,127 4,866 6,993 2,127	98 P 1 Slope (ft/ft) 0.42 cfs d CB-15 R-20 mett hr S1 1-yr <u>CN D</u> 80 P 98 P 93 W 3 6	aved park aved park 00.00% In Velocity (ft/sec) Sum s @ 12.0 aved park r Rainfall= escription 75% Gras aved park /eighted A 0.42% Per 9.58% Imp	ing, HSG D apervious A Capacity (cfs) a <b>mary for</b> 4 hrs, Volu SCS, Weigh =2.60" s cover, Gc ing, HSG D verage vious Area	Description Direct Entry, Subcatchment PS-21: Ime= 0.025 af, Depth= 1.87" Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Dood, HSG D

3_App J_Post-Develop_32142-00 Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software S	Newburgh South Logistics Center NY-32142-00 24-hr S1 1-yr Rainfall=2.60" Printed 1/4/2024 Jultions LLC Page 12
Summary for Subcatcl	nment PS-22:
Runoff = 0.61 cfs @ 12.04 hrs, Volume= Routed to Pond CB-16 :	0.036 af, Depth= 1.79"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Tir NY-32142-00 24-hr S1 1-yr Rainfall=2.60"	ne Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
3,470 80 >75% Grass cover, Good, HSG D 7,036 98 Paved parking, HSG D	
10,506 92 Weighted Average	
3,470         33.03% Pervious Area           7,036         66.97% Impervious Area	
Tc Length Slope Velocity Capacity Descriptio (min) (feet) (ft/ft) (ft/sec) (cfs)	1
6.0 Direct En	ry,
Summary for Subcatcl	nment PS-23:
Runoff = 6.39 cfs @ 12.04 hrs, Volume= Routed to Pond CB-17 :	0.402 af, Depth= 2.26"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Tir NY-32142-00 24-hr S1 1-yr Rainfall=2.60"	ne Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
4,379 80 >75% Grass cover, Good, HSG D 36,053 98 Paved parking, HSG D 52,393 98 Roofs, HSG D	
92,825 97 Weighted Average 4,379 4.72% Pervious Area	
88,446 95.28% Impervious Area	
Tc Length Slope Velocity Capacity Descriptio (min) (feet) (ft//t) (ft/sec) (cfs)	1
6.0 Direct En	ry,
Summary for Subcatcl	nment PS-24:
Runoff = 7.94 cfs @ 12.04 hrs, Volume= Routed to Pond CB-18 :	0.512 af, Depth= 2.37"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Tir NY-32142-00 24-hr S1 1-yr Rainfall=2.60"	ne Span= 0.00-72.00 hrs, dt= 0.01 hrs

Newburgh South Logistics Center         S_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 1-yr Rainfall=2.60"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 13	South Logistics Center           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 1-yr Rainfall=2.6           Prepared by Labella Associates         Printed 1/4/202           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 1
Area (sf) CN Description 1.790 80 >75% Grass cover. Good. HSG D	Summary for Subcatchment PS-27:
41,907 98 Paved parking, HSG D 69,120 98 Roofs, HSG D	Runoff = 1.74 cfs @ 12.04 hrs, Volume= 0.106 af, Depth= 1.01" Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)
112,817         98         Weighted Average           1,790         1.59% Pervious Area           111,027         98.41% Impervious Area	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 1-yr Rainfall=2.60"
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	Area (sf) CN Description 52,036 80 >75% Grass cover, Good, HSG D
6.0 Direct Entry,	2,530 98 Paved parking, HSG D
Summary for Subcatchment PS-25:	54,566         81         Weighted Average           52,036         95.36% Pervious Area           2,530         4.64% Impervious Area
Runoff = 1.12 cfs @ 12.04 hrs, Volume= 0.066 af, Depth= 1.47" Routed to Pond PF-2 : Pretreatment Forebay	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)
tunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs IY-32142-00 24-hr S1 1-yr Rainfall=2.60"	6.0 Direct Entry,
Area (sf) CN Description	Summary for Subcatchment PS-28:
Alea (sr)     Civ     Description       12,606     80     >75% Grass cover, Good, HSG D       5,405     98     Paved parking, HSG D       5,492     98     Water Surface, 0% imp, HSG D	Runoff = 7.06 cfs @ 12.32 hrs, Volume= 0.998 af, Depth= 0.50" Routed to Pond DP-1 : Gidneytown Creek
23,503         88         Weighted Average           18,098         77.00% Pervious Area           5,405         23.00% Impervious Area	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 1-yr Rainfall=2.60"
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	Area (sf) CN Description 45,884 98 Paved parking, HSG D 350 98 Paved parking. HSG A
6.0Direct Entry,	350         98         Paved parking, HSG A           377,918         77         Woods, Good, HSG D           18,580         30         Woods, Good, HSG A
Summary for Subcatchment PS-26:	230,060 39 >75% Grass cover, Good, HSG A 339,862 80 >75% Grass cover, Good, HSG D
unoff = 0.71 cfs @ 12.04 hrs, Volume= 0.044 af, Depth= 0.96" Routed to Pond DET-1 : Detention Basin	1,122 98 Water Surface, HSG A 21,350 98 Water Surface, HSG D
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs IY-32142-00 24-hr S1 1-yr Rainfall=2.60"	1,035,126         70         Weighted Average           966,420         93.36% Pervious Area           68,706         6.64% Impervious Area
Area (sf) CN Description	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)
23,847         80         >75% Grass cover, Good, HSG D           23,847         100.00% Pervious Area	11.7 100 0.0130 0.14 Sheet Flow, Grass: Short n= 0.150 P2= 3.15"
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	9.5 481 0.0145 0.84 Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
(min)         (feet)         (ft/sec)         (cfs)           6.0         Direct Entry,	1.2         154         0.0970         2.18         Shallow Concentrated Flow, Short Grass Pasture         Kv= 7.0 fps
	22.4 735 Total

58 cfs @ 12.04 hrs, B-8 : 0 method, UH=SCS, W 11 1-yr Rainfall=2.60" N Description 8 Paved parking, H 8 Paved parking, H 8 Paved parking, H 8 Weighted Average 100.00% Impervic Slope Velocity Capa (ft/ft) (ft/sec) (	r <b>for Subcatc</b> Volume= /eighted-CN, Tir SG D SG A e pus Area	hment PS-29 0.166 af, Dep me Span= 0.00-	oth= 2.37"	= 0.01 hrs	Page 15
58 cfs @ 12.04 hrs, B-8 : 0 method, UH=SCS, W 11 1-yr Rainfall=2.60" N Description 8 Paved parking, H 8 Paved parking, H 8 Paved parking, H 8 Weighted Average 100.00% Impervic Slope Velocity Capa (ft/ft) (ft/sec) (	Volume= Veighted-CN, Tir SG D SG A e nus Area nus Area ncity Descriptio cfs)	0.166 af, Dep me Span= 0.00-	oth= 2.37"	= 0.01 hrs	
B-8 : D method, UH=SCS, W 1 1-yr Rainfall=2.60" N Description 8 Paved parking, H8 8 Weighted Average 100.00% Impervic Slope Velocity Capa (ft/ft) (ft/sec) (	Veighted-CN, Tir SG D SG A a sus Area nus Area ncity Descriptio cfs)	me Span= 0.00-		= 0.01 hrs	
1 -yr       Rainfall=2.60"         N       Description         8       Paved parking, HS         8       Paved parking, HS         8       Weighted Average 100.00% Impervice         Slope       Velocity       Capa (ft/ft)	SG D SG A e sus Area licity Descriptio cfs)	·	72.00 hrs, dt	= 0.01 hrs	
8 Paved parking, H3     8 Paved parking, H3     8 Weighted Average     100.00% Impervic     Slope Velocity Capa     (ft/ft) (ft/sec) (	SG A e ous Area ucity Descriptio cfs)	'n			
<ol> <li><u>Paved parking, HS</u></li> <li>Weighted Average 100.00% Impervic</li> <li>Slope Velocity Capa (ft/ft) (ft/sec) (</li> </ol>	SG A e ous Area ucity Descriptio cfs)	n			
8 Weighted Average 100.00% Impervic Slope Velocity Capa (ft/ft) (ft/sec) (	e ous Area icity Descriptio cfs)	on			
(ft/ft) (ft/sec) (	cfs)	n			
<u>, , , , , , , , , , , , , , , , , , , </u>					
Summan	Direct	try,			
	v for Subcate	chment PS-3:			
	/eighted-CN, Tir	me Span= 0.00-	72.00 hrs, dt	= 0.01 hrs	
	- 0				
		)			
		L Contraction of the second seco			
0,					
21.67% Pervious	Area				
		n			
	Direct En	try,			
Summary	for Subcatc	hment PS-30	:		
	Volume=	0.130 af, Dep	oth= 2.06"		
D 0 :					
	S1 1-yr       Rainfall=2.60"         N       Description         0       >75% Grass cove         8       Paved parking, HS         9       >75% Grass cove         8       Paved parking, HS         9       >75% Grass cove         8       Paved parking, HS         1       Weighted Average         21.67% Pervious       78.33% Imperviou         Slope       Velocity Capa         (ft/ft)       (ft/sec)         Summary	S1 1-yr       Rainfall=2.60"         N       Description         0       >75% Grass cover, Good, HSG D         8       Paved parking, HSG D         9       >75% Grass cover, Good, HSG A         8       Paved parking, HSG A         3       Weighted Average 21.67% Pervious Area         78.33% Impervious Area         Slope       Velocity Capacity Description (ft/ft)         (ft/sec)       (cfs)         Direct En         Summary for Subcatc         .14 cfs @       12.04 hrs, Volume=	S1 1-yr       Rainfall=2.60"         N       Description         0       >75% Grass cover, Good, HSG D         8       Paved parking, HSG D         9       >75% Grass cover, Good, HSG A         8       Paved parking, HSG A         3       Weighted Average         21.67% Pervious Area         78.33% Impervious Area         Slope       Velocity         Capacity       Description         (ft/ft)       (ft/sec)       (cfs)         Direct Entry,         Summary for Subcatchment PS-30         .14 cfs @       12.04 hrs, Volume=       0.130 af, Dep	S1 1-yr       Rainfall=2.60"         N       Description         0       >75% Grass cover, Good, HSG D         8       Paved parking, HSG D         9       >75% Grass cover, Good, HSG A         8       Paved parking, HSG A         3       Weighted Average         21.67% Pervious Area         78.33% Impervious Area         Slope       Velocity         Capacity       Description         (ft/ft)       (ft/sec)         (ft/ft)       (cfs)         Direct Entry,         Summary for Subcatchment PS-30:         .14 cfs @       12.04 hrs, Volume=       0.130 af, Depth= 2.06"	N       Description         00       >75% Grass cover, Good, HSG D         80       Paved parking, HSG D         90       >75% Grass cover, Good, HSG D         91       >75% Grass cover, Good, HSG A         92       >75% Grass cover, Good, HSG A         93       Weighted Average         21.67% Pervious Area         78.33% Impervious Area         Slope       Velocity Capacity Description         (ft/ft)       (ft/sec)         (ft/ft)       (cfs)         Direct Entry,         Summary for Subcatchment PS-30:         .14 cfs @       12.04 hrs, Volume=       0.130 af, Depth= 2.06"

			ssociates	3 HydroCAI	D Software Solutions LLC Printed 1/4/2024 Page 16
A	rea (sf)	CN	Description		
	4,835 28,221	80 98	>75% Gras Paved park		ood, HSG D
	33.056	95	Weighted A		5
	4,835		14.63% Per	vious Area	
	28,221		85.37% Imp	pervious Ar	rea
Tc	Length		e Velocity		Description
(min)	(feet)	(ft/f	t) (ft/sec)	(cfs)	
6.0					Direct Entry,
			Sun	nmary fo	r Subcatchment PS-4:
Runoff	=	0 16	cfs @ 12.1	6 hrs Volu	ume= 0.019 af, Depth= 0.43"
	ed to Pon				
D			- 411 -1 -1	00 14-1	
			-yr Rainfall=		hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
A	rea (sf)	CN	Description		
	6,817	39			ood, HSG A
	15,824 22.641	80		,	ood, HSG D
	22,641	68	Weighted A 100.00% Pe		a
	,				
Tc (min)	Length (feet)	Slop (ft/fl	t) (ft/sec)	Capacity (cfs)	Description
9.9		0.020	/ ( /	(013)	Sheet Flow.
					Grass: Short n= 0.150 P2= 3.15"
2.4	184	0.032	6 1.26		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.3	284	Total			
			Sun	nmary fo	r Subcatchment PS-5:
	=		cfs @ 12.0 :	4 hrs, Volu	ume= 0.015 af, Depth= 2.26"
Runoff Route	ed to Pon				
Route			ethod UH=S	SCS Weigh	hted-CN_Time Span= 0 00-72 00 hrs_dt= 0 01 hrs
Route	y SCS TI	R-20 m	ethod, UH=S -yr Rainfall=		hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Route Runoff b NY-3214	oy SCS TI 12-00 24-	R-20 m hr S1 1	-yr Rainfall=	=2.60"	hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Route Runoff b NY-3214	oy SCS TI 12-00 24- .rea (sf)	R-20 m hr S1 1 CN	-yr Rainfall= Description	=2.60"	
Route Runoff b NY-3214	oy SCS TF 42-00 24- <u>rea (sf)</u> 151	R-20 m hr S1 1	-yr Rainfall= Description >75% Gras	=2.60" s cover, Go	ood, HSG D
Route Runoff b NY-3214	oy SCS TI 12-00 24- .rea (sf)	R-20 m hr S1 1 <u>CN</u> 80	-yr Rainfall= Description >75% Gras Paved park >75% Gras	=2.60" s cover, Go ing, HSG E s cover, Go	ood, HSG D
Route Runoff b NY-3214	oy SCS TF 42-00 24- <u>rea (sf)</u> 151 3,231	R-20 m hr S1 1 <u>CN</u> 80 98	-yr Rainfall= Description >75% Gras Paved park	=2.60" s cover, Go ing, HSG I s cover, Go verage	ood, HSG D D

	J_Post- ed by Lab		op_32142 sociates	2-00		NY-32142-00 24-hr S	1 1-yr Rainfall=2.6 Printed 1/4/202
HydroCA	D® 10.20-	3f s/n 09	9581 © 202	3 HydroCAE	) Software So	lutions LLC	Page 1
Tc (min)	Length (feet)	Slope (ft/ft)		Capacity (cfs)	Description		
6.0					Direct Entr	у,	
			Sun	nmary for	r Subcatch	iment PS-6:	
Runoff Route	= ed to Pone		fs @ 12.0	4 hrs, Volu	me=	0.154 af, Depth= 2.26"	
			thod, UH=S yr Rainfall=		ited-CN, Tim	e Span= 0.00-72.00 hrs,	dt= 0.01 hrs
A	rea (sf)		Description				
	1,235 34,319		>75% Gras Paved park		ood, HSG D		
	20		Paved park				
	35,574		Weighted A				
	1,235 34,339		3.47% Perv 96.53% Imp		ea		
	01,000						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
6.0	(ieet)	(1011)	(10360)	(013)	Direct Entr	у,	
			Sun	nmary fo	r Subcatch	iment PS-7:	
Runoff Route	= ed to Pone		fs @ 12.0	4 hrs, Volu	me=	0.008 af, Depth= 0.96"	
						0 0 0 70 00 1	
			thod, UH=S yr Rainfall=		ited-CN, 1 im	e Span= 0.00-72.00 hrs,	dt= 0.01 hrs
			·				
A	rea (sf)		Description		L LIOO D		
	614 1,329		>75% Gras Paved park		ood, HSG D		
	1,117	98 I	Paved park	ing, HSG A			
	1,083				od, HSG A		
	4,143 1,697		Weighted A 40.96% Pe				
	2,446		59.04% Imp				
Тс					Description		
<u>(min)</u> 6.0	(feet)	(ft/ft)	(ft/sec)	(cfs)	Disc of East		
					Direct Entr	y,	

HydroCAD® 10.2	0-3f s/n 095	<u>81 © 2023</u>	B HydroCAD	Software Sol	utions LLC			1/4/2024 Page 18
					ment PS-8:			
Runoff =	0.04 -				0.015 af, Depth	- 0.04"		
Routed to Po		@ 12.04	hrs, Volu	me-	0.015 al, Depli	1- 0.91		
				ited-CN, Tim	e Span= 0.00-72	2.00 hrs, dt	= 0.01 hrs	
4 NY-32142-00 (Area (sf		escription	2.00					
			ng, HSG D	)				
2,834 5,688	39 >7	5% Ġrass		od, HSG A				
8,693		eighted Av						
2,834 5,859			vious Area ervious Are					
Tc Lengt				Description				
(min) (feet 6.0	) (ft/ft)	(ft/sec)	(cfs)	Direct Entr	У,			
		Cum	many for	- Subcatch	mont DS 0.			
		Sum	imary foi	r Subcatch	ment PS-9:			
Runoff =			<b>imary foi</b> hrs, Volu		ment PS-9: 0.009 af, Depth	ו= 2.37"		
Runoff = Routed to Po						n= 2.37"		
Routed to Po Runoff by SCS	ond CB-23 : TR-20 metho	@ 12.04 od, UH=S	hrs, Volu CS, Weigh	me=			= 0.01 hrs	
Routed to Po Runoff by SCS NY-32142-00 24	ond CB-23 : TR-20 metho 4-hr S1 1-yr	@ 12.04 od, UH=S Rainfall=	hrs, Volu CS, Weigh	me=	0.009 af, Depth		= 0.01 hrs	
Routed to Po Runoff by SCS	ond CB-23 : TR-20 metho 4-hr S1 1-yr CN De	@ 12.04 od, UH=S Rainfall= escription	hrs, Volu CS, Weigh	me= ited-CN, Tim	0.009 af, Depth		= 0.01 hrs	
Routed to Po Runoff by SCS NY-32142-00 2 Area (sf)	ond CB-23 : TR-20 metho 4-hr S1 1-yr <u>CN De</u> 98 Pa	<ul> <li>@ 12.04</li> <li>od, UH=S</li> <li>Rainfall=</li> <li>escription</li> <li>aved parki</li> </ul>	l hrs, Volu CS, Weigh 2.60"	me= ited-CN, Tim	0.009 af, Depth		= 0.01 hrs	
Routed to Po Runoff by SCS NY-32142-00 2 Area (sf) 2,000	ond CB-23 : TR-20 metho 4-hr S1 1-yr <u>CN De</u> 98 Pa 10	<ul> <li>2.04</li> <li>0d, UH=S</li> <li>Rainfall=</li> <li>escription</li> <li>aved parki</li> <li>0.00% Im</li> </ul>	Lhrs, Volu CS, Weigh 2.60" n <u>g, HSG A</u> pervious A	me= ited-CN, Tim	0.009 af, Depth		= 0.01 hrs	
Routed to Po Runoff by SCS NY-32142-00 2 Area (sf) 2,000 2,000 Tc Lengt (min) (feet	ond CB-23 : TR-20 metho 4-hr S1 1-yr <u>CN De</u> <u>98 Pa</u> 10 n Slope	<ul> <li>2.04</li> <li>0d, UH=S</li> <li>Rainfall=</li> <li>escription</li> <li>aved parki</li> <li>0.00% Im</li> </ul>	Lhrs, Volu CS, Weigh 2.60" n <u>g, HSG A</u> pervious A	me= tted-CN, Tim rea Description	0.009 af, Depth e Span= 0.00-72		= 0.01 hrs	
Routed to Po Runoff by SCS NY-32142-00 2 Area (sf) 2,000 2,000 Tc Lengt	ond CB-23 : TR-20 metho 4-hr S1 1-yr <u>CN De</u> <u>98 Pa</u> 10 n Slope	<ul> <li>2.04</li> <li>ad, UH=S</li> <li>Rainfall=</li> <li>ascription</li> <li>aved parki</li> <li>0.00% Im</li> <li>Velocity</li> </ul>	L hrs, Volu CS, Weigh 2.60" ng, HSG A pervious A Capacity	me= ted-CN, Tim	0.009 af, Depth e Span= 0.00-72		= 0.01 hrs	
Routed to Po Runoff by SCS NY-32142-00 2 Area (sf) 2,000 2,000 Tc Lengt (min) (feet 6.0	ond CB-23 : TR-20 metho 4-hr S1 1-yr <u>CN De</u> 98 Pa 10 n Slope ) (ft/ft)	@ 12.04 od, UH=S Rainfall= <u>escription</u> <u>aved parki</u> 0.00% Im Velocity ( <u>ft/sec</u> )	k hrs, Volu CS, Weigh 2.60" <u>ng, HSG A</u> pervious A Capacity (cfs)	me= ted-CN, Tim rea Description Direct Entr	0.009 af, Depth e Span= 0.00-72	2.00 hrs, dt		
Routed to Po Runoff by SCS NY-32142-00 2 Area (sf) 2,000 2,000 Tc Lengt (min) (feet 6.0 <b>St</b> Inflow Area =	And CB-23 : TR-20 metho 4-hr S1 1-yr <u>CN De</u> 98 Pa 10 n Slope ) (ft/ft) mmary fo 9.376 ac	<ul> <li>2.04</li> <li>od, UH=S Rainfall=</li> <li>escription</li> <li>exection of the second seco</li></ul>	I hrs, Volu CS, Weigh 2.60" ng, HSG A pervious A Capacity (cfs) BIO-1: Fi	me= ited-CN, Tim rea Description Direct Entr iltration Bi us, Inflow De	0.009 af, Depth e Span= 0.00-72 y, oretention (2 	2.00 hrs, dt	media)	
Routed to Po Runoff by SCS NY-32142-00 2 <u>Area (sf)</u> 2,000 2,000 Tc Lengt (min) (feet 6.0 <b>Su</b> Inflow Area = Inflow =	md CB-23 :           TR-20 method           4-hr S1 1-yr           CN         Dec           98         Pa           10           n         Slope           )         (ft/ft)	<ul> <li>(a) 12.04</li> <li>(b) 00, UH=S Rainfall=</li> <li>(c) 00% Im</li> <li>(c) 00</li></ul>	I hrs, Volu CS, Weigh 2.60" ng, HSG A pervious A Capacity (cfs) BIO-1: Fi 6 Imperviou 5 hrs, Volu	me= ited-CN, Tim rea Description Direct Entr iltration Bi us, Inflow De me=	0.009 af, Depth e Span= 0.00-72 y, oretention (2 upth = 2.03" fr 1.589 af	2.00 hrs, dt	media)	
Routed to Po           Runoff by SCS           NY-32142-00 2           Area (sf)           2,000           Z,000           Tc Lengt           (min) (feet           6.0           St           Inflow Area =           Inflow Area =           Outflow =           Outflow =           Discarded =	nnd CB-23 : TR-20 method 4-hr S1 1-yr <u>CN De</u> 98 Pa 10 n Slope ) (ft/ft) mmmary fo 9.376 ar 21.90 cfs 5.31 cfs 0.25 cfs	<ul> <li>@ 12.04</li> <li>od, UH=S Rainfall=</li> <li>escription</li> <li>exectpetion</li> <li>exectpetion</li> <li>exectpetion</li> <li>executive</li> <li>executive</li></ul>	k hrs, Volu CS, Weigh 2.60" <u>ng, HSG A</u> pervious A <u>Capacity</u> (cfs) <b>BIO-1: Fi</b> 6 Imperviou 6 Imperviou 6 Imperviou 7 hrs, Volu	me= ited-CN, Tim rea Description <b>Direct Entr</b> iltration Bi us, Inflow De me= me=	0.009 af, Depth e Span= 0.00-72 y, oretention (2 pth = 2.03" fr 1.589 af, Atten 0.979 af	2.00 hrs, dt	media)	
Routed to Po           Runoff by SCS           NY-32142-00 2           Area (sf)           2,000           2,000           Tc Lengt           (min) (feet           6.0           St           Inflow Area =           Inflow =           Discarded =           Primary =	And CB-23 : TR-20 method 4-hr S1 1-yr <u>CN De</u> 98 Pa 10 n Slope ) (ft/ft) mmary fo 9.376 ac 21.90 cfs 5.31 cfs 5.25 cfs 5.06 cfs	<ul> <li>@ 12.04</li> <li>od, UH=S Rainfall=</li> <li>ascription</li> <li>ascription</li> <li>ascription</li> <li>(ft/sec)</li> <li>ascription</li> <li>(ft/sec)</li> <li>ascription</li> <li>(ft/sec)</li> <li>(ft/sec)<td>L hrs, Volu CS, Weigh 2.60" <u>ng, HSG A</u> pervious A Capacity (cfs) BIO-1: Fi 6 Imperviou 5 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu</td><td>me= ited-CN, Tim rea Description <b>Direct Entr</b> iltration Bi us, Inflow De me= me=</td><td>0.009 af, Depth e Span= 0.00-72 y, oretention (2 1.589 af 1.589 af, Atten</td><td>2.00 hrs, dt</td><td>media)</td><td></td></li></ul>	L hrs, Volu CS, Weigh 2.60" <u>ng, HSG A</u> pervious A Capacity (cfs) BIO-1: Fi 6 Imperviou 5 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu	me= ited-CN, Tim rea Description <b>Direct Entr</b> iltration Bi us, Inflow De me= me=	0.009 af, Depth e Span= 0.00-72 y, oretention (2 1.589 af 1.589 af, Atten	2.00 hrs, dt	media)	
Routed to Po Runoff by SCS NY-32142-00 2: Area (sf) 2,000 Tc Lengt (min) (feel 6.0 St Inflow Area = Inflow = Outflow = Discarded = Primary = Routed to Po	md CB-23 :           TR-20 method           4-hr S1 1-yr           CN         Dec           98         Pa           10         10           n         Slope           )         (ft/ft)	@ 12.04 od, UH=S Rainfall= <u>escription</u> <u>ived parki</u> 0.00% Im Velocity ( <u>ft/sec</u> ) <b>or Pond</b> ( <u>ft/sec</u> ) <b>or Pond</b> ( <u>g</u> 12.37 @ 12.37 Detention	I hrs, Volu CS, Weigh 2.60" ng, HSG A pervious A Capacity (cfs) BIO-1: Fi 6 Imperviou 5 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu 8 Basin	me= ited-CN, Tim- rea Description Direct Entr iltration Bi us, Inflow De me= me= me= me=	0.009 af, Depth e Span= 0.00-72 y, oretention (2 upth = 2.03" fr 1.589 af 1.589 af, Atten 0.979 af 0.610 af	2.00 hrs, dt	media)	
Routed to Po           Runoff by SCS           NY-32142-00 2           Area (sf)           2,000           2,000           Tc Lengt           (min) (feet           6.0           St           Inflow Area =           Inflow =           Discarded =           Primary =	nd CB-23 : TR-20 metho t-hr S1 1-yr <u>CN De</u> <u>98 Pa</u> 10 n Slope ) (ft/ft) mmary fo 9.376 ar 21.90 cfs 5.31 cfs 0.25 cfs 5.06 cfs 5.06 cfs 5.06 cfs 1.00 cfs 5.00 cfs 5.00 cfs 5.00 cfs 5.00 cfs 5.00 cfs	<ul> <li>@ 12.04</li> <li>od, UH=S Rainfall=</li> <li>scription</li> <li>ved parking</li> <li>0.00% Im</li> <li>Velocity (ft/sec)</li> <li>or Pond</li> <li>c, 76.99%</li> <li>@ 12.05</li> <li>@ 12.37</li> <li>@ 12.37</li> <li>@ 12.37</li> <li>Detention</li> <li>Detention</li> <li>@ 0.000</li> </ul>	k hrs, Volu CS, Weigh 2.60" <u>ng, HSG A</u> pervious A Capacity (cfs) <b>BIO-1: Fi</b> 6 Imperviou 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu 7 hrs, Volu 9 hrs, Volu 9 hrs, Volu 9 hrs, Volu	me= ited-CN, Tim- rea Description Direct Entr iltration Bi us, Inflow De me= me= me= me=	0.009 af, Depth e Span= 0.00-72 y, oretention (2 pth = 2.03" fr 1.589 af, Atten 0.979 af	2.00 hrs, dt	media)	
Routed to Po           Runoff by SCS           NY-32142-00 2:           Area (sf)           2,000           Z,000           Tc Lengt           (min) (feet           6.0           St           Inflow Area =           Inflow Area =           Inflow =           Outflow =           Discarded =           Primary =           Routed to Po           Secondary =	And CB-23 : TR-20 method 4-hr S1 1-yr <u>CN De</u> 98 Pa 10 n Slope ) (ft/ft) mmary fo 9.376 au 21.90 cfs 5.31 cfs 0.25 cfs 5.06 cfs 5.06 cfs 0.00 cfs ond DP-1 : G	<ul> <li> <b>(a)</b>             12.04      </li> <li>             dod, UH=S             Rainfall=         </li> <li>             secription         </li> <li>             ved parki         </li> <li>             0.00% Im         </li> <li>             velocity             (ft/sec)         </li> <li>             velocity         </li> </ul> <li>             velocity         <ul> <li>             (ft/sec)         </li> </ul> </li> <li>             velocity             (ft/sec)         </li> <li>             velocity             (ft/sec)         </li> <li>             velocity         <ul>             difference</ul></li> velocity             (ft/sec) <li>             velocity             (ft/sec)         </li> <li>             velocity             velocity             (ft/sec)         </li> velocity             (ft/sec)              velocity             velocity             (ft/sec)              velocity             ve	A hrs, Volu CS, Weigh 2.60" <u>ng, HSG A</u> pervious A Capacity (cfs) BIO-1: Fi Market State hrs, Volu hrs, Volu hrs, Volu hrs, Volu hrs, Volu n Creek	me= tted-CN, Tim rea Description Direct Entr iltration Bi us, Inflow De me= me= me= me= me= me=	0.009 af, Depth e Span= 0.00-72 y, oretention (2 pth = 2.03" fr 1.589 af, Atten 0.979 af 0.610 af 0.000 af	2.00 hrs, dt	media)	

HydroC/	ed by Labella AD® 10.20-3f		3 2023 HydroCAD 3	Software So	olutions LLC		Printed	1/4/2024 Page 19
			Surf.Area= 43,2 14,411 sf Stora		rage= 25,569 cf 6 cf			
			lculated: outflow nin ( 1,372.6 - 8		inflow)			
Volume	Invert	Avail.Sto	rage Storage	Descriptior	ı			
#1	235.50'		<u> </u>		matic)Listed belo	ow (Recalc	)	
Elevati (fee		rf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.S (cubic-fe				
235.	50 4	41,373	0		0			
236. 237.		42,881 45.940	21,064 44,411		064 474			
		-,		,				
	Routing		Outlet Devices					
#1 #2	Discarded Primary	235.50' 236.00'	60.0' long x 1 Head (feet) 0.	1 <b>0.0' breac</b> 20 0.40 0	Through Media Ith Overflow We 0.60 0.80 1.00 6 2.70 2.69 2.0	eir to Det 1.20 1.40	1.60	
#3	Secondary	236.50'	20.0' long x 1 Head (feet) 0.	Í <b>5.0' breac</b> 20 0.40 0	Ith Emergency           0.60         0.80         1.00           0         2.70         2.64         2.6	Overflow \ 1.20 1.40	<b>Veir</b> 1.60	
		Max=0.25 cf	s @ 12.37 hrs	HW=236.1	0' (Free Discha	rge)		
Discard 1=E	d OutFlow	rough Media	(Exfiltration Co	ntrols 0.25	cfs)			
t_1=Ex Primary	cfiltration Thi	rough Media ax=5.06 cfs (	(Exfiltration Co	V=236.10'	TW=232.37' (E	)ynamic Ta	iilwater)	
t 1=Ex Primary 2=0 Şeconc	cfiltration Thi / OutFlow Ma verflow Weir lary OutFlow	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c	a (Exfiltration Co 2) 12.37 hrs HV Controls 5.06 c	V=236.10' xfs @ 0.81 IW=235.50	TW=232.37' (E	-		
t 1=Ex Primary 2=0 Şeconc	cfiltration Thi / OutFlow Ma verflow Weir lary OutFlow	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c	a (Exfiltration Co @ 12.37 hrs HV Controls 5.06 c fs @ 0.00 hrs +	V=236.10' cfs @ 0.81 IW=235.50 cfs)	TW=232.37' (E fps) )' TW=0.00' (D	-		
t_1=Ex Primary 2=0 Second 3=Ei	cfiltration Thi / OutFlow Ma verflow Weir lary OutFlow mergency Ov	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c rerflow Weir	(Exfiltration Co     12.37 hrs HV     Controls 5.06 c     fs @ 0.00 hrs H     ( Controls 0.00     Summary	V=236.10' sfs @ 0.81 IW=235.50 cfs) r <b>for Pon</b>	TW=232.37' (E fps) )' TW=0.00' (D	ynamic Tai	lwater)	
←1=E) Primary ←2=O Seconc ←3=Ei Inflow A Inflow	cfiltration Thu y OutFlow May verflow Weir lary OutFlow nergency Ov vera = 1 = 1.	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c rerflow Weir .362 ac, 46. .30 cfs @ 1		V=236.10' ifs @ 0.81 iW=235.50 cfs) r <b>for Pon</b> s, Inflow D ee=	TW=232.37' (E fps) ''TW=0.00' (D <b>d CB-1:</b> epth = 1.01" f 0.115 af	ynamic Tai or 1-yr eve	ilwater) ent	
←1=E Primary ←2=O Seconc ←3=Ei Inflow A Inflow Outflow	cfiltration Thu y OutFlow Mai verflow Weir lary OutFlow nergency Ov rea = 1 = 1. = 1.	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c rerflow Weir .362 ac, 46. .30 cfs @ 1: .30 cfs @ 1:		V=236.10' fs @ 0.81 IW=235.50 cfs) <b>for Pon</b> s, Inflow D ne= ne=	TW=232.37' (E fps) '' TW=0.00' (D <b>d CB-1:</b> epth = 1.01" f	ynamic Tai or 1-yr eve	ilwater) ent	
←1=E: Primary ←2=O Seconc ←3=Ei Inflow A Inflow Outflow Primary Rout	filtration Thu y OutFlow May verflow Weir lary OutFlow nergency Ov rea = 1 = 1. = 1. = 1. ued to Pond C	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c rerflow Weir .362 ac, 46. 30 cfs @ 1: 30 cfs @ 1: 30 cfs @ 1: 30 cfs @ 1: B-2 :		V=236.10' fs @ 0.81 IW=235.50 cfs) <b>for Pon</b> s, Inflow D he= he= he= he=	TW=232.37' (E fps) )' TW=0.00' (D d CB-1: epth = 1.01" f 0.115 af 0.115 af, Atten 0.115 af	ynamic Tai or 1-yr eve	ilwater) ent	
↑ 1=E: Primary ↑ 2=O Second ↑ 3=Ei Inflow A Inflow Outflow Primary Rout Second	filtration Thu y OutFlow May verflow Weir lary OutFlow nergency Ov rea = 1 = 1. = 1. = 1. ued to Pond C	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c rerflow Weir .362 ac, 46. .30 cfs @ 1: .30 cfs		V=236.10' fs @ 0.81 IW=235.50 cfs) <b>for Pon</b> s, Inflow D he= he= he= he=	TW=232.37' (E fps) )' TW=0.00' (D d <b>CB-1:</b> epth = 1.01" 1 0.115 af 0.115 af, Atten	ynamic Tai or 1-yr eve	ilwater) ent	
← 1=E) Primary ← 2=O Second → 3=Er Inflow A Inflow Outflow Primary Routi Second Routing Peak El	cfiltration Thu y OutFlow Ma verflow Weir lary OutFlow mergency Ov area = 1 = 1. = 1. = 1. = 1. ed to Pond C by Dyn-Stor- ev= 260.39° (c)	rough Media ax=5.06 cfs ( to Det (Weir Max=0.00 c rerflow Weir .362 ac, 46. .30 cfs @ 1: .30 cfs @ 1: .31 cfs @ 1: .31 cfs @ 1: .32 cfs @ 1: .32 cfs @ 1: .33 cfs @ 1: .33 cfs @ 1: .34 cfs @ 1: .34 cfs @ 1: .34 cfs @ 1: .35 cfs @ 1: .35 cfs @ 1: .35 cfs @ 1: .35 cfs @ 1: .36 cfs @ 1: .37 cfs		V=236.10' fs @ 0.81 IW=235.5( cfs) r for Pon s, Inflow D te= te= te= te= te= te= te= te=	TW=232.37' (E fps) )' TW=0.00' (D d CB-1: epth = 1.01" f 0.115 af 0.115 af, Atten 0.115 af 0.000 af s, dt= 0.01 hrs	ynamic Tai or 1-yr eve	ilwater) ent	

		abella A 20-3f_s/n			IvdroCAD	Software So	lutions LLC	2	Printeo	1/4/2 Page
								, 		- uge
Volume		nvert	Avail.St			Description				
#1 #2		9.81' 3.31'	11	32 cf 903 cf				ed below (R	ecalc) low (Recalc)	
#2	20	5.51	,			ailable Stor			iow (Recalc)	
Elevati	on	Surf.A	rea	Inc	.Store	Cum.St	ore			
(fee			q-ft)		c-feet)	(cubic-fe				
259.	81		9		0		0			
263.3	31		9		32		32			
Elevati	on	Surf.A	rea	Inc	.Store	Cum.St	ore			
(fee		(se	q-ft)	(cubio	c-feet)	(cubic-fe				
263.		-	9		0		0			
264. 265.			196 639		2,486 9,418	,2 11,9	486			
							505			
Device #1	Routir Prima		Inver 259.81		et Device	s I Culvert				
#2 #3	Prima Secor	-	264.55 264.71	' <b>10.0</b> Head 2.50 Coel 2.65 <b>10.0</b> Head 2.50 Coel	' long x d (feet) 0 3.00 3.4 f. (English 2.67 2.0 ' long x d (feet) 0 3.00 3.4 f. (English	<b>5.0' breadt</b> 0.20 0.40 0 50 4.00 4.5 1) 2.34 2.5 56 2.68 2.7 <b>5.0' breadt</b> 0.20 0.40 0 50 4.00 4.5	h Broad-C .60 0.80 50 5.00 5 0 2.70 2. 70 2.74 2 h Broad-C .60 0.80 50 5.00 5 0 2.70 2.	Crested Rec 1.00 1.20 1 .50 68 2.68 2.6 .79 2.88 Crested Rec 1.00 1.20 1 .50 68 2.68 2.6	v Area= 1.77 s <b>tangular We</b> 1.40 1.60 1.8 36 2.65 2.65 <b>tangular We</b> 1.40 1.60 1.8 36 2.65 2.65	r 0 2.00 2.65 r 0 2.00
1=Ci 2=Bi Second	ulvert( oad-Cr lary Ou	nlet Con ested Re tFlow Ma	trols 1.3 ectangu ax=0.00	0 cfs @ lar Wei cfs @ (	2.05 fps r( Contro ).00 hrs 1	) Is 0.00 cfs)	' TW=259		ic Tailwater) mic Tailwater	)
				Sı	ımmary	for Pond	CB-10:			
Inflow A Inflow Outflow Primary Rout Second	= = = ed to P	2.47 2.37 2.37 ond CB-1	cfs @ cfs @ cfs @	12.04 h 12.05 h 12.05 h	mperviou rs, Volur rs, Volur rs, Volur rs, Volur	ne= ne=	0.159 af		yr event Lag= 0.7 mir	n

	Newburgh South Logistics Center
3_App J_Post-Develop_32142-00	NY-32142-00 24-hr S1 1-yr Rainfall=2.60"
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Peak Elev= 241.87' @ 12.06 hrs Surf.Area= 12 sf Storage= 34 cf Flood Elev= 243.50' Surf.Area= 32 sf Storage= 54 cf

Plug-Flow detention time= 0.5 min calculated for 0.159 af (100% of inflow) Center-of-Mass det. time= 0.3 min ( 763.3 - 763.0 )

Volume	Invert	Avail.Sto	rage Sto	rage De	escription	
#1	239.00'					ic)Listed below (Recalc)
#2	243.50'	5,33	38 cf Cu	stom S	tage Data (P	rismatic)Listed below (Recalc)
		5,39	92 cf Tot	al Avail	able Storage	
Elevation	Su	rf.Area	Inc.Sto	е	Cum.Store	
(feet)		(sq-ft)	(cubic-fee	t)	(cubic-feet)	
239.00		12		0	0	
243.50		12	Ę	4	54	
Elevation	Su	rf.Area	Inc.Sto	•	Cum.Store	
(feet)		(sq-ft)	(cubic-fee	t)	(cubic-feet)	
243.50		20		0	0	
244.00		1,744	44	1	441	
244.70		12,247	4,89	7	5,338	
Device F	Routing	Invert	Outlet D	evices		
#1 F	Primary	239.00'	24.0" R	ound C	ulvert	
			L= 240.0	CPP	, projecting, n	o headwall, Ke= 0.900
						237.80' S= 0.0050 '/' Cc= 0.900
						ooth interior, Flow Area= 3.14 sf
#2 S	Secondary	244.60'	Head (fe 2.50 3.0 Coef. (E	et) 0.20 0 3.50 nglish)	0 0.40 0.60 4.00 4.50 5 2.34 2.50 2.	oad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 1.00 5.50 70 2.68 2.68 2.66 2.65 2.65 2.65 .74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 12.05 hrs HW=241.69' TW=241.79' (Dynamic Tailwater) -1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=239.00' TW=237.08' (Dynamic Tailwater)

#### Summary for Pond CB-11:

Inflow Area =	0.598 ac, 83.73% Impervious, Inflow D	Depth = 2.06" for 1-yr event
Inflow =	1.69 cfs @ 12.04 hrs, Volume=	0.103 af
Outflow =	1.69 cfs @ 12.04 hrs, Volume=	0.103 af, Atten= 0%, Lag= 0.0 min
Primary =	1.69 cfs @ 12.04 hrs, Volume=	0.103 af
Routed to Por	1d CB-12 :	

Flood Elev= 2 Plug-Flow de Center-of-Ma <u>Volume</u> #1	ss det. time= 0.2 n Invert Avail.S 259.05' 263.05' 1	= 18 sf Storag nin calculated fo nin ( 793.9 - 793 itorage Storag 36 cf STRU ,263 cf Custo	= 36 cf 0.103 af (100% of inflow)	
Center-of-Ma <u>Volume</u> #1 2 #2 2 Elevation <u>(feet)</u> 259.05 263.05 Elevation <u>(feet)</u> 263.05 263.05 263.05	ss det. time= 0.2 n <u>Invert</u> Avail.S 259.05' 263.05' 1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft) 9	nin ( 793.9 - 793 torage Storag 36 cf STRU ,263 cf Custo ,299 cf Total A Inc.Store (cubic-feet) 0 36 Inc.Store	7) <b>Description</b> <b>TURE (Prismatic)</b> Listed below (Rec <b>n Stage Data (Prismatic)</b> Listed below vailable Storage Cum.Store (cubic-feet) 0 36	
Center-of-Ma <u>Volume</u> #1 2 #2 2 Elevation <u>(feet)</u> 259.05 263.05 Elevation <u>(feet)</u> 263.05 263.05 263.05	ss det. time= 0.2 n <u>Invert</u> Avail.S 259.05' 263.05' 1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft) 9	nin ( 793.9 - 793 torage Storag 36 cf STRU ,263 cf Custo ,299 cf Total A Inc.Store (cubic-feet) 0 36 Inc.Store	7) <b>Description</b> <b>TURE (Prismatic)</b> Listed below (Rec <b>n Stage Data (Prismatic)</b> Listed below vailable Storage Cum.Store (cubic-feet) 0 36	
Volume #1 2 #2 2 Elevation (feet) 259.05 263.05 Elevation (feet) 263.05 263.65	Invert Avail.S 259.05' 263.05' 1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft) 9	<u>storage</u> <u>Storag</u> 36 cf <u>STRU</u> <u>263 cf<u>Custo</u> 299 cf Total / Inc.Store <u>(cubic-feet)</u> 0 36 Inc.Store</u>	2 Description <b>TURE (Prismatic)</b> Listed below (Red <b>n Stage Data (Prismatic)</b> Listed below vailable Storage Cum.Store (cubic-feet) 0 36	
#1 2 #2 2 Elevation (feet) 259.05 263.05 Elevation (feet) 263.05 263.65	259.05' 263.05' 1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft) 9	36 cf STRU ,263 cf Custo ,299 cf Total A Inc.Store (cubic-feet) 0 36 Inc.Store	TURE (Prismatic)Listed below (Red n Stage Data (Prismatic)Listed belov vailable Storage Cum.Store (cubic-feet) 0 36	
#2 2 Elevation (feet) 259.05 263.05 Elevation (feet) 263.05 263.65	263.05' 1 1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft) 9	,263 cf Custo ,299 cf Total A Inc.Store (cubic-feet) 0 36 Inc.Store	n <b>Stage Data (Priśmatic)</b> Listed belo vailable Storage Cum.Store (cubic-feet) 0 36	
Elevation (feet) 259.05 263.05 Elevation (feet) 263.05 263.65	1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft) 9	,299 cf Total A Inc.Store (cubic-feet) 0 36 Inc.Store	vailable Storage Cum.Store (cubic-feet) 0 36	w (Necalc)
(feet) 259.05 263.05 Elevation (feet) 263.05 263.65	Surf.Area (sq-ft) 9 Surf.Area (sq-ft) 9	Inc.Store (cubic-feet) 0 36 Inc.Store	Cum.Store (cubic-feet) 0 36	
(feet) 259.05 263.05 Elevation (feet) 263.05 263.65	(sq-ft) 9 9 Surf.Area (sq-ft) 9	(cubic-feet) 0 36 Inc.Store	(cubic-feet) 0 36	
259.05 263.05 Elevation (feet) 263.05 263.65	9 9 9 Surf.Area (sq-ft) 9	0 36 Inc.Store	0 36	
263.05 Elevation (feet) 263.05 263.65	9 Surf.Area (sq-ft) 9	36 Inc.Store	36	
Elevation (feet) 263.05 263.65	Surf.Area (sq-ft) 9	Inc.Store		
(feet) 263.05 263.65	<u>(sq-ft)</u> 9		Cum.Store	
263.05 263.65	9	(cubic-feet)		
263.65			(cubic-feet)	
	4,200	0	0	
Device Rou		1,263	1,263	
	ting Inve	rt Outlet Devid	es	
#1 Prin	nary 259.0		d Culvert	
		L= 216.0' (	PP, projecting, no headwall, Ke= 0.9	
			Invert= 259.05' / 256.89' S= 0.0100	
		n= 0.013 C	rrugated PE, smooth interior, Flow A	Area= 1.77 st
Primary Out	Flow Max=1.68 cf	s @ 12.04 hrs I	W=259.72' TW=257.94' (Dynamic	Tailwater)
1=Culvert	(Inlet Controls 1.6	68 cfs @ 2.20 fp	\$)	,
		•		
		Summa	y for Pond CB-12:	
Inflow Area =	1,315 ac. 8	1.40% Impervic	us, Inflow Depth = 2.01" for 1-yr	event
Inflow =		12.04 hrs, Vol		
Outflow =		12.04 hrs, Vol		_ag= 0.0 min
Primary =		12.04 hrs, Vol	me= 0.220 af	
Routed to	Pond CB-13 :			
Routing by D	n-Stor-Ind metho	d, Time Span= (	.00-72.00 hrs, dt= 0.01 hrs	
Peak Elev= 2	, 57.94' @ 12.04 hr:	s Surf.Area= 1	sf Storage= 13 cf	
Flood Elev= 2	63.05' Surf.Area	= 24 sf Storag	= 74 cf	
Plug-Flow de	tention time= $0.2$ n	nin calculated fo	0.220 af (100% of inflow)	
	ss det. time= 0.2 n			
		(	- /	

Newburgh South Logistics Center         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 1-yr Rainfall=2.60"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 23	South Logistics Cent         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 1-yr Rainfall=2.6         Prepared by Labella Associates       Printed 1/4/202         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 2
Volume         Invert         Avail.Storage         Storage Description           #1         256.89'         74 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         263.05'         1,868 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           1.942 cf         Total Available Storage	ElevationSurf.AreaInc.StoreCum.Store(feet)(sq-ft)(cubic-feet)(cubic-feet)263.131200263.873,4731,2891,289
Elevation     Surf.Area (sq-ft)     Inc.Store (cubic-feet)     Cum.Store (cubic-feet)       256.89     12     0     0       263.05     12     74     74       Elevation     Surf.Area     Inc.Store     Cum.Store	Device       Routing       Invert       Outlet Devices         #1       Primary       254.97' <b>18.0" Round Culvert</b> L= 137.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 254.97' / 253.60' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         Primary OutFlow Max=4.59 cfs @ 12.04 hrs HW=256.19' TW=254.83' (Dynamic Tailwater)
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           263.05         12         0         0           263.82         4,839         1,868         1,868	<b>Culvert</b> (Inlet Controls 4.59 cfs @ 2.97 fps) <b>Summary for Pond CB-14:</b>
Device       Routing       Invert       Outlet Devices         #1       Primary       256.89' <b>18.0" Round Culvert</b> L= 192.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.89' / 254.97' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         Primary OutFlow Max=3.63 cfs @ 12.04 hrs HW=257.94' TW=256.19' (Dynamic Tailwater)	Inflow Area =       1.654 ac, 84.27% Impervious, Inflow Depth =       2.06" for 1-yr event         Inflow =       4.66 cfs @       12.04 hrs, Volume=       0.284 af         Outflow =       4.66 cfs @       12.04 hrs, Volume=       0.284 af, Atten= 0%, Lag= 0.0 min         Primary =       4.66 cfs @       12.04 hrs, Volume=       0.284 af         Routed to Pond CB-15 :       0.284 af
Landrage Culvert (Inlet Controls 3.63 cfs @ 2.75 fps) Summary for Pond CB-13:	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 254.84' @ 12.04 hrs Surf.Area= 12 sf Storage= 15 cf Flood Elev= 262.48' Surf.Area= 12 sf Storage= 107 cf
Inflow Area =       1.636 ac, 84.10% Impervious, Inflow Depth =       2.06" for 1-yr event         Inflow =       4.60 cfs @       12.04 hrs, Volume=       0.281 af         Outflow =       4.60 cfs @       12.04 hrs, Volume=       0.281 af, Atten= 0%, Lag= 0.0 min         Primary =       4.60 cfs @       12.04 hrs, Volume=       0.281 af         Routed to Pond CB-14 :       0       0.281 af	Plug-Flow detention time= 0.2 min calculated for 0.284 af (100% of inflow)         Center-of-Mass det. time= 0.2 min (793.2 - 793.0)         Volume       Invert         Avail.Storage       Storage Description         #1       253.60'         107 cf       STRUCTURE (Prismatic)Listed below (Recalc)
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 256.20'@ 12.04 hrs Surf.Area= 12 sf Storage= 15 cf Flood Elev= 263.13' Surf.Area= 24 sf Storage= 98 cf Plug-Flow detention time= 0.3 min calculated for 0.281 af (100% of inflow) Center-of-Mass det. time= 0.2 min (793.3 - 793.1)	Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           253.60         12         0         0           262.48         12         107         107           262.50         20         0         107
Volume       Invert       Avail.Storage       Storage Description         #1       254.97'       98 cf       STRUCTURE (Prismatic)Listed below (Recalc)         #2       263.13'       1,289 cf       Custom Stage Data (Prismatic)Listed below (Recalc)         1.387 cf       Total Available Storage	Device         Routing         Invert         Outlet Devices           #1         Primary         253.60' <b>18.0" Round Culvert</b> L= 180.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 253.60' / 249.91'         S= 0.0205 '/'         Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
Elevation     Surf.Area     Inc.Store     Cum.Store       (feet)     (sq-ft)     (cubic-feet)     (cubic-feet)       254.97     12     0     0	#2         Primary         262.48'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)         0.20         0.40         0.60         0.80         1.00         1.20         1.40         1.60         1.80         2.00           2.50         3.00         3.50         4.00         4.50         5.00         5.50           Coef. (English)         2.34         2.50         2.70         2.68         2.66         2.65         2.65

Newburgh South Logistics Center 3\_App J\_Post-Develop\_32142-00 NY-32142-00 24-hr S1 1-yr Rainfall=2.60" Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC Printed 1/4/2024 Page 25

Primary OutFlow Max=4.65 cfs @ 12.04 hrs HW=254.83' TW=251.23' (Dynamic Tailwater) -1=Culvert (Inlet Controls 4.65 cfs @ 2.99 fps) **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

#### Summary for Pond CB-15:

Inflow Area	a =	1.815 ac, 8	32.97% Impervious,	Inflow Depth = 2	.04" for '	1-yr event
Inflow	=	5.08 cfs @	12.04 hrs, Volume	e 0.309 af		-
Outflow	=	5.08 cfs @	12.04 hrs, Volume	e= 0.309 af	, Atten= 0	%, Lag= 0.0 min
Primary	=	5.08 cfs @	12.04 hrs, Volume	e= 0.309 af		-
Routed	to Pone	d CB-16 :				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 251.23' @ 12.04 hrs Surf.Area= 12 sf Storage= 16 cf Flood Elev= 253.61' Surf.Area= 12 sf Storage= 44 cf

Plug-Flow detention time= 0.2 min calculated for 0.309 af (100% of inflow) Center-of-Mass det. time= 0.2 min (794.6 - 794.4)

Volume	Inv	ert Avail.Sto	rage Stora	age Description
#1	249.9	91' 4	17 cf STR	UCTURE (Prismatic)Listed below (Recalc)
Elevatio (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	
249.9 253.0	•••	12 12	0 44	0 44
253.	75	20	2	47
Device	Routing	Invert	Outlet Dev	vices
#1	Primary	249.91'	L= 180.0' Inlet / Outl	und Culvert CPP, projecting, no headwall, Ke= 0.900 et Invert= 249.91' / 241.94' S= 0.0443 '/' Cc= 0.900 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	253.61'		x 5.0' breadth Broad-Crested Rectangular Weir

Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=5.07 cfs @ 12.04 hrs HW=251.23' TW=243.39' (Dynamic Tailwater) -1=Culvert (Inlet Controls 5.07 cfs @ 3.08 fps) -2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

			Summary	for Pond CB-16:
[90] Wai	rning: Qout	>Qin may requ	ire smaller dt or	Finer Routing
Inflow A Inflow Outflow Primary Route	=	5.68 cfs @ 12 5.68 cfs @ 12 5.68 cfs @ 12	10% Impervious 2.04 hrs, Volum 2.04 hrs, Volum 2.04 hrs, Volum	e= 0.345 af, Atten= 0%, Lag= 0.0 min
Peak Ele	ev= 243.56	'@ 12.06 hrs		0-72.00 hrs, dt= 0.01 hrs f Storage= 19 cf 68 cf
Center-o	of-Mass det Inver	t time= 0.2 min	ı ( 796.8 - 796.7 rage Storage I	, Description
#1	241.94	t. <i>1</i>	2 cf SIRUCI	URE (Prismatic)Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store
(fee	/	(sq-ft)	(cubic-feet)	(cubic-feet)
241.9 247.5		12 12	0	0
247.8		20	68 4	68 72
Device	Routing	Invert	Outlet Devices	
#1	Primary	241.94' 247.58'	L= 194.0' CP Inlet / Outlet In n= 0.013 Corr 20.0' long x 5	P, projecting, no headwall, Ke= 0.900 vert= 241.94' / 240.00' S= 0.0100 '/' Cc= 0.900 ugated PE, smooth interior, Flow Area= 1.77 sf <b>.0' breadth Broad-Crested Rectangular Weir</b>
			Head (feet) 0.	20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00

Primary OutFlow Max=5.13 cfs @ 12.04 hrs HW=243.39' TW=242.38' (Dynamic Tailwater) -1=Culvert (Outlet Controls 5.13 cfs @ 3.73 fps) -2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond CB-17:

Newburgh South Logistics Center NY-32142-00 24-hr S1 1-yr Rainfall=2.60" 3\_App J\_Post-Develop\_32142-00 Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC Printed 1/4/2024 Page 26

South Logistics Center         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 1-yr Rainfall=2.60"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 27	Newburgh South Logistics C           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 1-yr         Rainfall=           Prepared by Labella Associates         Printed 1/4/.           HydroCAD® 10.20-3f s/n 09581         © 2023 HydroCAD Software Solutions LLC         Page
Inflow Area =       4.187 ac, 88.32% Impervious, Inflow Depth =       2.14" for 1-yr event         Inflow =       12.07 cfs @       12.04 hrs, Volume=       0.747 af         Outflow =       11.81 cfs @       12.04 hrs, Volume=       0.747 af, Atten= 2%, Lag= 0.1 min         Primary =       11.81 cfs @       12.04 hrs, Volume=       0.747 af         Routed to Pond CB-18 :       0.747 af	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af Routed to Pond PF-2 : Pretreatment Forebay Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af Routed to Pond DP-1 : Gidneytown Creek	Primary OutFlow Max=10.15 cfs @ 12.04 hrs HW=242.43' TW=241.71' (Dynamic Tailwater) 1=Culvert (Inlet Controls 10.15 cfs @ 3.23 fps) 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=239.50' TW=232.00' (Dynamic Tailwater)
Peak Elev= 242.73' @ 12.06 hrs Surf.Area= 20 sf Storage= 65 cf Flood Elev= 244.30' Surf.Area= 40 sf Storage= 96 cf	<b>Tertiary OutFlow</b> Max=0.00 cfs @ 0.00 hrs HW=239.50' TW=0.00' (Dynamic Tailwater) <b>4=Broad-Crested Rectangular Weir</b> ( Controls 0.00 cfs)
Plug-Flow detention time= 0.2 min calculated for 0.747 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 785.3 - 785.1 )	Summary for Pond CB-18:
Volume         Invert         Avail.Storage         Storage Description           #1         239.50'         96 cf         STRUCTURE (Prismatic)Listed below (Recalc)	[80] Warning: Exceeded Pond CB-10 by 0.43' @ 12.02 hrs (6.66 cfs 0.022 af)
#2     244.30'     18,411 cf     Custom Stage Data (Prismatic)Listed below (Řecalc)       18,507 cf     Total Available Storage       Elevation     Surf.Area     Inc.Store	Inflow Area =         7.583 ac, 92.78% Impervious, Inflow Depth =         2.24" for 1-yr event           Inflow         =         22.08 cfs @         12.04 hrs, Volume=         1.418 af           Outflow         =         21.95 cfs @         12.04 hrs, Volume=         1.418 af           Outflow         =         21.95 cfs @         12.04 hrs, Volume=         1.418 af, Atten= 1%, Lag= 0.2 min
(feet) (sq-ft) (cubic-feet) (cubic-feet) 239.50 20 0 0 0	Primary = 21.95 cfs @ 12.04 hrs, Volume= 1.418 af Routed to Pond DIV-2 : Diversion 2
244.30     20     96     96       Elevation     Surf.Area     Inc.Store     Cum.Store	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 241.83' @ 12.05 hrs Surf.Area= 20 sf Storage= 95 cf Flood Elev= 243.50' Surf.Area= 40 sf Storage= 128 cf
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           244.30         20         0         0           245.00         7,740         2,716         2,716           245.35         12,368         3,519         6,235	Plug-Flow detention time= 0.2 min calculated for 1.418 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 775.0 - 774.8 )
246.00 25,096 12,176 18,411	Volume Invert Avail.Storage Storage Description
Device Routing Invert Outlet Devices	#1     237.08'     128 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     243.50'     4,850 cf     Custom Stage Data (Prismatic)Listed below (Recalc)
#1 Primary 239.50' <b>24.0" Round Culvert</b> L= 192.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.50' / 237.58' S= 0.0100 '/ Cc= 0.900	4,978 cf Total Available Storage Elevation Surf.Area Inc.Store Cum.Store
n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf #2 Primary 245.26' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b>	(feet) (sq-ft) (cubic-feet) (cubic-feet) 237.08 20 0 0
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	243.50     20     128     128       Elevation     Surf.Area     Inc.Store     Cum.Store
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #3 Secondary 245.34' 10.0' long x 5.0' breadth Broad-Crested Rectangular Weir	(feet) (sq-ft) (cubic-feet) (cubic-feet)
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	243.50         20         0         0           244.75         7,740         4,850         4,850
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.66 2.68 2.70 2.74 2.79 2.88	Device         Routing         Invert         Outlet Devices           #1         Primary         237.08'         30.0" Round Culvert
#4 Tertiary 245.40' 10.0' long x 5.0' breadth Broad-Crested Rectangular Weir	$\mu$ = Primary 237.08 <b>30.0 Round Curver</b> L= 64.0' CPP, projecting, no headwall, Ke= 0.900

<b>3_App J_Post-D</b> Prepared by Label HydroCAD® 10.20-3f	ella Associate	s		NY-32142-	Newburgh South L -00 24-hr S1 1-yr Pi		Prepare	ed by Labe	<b>Develop_</b> ella Associa af s/n 09581	ates		Software S
#2 Primary	244.70'	n= 0.013 Corru <b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50	ugated PE, 5.0' breadth 20 0.40 0.6 0 4.00 4.50	smooth inte Broad-Cre 30 0.80 1.0 3 5.00 5.50	S= 0.0159 <sup>1</sup> / Cc erior, Flow Area= 4 ested Rectangular 00 1.20 1.40 1.60 0 3 2.68 2.66 2.65 3	l.91 sf • <b>Weir</b> ) 1.80 2.00	Primary	OutFlow	Max=14.54	2.50 Coe 2.85 cfs @ 12	) 3.00 <sup>´</sup> 3. f. (Englisi 5 3.07 3. 2.04 hrs I	h) 2.54 2. 20 3.32 HW=242.30
Primary OutFlow M			W=241.72'			ater)	Şecond	ary OutFlo	t Controls 1 w Max=0.0 ed Rectang	0 cfs @	0.00 hrs	HW=239.8
2=Broad-Creste	ed Rectangula	ar Weir (Controls	s 0.00 cfs)						-	S	ummar	y for Por
		Summary f	for Pond	CB-19:								-
Inflow = 14	14.59 cfs @ 1 14.58 cfs @ 1	.00% Impervious, 2.04 hrs, Volume 2.04 hrs, Volume 2.04 hrs, Volume	ie= i	0.940 af	" for 1-yr event htten= 0%, Lag= 0.	1 min	Inflow A Inflow Outflow Primary Rout	= =	2.565 ac, 3.56 cfs @ 3.56 cfs @ 3.56 cfs @ CB-22 :	12.07 h 12.07 h	nrs, Volui nrs, Volui	me= me=
				5.5 <del>4</del> 0 ai								
Routed to Pond I Secondary = ( Routed to Pond (	PF-1 : Pretrea 0.00 cfs @ CB-8 :	atment Forebay 0.00 hrs, Volume	ie= (	0.000 af			Peak El	ev= 258.57	or-Ind metho "@ 12.07 h 6' Surf.Area	rs Surf.	Area= 12	sf Storag
Routed to Pond I Secondary =	PF-1 : Pretrea 0.00 cfs @ CB-8 : or-Ind method, '@ 12.04 hrs	atment Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 st	le= ( 0-72.00 hrs f Storage=	0.000 af , dt= 0.01 h	ırs		Peak Ĕle Flood El Plug-Flo	ev= 258.57 lev= 263.36 ow detentio	" @ 12.07 h	rs Surf. a= 24 sf min calc	Area= 12 Storage= ulated for	sf Storag = 70 cf 0.286 af (1
Routed to Pond I Secondary = () Routed to Pond () Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 245.95' Plug-Flow detention	PF-1 : Pretrea 0.00 cfs @ CB-8 : or-Ind method, ' @ 12.04 hrs 5' Surf.Area= n time= 0.2 mir	atment Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 st 40 sf Storage= n calculated for 0.	ue= ( 0-72.00 hrs. f Storage= 123 cf 0.940 af (100	0.000 af , dt= 0.01 h : 50 cf			Peak Ĕŀ Flood El Plug-Flo Center-o <u>Volume</u>	ev= 258.57 lev= 263.36 ow detentio of-Mass de Inve	"@ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 rt Avail.	rs Surf. a= 24 sf min calco min ( 843 Storage	Area= 12 Storage= ulated for 3.3 - 843. Storage	sf Storag = 70 cf 0.286 af (1 1) Descriptio
Routed to Pond I Secondary = () Routed to Pond () Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 245.95' Plug-Flow detention Center-of-Mass det.	PF-1 : Pretrea 0.00 cfs @ CB-8 : br-Ind method, ' @ 12.04 hrs 5' Surf.Area= n time= 0.2 min t. time= 0.2 min	timent Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 st 40 sf Storage= 1 n calculated for 0. n (763.3 - 763.1	ue= ( 0-72.00 hrs. of Storage= 123 cf 0.940 af (100 )	0.000 af , dt= 0.01 h : 50 cf			Peak Ĕi Flood El Plug-Flo Center-o	ev= 258.57 lev= 263.36 ow detentio of-Mass de	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 rt <u>Avail.</u> 4'	rs Surf. a= 24 sf min calco min ( 843 <u>Storage</u> 70 cf	Area= 12 Storage= ulated for 3.3 - 843. <u>Storage</u> <b>STRUC</b>	sf Storag = 70 cf 0.286 af (1 1 )
Routed to Pond I Secondary = ( Routed to Pond ( Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 245.95' Plug-Flow detention Center-of-Mass det. Volume Invert	PF-1 : Pretrea 0.00 cfs @ CB-8 : or-Ind method, '@ 12.04 hrs 5' Surf.Area= n time= 0.2 min t. time= 0.2 min rt Avail.Sto	timent Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 sl 40 sf Storage= 1 n calculated for 0 n (763.3 - 763.1 orage Storage D	e= ( 0-72.00 hrs, f Storage= 123 cf 0.940 af (100 ) Description	0.000 af , dt= 0.01 h : 50 cf 0% of inflow	v)		Peak Ĕlı Flood El Plug-Flc Center-c <u>Volume</u> #1	ev= 258.57 lev= 263.36 ow detentio of-Mass de <u>Inve</u> 257.54	"@ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 rt Avail. 4' 6' 14	rs Surf. a= 24 sf min calcu min ( 843 <u>Storage</u> 70 cf 4,129 cf	Area= 12 Storage= Jated for 3.3 - 843. Storage STRUC Custom	sf Storag = 70 cf 0.286 af (1 1) <u>Descriptio</u> <b>TURE (Pri</b>
Routed to Pond I Secondary = () Routed to Pond () Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 245.95' Plug-Flow detention Center-of-Mass det.	PF-1 : Pretrea 0.00 cfs @ CB-8 : pr-Ind method, '@ 12.04 hrs 5' Surf.Area= n time= 0.2 mir t. time= 0.2 mir rt Avail.Sto 2' 1: 5' 2:	Time Span= 0.00 Surf.Area= 20 st 40 sf Storage= n calculated for 0. n ( 763.3 - 763.1 <u>orage Storage D</u> 23 cf <b>STRUCTI</b> 55 cf <b>Custom S</b>	e= ( 0-72.00 hrs. f Storage= 123 cf 0.940 af (100 ) <u>Description</u> <b>URE (Prisn</b> <b>Stage Data</b>	0.000 af , dt= 0.01 h 50 cf 0% of inflow natic)Listed (Prismatic	v)	alc)	Peak Ĕi Flood El Plug-Flc Center-c <u>Volume</u> #1 #2 Elevatio	ev= 258.57 lev= 263.30 ww detentio of-Mass de Inve 257.5 263.30 on	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 rt Avail. 6' 14 6' 14 14 Surf.Area	rs Surf. a= 24 sf min calco min ( 843 <u>Storage</u> 70 cf 4,129 cf 4,199 cf Inc	Area= 12 Storage: ulated for 3.3 - 843. <u>Storage</u> <b>STRUC</b> <u>Custom</u> Total Av 2.Store	sf Storag = 70 cf 0.286 af (1 1) Descriptio TURE (Pri <u>1 Stage Da</u> vailable Sto Cum.S
Routed to Pond I         Secondary =       ()         Routed to Pond ()         Routing by Dyn-Stor         Peak Elev= 242.31'         Flood Elev= 242.31'         Flood Elev= 245.95'         Plug-Flow detention         Center-of-Mass det.         Volume       Invert         #1       239.82'         #2       245.95'         Elevation       S	PF-1 : Pretrea 0.00 cfs @ CB-8 : pr-Ind method, '@ 12.04 hrs 5' Surf.Area= n time= 0.2 min rt Avail.Sto 2' 1: 5' 1 Surf.Area	timent Forebay 0.00 hrs, Volume Surf.Area= 20 sl 40 sf Storage= 1 n calculated for 0, n (763.3 - 763.1 orage Storage D 23 cf STRUCTI 55 cf Custom S 78 cf Total Avai Inc.Store	e= 0 0-72.00 hrs. of Storage= 123 cf 0.940 af (100 ) Description URE (Prisn Stage Data silable Stora Cum.Sto	0.000 af , dt= 0.01 h 50 cf 0% of inflow <u>(Prismatic</u> ge re	v) I below (Recalc)	alc)	Peak Ĕlı Flood El Plug-Flc Center-c <u>Volume</u> #1 #2	ev= 258.57 lev= 263.36 ow detentio of-Mass de <u>Inve</u> 257.5- 263.30 on \$ on \$ on \$ on \$	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 <u>rt Avail.</u> <u>6' 14</u> 14	rs Surf. a= 24 sf min calco min ( 843 <u>Storage</u> 70 cf 4,129 cf 4,199 cf Inc	Area= 12 Storage: ulated for 3.3 - 843. <u>Storage</u> STRUC <u>Custom</u> Total Av	sf Storag = 70 cf 0.286 af (1 1) Descriptio TURE (Pri <u>1 Stage Da</u> vailable Sto
Routed to Pond I Secondary = () Routed to Pond () Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 245.95' Plug-Flow detention Center-of-Mass det. Volume Invert #1 239.82 Elevation S (feet) 239.82	PF-1 : Pretrea 0.00 cfs @ CB-8 : pr-Ind method, ' @ 12.04 hrs 5' Surf.Area = - n time= 0.2 mir t. tim= 0.2 mir t	timent Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 sf 40 sf Storage= n calculated for 0. n (763.3 - 763.1) rage Storage D 23 cf STRUCTI 55 cf Custom S 78 cf Total Avai Inc.Store (cubic-feet) 0	e= ( 0-72.00 hrs. f Storage= 123 cf 0.940 af (100 ) <u>Description</u> URE (Prisn <u>Stage Data</u> iilable Stora Cum.Sto (cubic-fee	0.000 af , dt= 0.01 h : 50 cf 0% of inflow natic)Listed (Prismatic ge re <u>et)</u> 0	v) I below (Recalc)	alc)	Peak Ĕi Flood El Plug-Flc Center-c #1 #2 Elevatic 	ev= 258.57 lev= 263.30 w detentio of-Mass de Inve 257.5- 263.30 on 5 ot 54 36 on 5	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 <u>rt Avail.</u> 4' 6' 1 <sup>2</sup> 12 Surf.Area (sq-ft) 12 12 Surf.Area	rs Surf. a= 24 sf min calci min ( 843 <u>Storage</u> 70 cf 4,129 cf 4,199 cf Inc (cubi	Area= 12 Storage= Ilated for 3.3 - 843. Storage STRUC Custom Total Av 2.Store c-feet) 0 70 2.Store	sf Storag = 70 cf 0.286 af (* 1 ) Description TURE (Pri a Stage Da vailable Sto Cum.S Cum.S
Routed to Pond I Secondary = ( Routed to Pond of Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 242.31' Plug-Flow detention Center-of-Mass det. Volume Invert #1 239.82 #2 245.95 Elevation S Elevation S	PF-1 : Pretrea 0.00 cfs @ CB-8 : pr-Ind method, ' @ 12.04 hrs 5' Surf.Area n time= 0.2 mir t. t	Time Span= 0.00 Surf.Area= 20 st 40 sf Storage= 1 in calculated for 0, n (763.3 - 763.1) orage Storage D 23 cf STRUCTI 55 cf Custom S 78 cf Total Avai Inc.Store (cubic-feet) 0 123 Inc.Store	e= 0 0-72.00 hrs. f Storage= 123 cf 0.940 af (100 ) Description URE (Prisn Stage Data illable Stora Cum.Sto (cubic-fee 12 Cum.Sto	0.000 af , dt= 0.01 h 50 cf 0% of inflow (Prismatic ge re <u>et</u> ) 0 23 re	v) I below (Recalc)	alc)	Peak Éli Flood El Plug-Flc Center-o #1 #2 Elevatio (fee 263.3 Elevatio (fee 263.3 264.0	ev= 258.57 lev= 263.36 ow detentio of-Mass de <u>Inve</u> 257.5- 263.30 on <u>5</u> 36 on <u>5</u> 36 36 30	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 tt <u>Avail.</u> 4' <u>6' 14</u> <u>6' 14</u> <u>14</u> Surf.Area (sq-ft) 12 Surf.Area (sq-ft) 12 4,336	rs Surf. a= 24 sf min calco min ( 843 <u>Storage</u> 70 cf 4,129 cf 4,199 cf Inc (cubi	Area= 12 Storage: ulated for 3.3 - 843. Storage STRUC Custor Total Av 2.Store c-feet) 0 0 2.Store c-feet 0 1,391	sf Storag = 70 cf 0.286 af (* 1 ) <u>Descriptic</u> TURE (Pri <u>stage Da</u> railable Stc Cum.S (cubic- Cum.S
Routed to Pond I Secondary = ( Routed to Pond of Peak Elev= 242.31' Flood Elev= 242.31' Plug-Flow detention Center-of-Mass det. Volume Invert #1 239.82 #2 245.95 Elevation S (feet) Elevation S (feet)	PF-1 : Pretrea 0.00 cfs @ CB-8 : pr-Ind method, ' @ 12.04 hrs 5' Surf.Area = - n time= 0.2 mir t. time= 0.2 mir	timent Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 st 40 sf Storage= 1 n calculated for 0. n (763.3 - 763.1) <u>trage Storage D</u> 23 cf STRUCTI 55 cf Custom S 78 cf Total Avai Inc.Store (cubic-feet) 0 123 Inc.Store (cubic-feet)	e= 0 0-72.00 hrs. of Storage= 123 cf 0.940 af (100) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.000 af , dt= 0.01 h 50 cf 0% of inflow <b>natic)</b> Listed ( <b>Prismatic</b> ge re <u>et</u> ) 0 23 re <u>et</u> )	v) I below (Recalc)	alc)	Peak Ĕin Flood El Plug-Flc Center-c Wolume #1 #2 Elevatic (fee 263.3 Elevatic (fee 263.3	ev= 258.57 lev= 263.36 ow detentio of-Mass de <u>Inve</u> 257.5- 263.30 on <u>5</u> 36 on <u>5</u> 36 36 30	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 rt Avail.: 4' 6' 14 5urf.Area (sq-ft) 12 5urf.Area (sq-ft) 12	rs Surf. a= 24 sf min calco min ( 843 <u>Storage</u> 70 cf 4,129 cf 4,199 cf Inc (cubi	Area= 12 Storage= Jlated for 3.3 - 843. <u>Storage</u> <b>StrRUC</b> <b>Custor</b> Total Av 2.Store <u>c-feet</u> ) 0 70 2.Store <u>c-feet</u> ) 0	sf Storag = 70 cf 0.286 af (* 1 ) Descriptio TURE (Pri Stage Da railable Sto Cum.S (cubic-
Routed to Pond I Secondary = ( Routed to Pond of Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 242.31' Plug-Flow detention Center-of-Mass det. Volume Invert #1 239.82 #2 245.95 Elevation S Elevation S	PF-1 : Pretrea 0.00 cfs @ CB-8 : pr-Ind method, ' @ 12.04 hrs 5' Surf.Area n time= 0.2 mir t. t	Time Span= 0.00 Surf.Area= 20 st 40 sf Storage= 1 in calculated for 0, n (763.3 - 763.1) orage Storage D 23 cf STRUCTI 55 cf Custom S 78 cf Total Avai Inc.Store (cubic-feet) 0 123 Inc.Store	e= 0 0-72.00 hrs. of Storage= 123 cf 0.940 af (100 ) <u>Description</u> <b>URE (Prisn</b> <u>Stage Data</u> illable Stora Cum.Sto (cubic-fee 12 Cum.Sto (cubic-fee	0.000 af , dt= 0.01 h 50 cf 0% of inflow (Prismatic ge re <u>et</u> ) 0 23 re	v) I below (Recalc)	alc)	Peak Ĕin Flood El Plug-Flc Center-c #1 #2 Elevatio (fee 263.3 Elevatio (fee 263.3 264.0 265.0	ev= 258.57 lev= 263.30 w detentio of-Mass de 	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 tt Avail.: 4' 6' 14 5urf.Area (sq-ft) 12 12 5urf.Area (sq-ft) 12 4,336 21,139	rs Surf. a= 24 sf min calcumin ( 843 Storage 70 cf 4,129 cf 4,199 cf Inc (cubi ert Out	Area= 12 Storage= Jated for 3.3 - 843. <u>Storage</u> <b>STRUC</b> <b>Custorr</b> Total Av 2.Store <u>c-feet</u> ) 0 70 2.Store <u>c-feet</u> ) 0 1,391 12,738 let Device	sf Storag = 70 cf 0.286 af (* 1 ) Descriptio TURE (Pri <u>stage Da</u> railable Sto Cum.S (cubic- 1 14
Routed to Pond I Secondary = ( Routed to Pond ( Routing by Dyn-Stor Peak Elev= 242.31' Flood Elev= 245.95' Plug-Flow detention Center-of-Mass det. Volume Invert #1 239.82 #2 245.95 Elevation S (feet) 239.82 245.95	PF-1 : Pretrea 0.00 cfs @ CB-8 : or-Ind method, ' @ 12.04 hrs 5' Surf.Area n time= 0.2 mir t. t	timent Forebay 0.00 hrs, Volume Time Span= 0.00 Surf.Area= 20 sl 40 sf Storage= 1 n calculated for 0. n (763.3 - 763.1 <u>trage Storage D</u> 23 cf <b>STRUCTI</b> 55 cf <b>Custom S</b> 78 cf Total Avai Inc.Store (cubic-feet) 0 123 Inc.Store (cubic-feet) 0	e= 0 0-72.00 hrs. f Storage= 123 cf 0.940 af (100 ) Description URE (Prisn Stage Data iilable Stora Cum.Sto (cubic-fee functional stora (cubic-fee	0.000 af dt= 0.01 h 50 cf 0% of inflow <b>natic)</b> Listed ( <b>Prismatic</b> ge re et) 0 23 re et) 0	v) I below (Recalc)	alc)	Peak Ĕli Flood El Plug-Flc Center-c #1 #2 Elevatio (fee 263.3 Elevatio (fee 263.3 264.0 265.0	ev= 258.57 lev= 263.30 w detentio of-Mass de 	" @ 12.07 h 6' Surf.Area n time= 0.2 t. time= 0.2 rt Avail.: 4' 6' 14 5urf.Area (sq-ft) 12 12 Surf.Area (sq-ft) 12 4,336 21,139	rs Surf. a= 24 sf min calco min ( 843 <u>Storage</u> 70 cf 4,129 cf 4,199 cf Inc (cubi Inc (cubi ert Outt 54' <b>18.</b> 0	Area= 12 Storage= ulated for 3.3 - 843. Storage STRUC Custor Total Av Store c-feet) 0 2.Store c-feet) 0 1,391 12,738 et Device "Round" Round "Round"	sf Storag = 70 cf 0.286 af (* 1 ) Description TURE (Pri stage Da /ailable Sto Cum.S (cubic- Cum.S (cubic- 1 1 14

Newburgh South Logistics Center 32142-00 24-hr S1 1-yr Rainfall=2.60" Printed 1/4/2024 LLC Page 30 .80 1.00 1.20 1.40 1.60 1.80 2.00 2.60 2.66 2.70 2.77 2.89 2.88 238.93' (Dynamic Tailwater) =239.53' (Dynamic Tailwater) -2: 1.34" for 1-yr event 6 af 5 af, Atten= 0%, Lag= 0.0 min 6 af 0.01 hrs cf f inflow) )Listed below (Recalc) **smatic)**Listed below (Recalc) headwall, Ke= 0.900 255.03' S= 0.0100 '/' Cc= 0.900 oth interior, Flow Area= 1.77 sf pad-Crested Rectangular Weir .80 1.00 1.20 1.40 1.60 1.80 2.00 0 5.50

 Sewburgh South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 1-yr Rainfall=2.60"

 Prepared by Labella Associates
 Printed 1/4/2024

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Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=3.55 cfs @ 12.07 hrs HW=258.57' TW=256.37' (Dynamic Tailwater) 1=Culvert (Inlet Controls 3.55 cfs @ 2.73 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)

#### Summary for Pond CB-20:

Inflow Area =	0.793 ac,10	00.00% Impervious, Inflow	v Depth = 2.37" for 1-yr event	
Inflow =	2.43 cfs @	12.04 hrs, Volume=	0.157 af	
Outflow =	2.43 cfs @	12.04 hrs, Volume=	0.157 af, Atten= 0%, Lag= 0.1 min	
Primary =	2.43 cfs @	12.04 hrs, Volume=	0.157 af	
Routed to Pone	d CB-19 :			
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	
Routed to Pone	d CB-10 :			
Tertiary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	
Routed to Pone	d CB-18 :			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 242.98' @ 12.04 hrs Surf.Area= 9 sf Storage= 9 cf Flood Elev= 245.95' Surf.Area= 18 sf Storage= 36 cf

Plug-Flow detention time= 0.2 min calculated for 0.157 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 763.3 - 763.0 )

Volume	Inv	ert Avail.Sto	orage	Storag	e Description	
#1	241.	97'	36 cf	STRU	CTURE (Prismat	tic)Listed below (Recalc)
#2	245.	95' 1	71 cf	Custo	m Stage Data (P	rismatic)Listed below (Recalc)
		2	06 cf	Total /	Available Storage	
Elevatio	on	Surf.Area	Inc	Store	Cum.Store	
(fee	et)	(sq-ft)	(cubi	c-feet)	(cubic-feet)	
241.9	97	9		0	0	
245.9	95	9		36	36	
Elevatio	on	Surf.Area	Inc	Store	Cum.Store	
(fee	et)	(sq-ft)	(cubi	c-feet)	(cubic-feet)	
245.9	95	9		0	0	
246.9	90	350		171	171	
Device	Routing	Invert	Outle	et Devi	ces	
#1	Primary	241.97'	24.0	" Roui	nd Culvert	
						no headwall, Ke= 0.900
						239.81' S= 0.0050 '/' Cc= 0.900
						ooth interior, Flow Area= 3.14 sf
#2	Second	ary 245.95'				road-Crested Rectangular Weir
						0.80 1.00 1.20 1.40 1.60 1.80 2.00
					3.50 4.00 4.50 5	
			Coe	f. (Engli	ish) 2.34 2.50 2	.70 2.68 2.68 2.66 2.65 2.65 2.65

HydroCA #3	AD® 10.20- Tertiary	3f s/n 09581 © 2	2023 HydroCAD S	oftware Solutions L	LC	Page 3
#3	Tertion					
	reruary	245.95'	<b>20.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)	20 0.40 0.60 0.8 0 4.00 4.50 5.00	I-Crested Rectangul 0 1.00 1.20 1.40 1. 5.50 2.68 2.68 2.66 2.65	60 1.80 2.00
Primary	y OutFlow ulvert (Ou	Max=2.36 cfs ( tlet Controls 2.3	@ 12.04 hrs HW 6 cfs @ 2.19 fps	=242.97' TW=24 )	2.30' (Dynamic Tailv	vater)
Second 2=Br	lary OutFl road-Cres	ow Max=0.00 c ted Rectangula	fs @ 0.00 hrs H Ir Weir (Controls	W=241.97' TW=2 0.00 cfs)	39.00' (Dynamic Ta	ilwater)
Tertiary -3=Br	/ OutFlow road-Cres	Max=0.00 cfs ( ted Rectangula	② 0.00 hrs HW≕ ar Weir( Controls	241.97' TW=237 0.00 cfs)	08' (Dynamic Tailwa	ater)
			Summary f	or Pond CB-2	2:	
Routing Peak El Flood E Plug-Flo	e = ted to Pono by Dyn-Si lev= 256.4 lev= 263.2 ow detentio	5.32 cfs @ 12 d CB-3 : cor-Ind method, D' @ 12.06 hrs 6' Surf.Area= 2 on time= 0.3 mir	Surf.Area= 12 sf 24 sf Storage= 9 1 calculated for 0.	e= 0.401 a 0-72.00 hrs, dt= 0 5 Storage= 16 cf 99 cf 401 af (100% of i	01 hrs	0.1 min
Center- Volume			n ( 833.4 - 833.2 ) rage Storage D			
#1	255.0	13' (	9 cf STRUCTI	JRE (Prismatic)	isted below (Recalc)	
#2	263.2				natic)Listed below (Re	ecalc)
		9,5	70 cf Total Avai	lable Storage		
Elevati		Surf.Area	Inc.Store	Cum.Store		
255.	et) 03	(sq-ft) 12	(cubic-feet) 0	(cubic-feet) 0		
263.		12	99	99		
Elevati (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
263.		12	0	0		
264. 265.		3,123 13,500	1,160 8,312	1,160 9,471		
	Routing	Invert	Outlet Devices			
Device						
Device #1	Primary	255.03'	18.0" Round (		adwall, Ke= 0.900	

Prepare	ed by Label	evelop_321 la Associates s/n 09581 ©2		Software So	NY-32142-00 24-h			<b>3_/</b> Pre <u>Hyd</u>
#2	Primary	264.57'	n= 0.013 Corr <b>10.0' long x 5</b> Head (feet) 0. 2.50 3.00 3.5 Coef. (English	rugated PE 5.0' bread .20 0.40 ( 50 4.00 4. 1) 2.34 2.5	.03'/254.04' S= 0.0' E, smooth interior, Flo th Broad-Crested Re 0.60 0.80 1.00 1.20 50 5.00 5.50 50 2.70 2.68 2.68 2. 70 2.74 2.79 2.88	w Area= 1.77 s <b>ctangular We</b> i 1.40 1.60 1.8	sf i <b>r</b> 0 2.00	Inflo Inflo Out Prir
Ê—1=Ci	ulvert (Inlet	Controls 5.31	<ul> <li>① 12.06 hrs HV</li> <li>cfs @ 3.14 fps)</li> <li>ar Weir (Control</li> </ul>	)	TW=255.48' (Dynar )	nic Tailwater)		Rou Pea Floo
			Summary	for Pone	d CB-23:			Plu
Inflow A Inflow Outflow Primary Rout	= 8	3.47 cfs @ 12 3.47 cfs @ 12 3.47 cfs @ 12	59% Impervious 2.05 hrs, Volum 2.05 hrs, Volum 2.05 hrs, Volum	ne= ne=	Depth = 1.47" for 1- 0.620 af 0.620 af, Atten= 0% 0.620 af		n	Cer Vol #
					rs, dt= 0.01 hrs			Ele
Flood E Plug-Flo	lev= 246.73	Surf.Area= ' time= 0.2 min	Surf.Area= 12 s 12 sf Storage= calculated for ( (821 6 - 821 5	52 cf 0.620 af (1				
Flood E Plug-Flo Center-	lev= 246.73' ow detention of-Mass det.	Surf.Area= time= 0.2 min time= 0.1 min	12 sf Storage= calculated for ( (821.6 - 821.5	52 cf 0.620 af (1 5 )	00% of inflow)			
Flood E Plug-Flo Center-	lev= 246.73' ow detention of-Mass det.	Surf.Area= ´ time= 0.2 min time= 0.1 min Avail.Sto	12 sf Storage= calculated for ( 0 (821.6 - 821.5 rage Storage	52 cf 0.620 af (1 5 ) Description	00% of inflow)	Recalc)		
Flood E Plug-Flo Center- Volume #1 Elevatio (fee	ilev= 246.73 ow detention of-Mass det. <u>Invert</u> 242.40 on S et)	Surf.Area = ^ time= 0.2 min time= 0.1 mir <u>Avail.Sto</u> t urf.Area (sq-ft)	12 sf Storage= a calculated for ( a (821.6 - 821.5 rage Storage 56 cf STRUCT Inc.Store (cubic-feet)	52 cf 0.620 af (1 5 ) Description	00% of inflow) <u>n</u> <b>smatic)</b> Listed below (f itore i <u>feet)</u>	Recalc)		
Flood E Plug-Flo Center- Volume #1 Elevation (fee 242.4	ilev= 246.73' pw detention of-Mass det. Invert 242.40' on S et) 40	Surf.Area	12 sf Storage= a calculated for ( a (821.6 - 821.5 rage Storage 56 cf STRUCT Inc.Store (cubic-feet) 0	52 cf 0.620 af (1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00% of inflow) n <b>smatic)</b> Listed below (f itore i <u>eet)</u> 0	Recalc)		EI
Flood E Plug-Flo Center- Volume #1 Elevatio (fee	ilev= 246.73' ow detention of-Mass det. <u>Invert</u> 242.40' on S et) 40 73	Surf.Area = ^ time= 0.2 min time= 0.1 mir <u>Avail.Sto</u> t urf.Area (sq-ft)	12 sf Storage= a calculated for ( a (821.6 - 821.5 rage Storage 56 cf STRUCT Inc.Store (cubic-feet)	52 cf 0.620 af (1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00% of inflow) <u>n</u> <b>smatic)</b> Listed below (f itore i <u>feet)</u>	Recalc)		
Flood E Plug-Flc Center <u>Volume</u> #1 Elevatin (fec 242.: 246.: 247.: Device	lev= 246.73' by detention of-Mass det. <u>Invert</u> 242.40' on S et) 40 73 00 <u>Routing</u>	Surf.Area= ^ time= 0.2 min time= 0.1 mir <u>Avail.Sto</u> { urf.Area (sq-ft) 12 12 12 20 Invert	12 sf Storage= a calculated for ( a (821.6 - 821.5 rage Storage   36 cf STRUCT Inc.Store (cubic-feet) 0 52 4 Outlet Devices	52 cf 0.620 af (1 5) Description <b>FURE (Pris</b> Cum.S (cubic-f	00% of inflow) n <b>smatic)</b> Listed below (f itore ieet) 0 52	Recalc)		EI
Flood E Plug-Flc Center <u>Volume</u> #1 Elevatin (fec 242.: 246.: 247.:	lev= 246.73' by detention of-Mass det. <u>Invert</u> 242.40' on S et) 40 73 00	Surf.Area= ^ time= 0.2 min time= 0.1 mir <u>Avail.Sto</u> (sq-ft) 12 12 20	12 sf Storage= a calculated for ( a (821.6 - 821.5) rage Storage 56 cf STRUCT Inc.Store (cubic-feet) 0 52 4 Outlet Devices 18.0" Round L= 135.0" CP Inlet / Outlet Ir n= 0.013 Corr 24.0' long x f Head (feet) 0 2.50 3.00 3.5 Coef. (English	52 cf 	00% of inflow) n <b>smatic)</b> Listed below (f itore ieet) 0 52	0.900  26 '/' Cc= 0.9 w Area= 1.77 s ctangular Wei 1.40 1.60 1.8	sf i <b>r</b> 0 2.00	EI

<b>3_App J_Post-Develop_32142-00</b> Prepared by Labella Associates <u>HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software S</u>	Newburgh South Logistics Center NY-32142-00 24-hr S1 1-yr Rainfall=2.60" Printed 1/4/2024 olutions LLC Page 34
Summary for Pon	d CB-24:
Inflow Area =         0.520 ac,         0.00% Impervious,         Inflow Inflow E           Inflow         =         0.16 cfs @         12.16 hrs,         Volume=           Outflow         =         0.16 cfs @         12.16 hrs,         Volume=           Primary         =         0.16 cfs @         12.16 hrs,         Volume=           Routed to Pond CB-3 :         -         -         -         -	Depth = 0.43" for 1-yr event 0.019 af 0.019 af, Atten= 0%, Lag= 0.1 min 0.019 af
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 h Peak Elev= 256.72' @ 12.16 hrs Surf.Area= 4 sf Storage Flood Elev= 260.50' Surf.Area= 8 sf Storage= 16 cf	
Plug-Flow detention time= 0.2 min calculated for 0.019 af (1 Center-of-Mass det. time= 0.2 min ( 931.9 - 931.7 )	00% of inflow)
Volume Invert Avail.Storage Storage Descriptio	n
	smatic)Listed below (Recalc)
	ta (Prismatic)Listed below (Recalc)
16,873 cf Total Available Sto	rage
Elevation Surf.Area Inc.Store Cum.S	Store
(feet) (sq-ft) (cubic-feet) (cubic-	
256.50 4 0	0
260.50 4 16	16
Elevation Surf.Area Inc.Store Cum.S (feet) (sq-ft) (cubic-feet) (cubic-	
260.50 4 0	0
261.00 1,000 251	251
	,976
	,595
264.00 9,737 8,262 16	,857
Device Routing Invert Outlet Devices	
Inlet / Outlet Invert= 256 n= 0.013 Corrugated Pl Primary OutFlow Max=0.16 cfs @ 12.16 hrs HW=256.72'	ig, no headwall, Ke= 0.900 .50' / 256.24' S= 0.0100 '/ Cc= 0.900 E, smooth interior, Flow Area= 0.79 sf TW=255.18' (Dynamic Tailwater)
<b>1=Culvert</b> (Inlet Controls 0.16 cfs @ 1.25 fps)	
Summary for Pon	d CB-25:

	ed by Label	evelop_321 la Associates s/n 09581 © 2	6	D Software So	NY-32142-00			ed 1/4/2024 Page 35
Inflow A	rea =	5.318 ac. 60	94% Impervio	us Inflow De	epth = 1.44"	for 1-v	revent	
nflow		8.78 cfs @ 12			0.640 af		oroni	
Outflow	= ;	8.77 cfs 🥘 12	2.05 hrs, Volu	ıme=	0.640 af, Atte	n= 0%,	Lag= 0.1 n	nin
Primary		8.77 cfs @ 12			0.640 af			
		PF-1 : Pretrea			0.000 -f			
Second Rout	ed to Pond		0.00 hrs, Volu	ime=	0.000 af			
Routina	bv Dvn-Sto	r-Ind method.	Time Span= (	).00-72.00 hr	s, dt= 0.01 hrs			
		@ 12.05 hrs						
Flood E	lev= 244.70	Surf.Area= 2	24 sf Storage	e= 48 cf				
					00% of inflow)			
Center-	or-mass det.	time= 0.1 mir	1 ( 823.4 - 823	.∠)				
Volume	Inver	t Avail.Sto	rage Storag	e Description	ı			
#1	240.70				ic)Listed below	(Recald	;)	
#2	244.70	•			a (Prismatic)Li			;)
		Ę	54 cf Total A	vailable Stor	200			
					aye			
	-	<i>.</i> .			0			
Elevati		urf.Area	Inc.Store	Cum.St	tore			
(fee	et)	(sq-ft)	(cubic-feet)		tore eet)			
(fee 240.	et) 70	(sq-ft) 12	(cubic-feet) 0	Cum.St	tore eet) 0			
(fee	et) 70	(sq-ft)	(cubic-feet)	Cum.St	tore eet)			
(fee 240.	et) 70 70	(sq-ft) 12	(cubic-feet) 0	Cum.St	tore eet) 0 48			
(fee 240. 244.	et) 70 70 on S	(sq-ft) 12 12	(cubic-feet) 0 48	Cum.St (cubic-fe	tore eet) 0 48 tore			
(fee 240. 244. Elevatio (fee 244.	et) 70 70 on S et) 70	(sq-ft) 12 12 urf.Area (sq-ft) 12	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0	Cum.St (cubic-fe Cum.St	tore <u>eet)</u> 0 48 tore <u>eet)</u> 0			
(fee 240. 244. Elevatio (fee	et) 70 70 on S et) 70	(sq-ft) 12 12 urf.Area (sq-ft)	(cubic-feet) 0 48 Inc.Store (cubic-feet)	Cum.St (cubic-fe Cum.St	tore eet) 0 48 tore eet)			
(fee 240. 244. Elevatio (fee 244.	et) 70 70 0n S et) 70 10	(sq-ft) 12 12 urf.Area (sq-ft) 12 20	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0	Cum.St (cubic-fe Cum.St (cubic-fe	tore <u>eet)</u> 0 48 tore <u>eet)</u> 0			
(fee 240. 244. Elevatio (fee 244. 245.	et) 70 70 0n S et) 70 10	(sq-ft) 12 12 urf.Area (sq-ft) 12 20	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic	Cum.St (cubic-fe Cum.St (cubic-fe	tore <u>eet)</u> 0 48 tore <u>eet)</u> 0			
(fee 240. 244. Elevatio (fee 244. 245. Device	et) 70 70 on S et) 70 10 Routing	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour	Cum.St (cubic-fe Cum.St (cubic-fe es d Culvert	tore <u>eet)</u> 0 48 tore <u>eet)</u> 0	Ke= 0.9	900	
(fee 240. 244. Elevatio (fee 244. 245. Device	et) 70 70 on S et) 70 10 Routing	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour L= 82.0' CF Inlet / Outlet	Cum.St (cubic-fe Cum.St (cubic-fe es es P, projecting Invert= 240.	core eet) 0 48 core eet) 0 6 g, no headwall, 70' / 239.00' S	= 0.020	7 '/' Cc= 0	
(fee 240. 244. Elevatio (fee 244. 245. Device #1	et) 70 70 8t) 70 70 10 <u>Routing</u> Primary	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert 240.70'	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour L= 82.0' Cf Inlet / Outlet net / Outlet n= 0.013 Cr	Cum.St (cubic-fe Cum.St (cubic-fe d Culvert PP, projecting Invert= 240. orrugated PE	core eet) 0 48 tore eet) 0 6 g, no headwall, 70' / 239.00' S , smooth interio	= 0.020 r, Flow	7 '/' Cc= 0 Area= 1.77	7 sf
(fee 240. 244. Elevatio (fee 244. 245. Device	et) 70 70 on S et) 70 10 Routing	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert 240.70'	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour L= 82.0' Cl Inlet / Outlet n= 0.013 Cd 10.0' long	Cum.St (cubic-fe Cum.St (cubic-fe es d Culvert P, projecting Invert= 240. orrugated PE < 5.0° breadt	core eet) 0 48 tore eet) 0 6 g, no headwall, 70'/239.00' S , smooth interic h Broad-Crest	= 0.020 r, Flow ed <b>Rect</b>	7 '/' Cc= 0 Area= 1.77 angular W	7 sf <b>/eir</b>
(fee 240. 244. Elevatio (fee 244. 245. Device #1	et) 70 70 8t) 70 70 10 <u>Routing</u> Primary	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert 240.70'	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0° Rour L= 82.0° Cf Inlet / Outlet n= 0.013 Cc 10.0° long 3 Head (feet)	Cum.St (cubic-fe Cum.St (cubic-fe d Culvert PP, projecting Invert= 240. prrugated PE c 5.0' breadt 0.20 0.40 0	core eet) 0 48 tore eet) 0 6 5 , no headwall, 70'/239.00' S , smooth interic h Broad-Crest 6.60 0.80 1.00	= 0.020 r, Flow ed <b>Rect</b>	7 '/' Cc= 0 Area= 1.77 angular W	7 sf <b>/eir</b>
(fee 240. 244. Elevatio (fee 244. 245. Device #1	et) 70 70 8t) 70 70 10 <u>Routing</u> Primary	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert 240.70'	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour L= 82.0' CF Inlet / Outlet n= 0.013 Cc 10.0' long 3 Head (feet) 2.50 3.00 3	Cum.St (cubic-fe Cum.St (cubic-fe d Culvert PP, projecting Invert= 240. orrugated PE ( 5.0' breadt 0.20 0.40 0 5.50 4.00 4.5	core eaet) 0 48 core eaet) 0 6 g, no headwall, 70' / 239.00' S , smooth interio h Broad-Crest h Broad-Crest 60 1.00 50 5.00 5.50	= 0.020 r, Flow ed Rect 1.20 1.	7 '/' Cc= 0 Area= 1.77 angular W 40 1.60 1	7 sf <b>/eir</b> .80 2.00
(fee 240. 244. Elevatio (fee 244. 245. Device #1	et) 70 70 8t) 70 70 10 <u>Routing</u> Primary	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert 240.70'	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour L= 82.0' Cf Inlet / Outlet n= 0.013 Cc 10.0' long to Head (feet) 2.50 3.00 3 Coef. (Englii	Cum.St (cubic-fe Cum.St (cubic-fe d Culvert PP, projecting Invert= 240. orrugated PE c 5.0' breadt 0.20 0.40 0 (.50 4.00 4.5 sh) 2.34 2.5	core eet) 0 48 tore eet) 0 6 g, no headwall, 70' / 239.00' S , smooth interic h Broad-Crest 60 0.80 1.00 0 5.00 5.50 0 2.70 2.68 2	= 0.020 r, Flow ed Rect 1.20 1.	7 '/' Cc= 0 Area= 1.77 angular W 40 1.60 1	7 sf <b>/eir</b> .80 2.00
(fee 240. 244. Elevatio (fee 244. 245. Device #1	et) 70 70 8t) 70 70 10 <u>Routing</u> Primary	(sq-ft) 12 12 urf.Area (sq-ft) 12 20 Invert 240.70'	(cubic-feet) 0 48 Inc.Store (cubic-feet) 0 6 Outlet Devic 18.0" Rour L= 82.0' Cf Inlet / Outlet n= 0.013 Cc 10.0' long to Head (feet) 2.50 3.00 3 Coef. (Englii	Cum.St (cubic-fe Cum.St (cubic-fe d Culvert PP, projecting Invert= 240. orrugated PE c 5.0' breadt 0.20 0.40 0 (.50 4.00 4.5 sh) 2.34 2.5	core eaet) 0 48 core eaet) 0 6 g, no headwall, 70' / 239.00' S , smooth interio h Broad-Crest h Broad-Crest 60 1.00 50 5.00 5.50	= 0.020 r, Flow ed Rect 1.20 1.	7 '/' Cc= 0 Area= 1.77 angular W 40 1.60 1	7 sf <b>/eir</b> .80 2.00

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=240.70' TW=238.91' (Dynamic Tailwater)

		-Develop_32' oella Associates		I	v <i>1-32142</i> -U	0 24-hr S1 1-yr Rain Printed	
		-3f s/n 09581 © 2		Software Solu	tions LLC		Page 3
			Summar	y for Pond	СВ-3:		
Inflow A			30% Imperviou 2.06 hrs, Volur		oth = 1.34" ).435 af	for 1-yr event	
Outflow Primary	=	5.63 cfs @ 12 5.63 cfs @ 12	2.06 hrs, Volur 2.06 hrs, Volur 2.06 hrs, Volur	me= (		en= 0%, Lag= 0.1 min	
		tor-Ind method,				3	
		8' @ 12.06 hrs 59' Surf.Area= 4			29 cf		
I lood L			lo ol otolago	211 01			
		on time= 0.4 mir			% of inflow)		
Center-	of-Mass d	et. time= 0.3 mir	n ( 835.9 - 835.6	6)			
Volume	Inv	ert Avail.Sto	rage Storage	Description			
#1	254.0	)4' 2'	11 cf STRUC	TURE (Prism	atic)Listed	pelow (Recalc)	
#2	264.5	59' 25				isted below (Recalc)	
		46	59 cf Total Av	ailable Stora	ge		
Elevati	on	Surf.Area	Inc.Store	Cum.Sto	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
(fee		(sq-ft)	(cubic-feet)	(cubic-fee			
254.	1	20	0	(	0		
204.	04				0		
264.		20	211	21			
264.	59		-	21 Cum.Sto	1		
	59 on	20	211		1 re		
264. Elevati (fee 264.	59 on et) 59	20 Surf.Area (sq-ft) 20	211 Inc.Store (cubic-feet) 0	Cum.Sto (cubic-fee	1 re <u>t)</u> 0		
264. Elevati (fee 264. 265.	59 on et) 59 00	20 Surf.Area (sq-ft) 20 500	211 Inc.Store (cubic-feet) 0 107	Cum.Sto (cubic-fee	1 re ( <u>t)</u> 0 07		
264. Elevati (fee 264.	59 on et) 59 00	20 Surf.Area (sq-ft) 20	211 Inc.Store (cubic-feet) 0	Cum.Sto (cubic-fee	1 re ( <u>t)</u> 0 07		
264. Elevati (fee 264. 265.	59 on et) 59 00 20	20 Surf.Area (sq-ft) 20 500 1,010	211 Inc.Store (cubic-feet) 0 107	Cum.Sto (cubic-fee 1( 25	1 re ( <u>t)</u> 0 07		
264. Elevati (fec 264. 265. 265.	59 on et) 59 00 20	20 Surf.Area (sq-ft) 20 500 1,010	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round	Cum.Sto (cubic-fee 1( 25 s Culvert	1 re t <u>t</u> ) 0 77 88		
264. Elevati (fec 264. 265. 265. Device	59 on et) 59 00 20 Routing	20 Surf.Area (sq-ft) 20 500 1,010 Invert	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF	Cum.Sto (cubic-fee 10 25 s <b>S</b> <b>I Culvert</b> PP, projecting	1 re ( <u>t)</u> 0 77 88 , no headwa	II, Ke= 0.900	
264. Elevati (fec 264. 265. 265. Device	59 on et) 59 00 20 Routing	20 Surf.Area (sq-ft) 20 500 1,010 Invert	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF Inlet / Outlet I	Cum.Sto (cubic-fee 1( 25 s I Culvert PP, projecting nvert= 254.0	1 re t) 0 7 88 , no headwa 1' / 252.01'	S= 0.0100 '/' Cc= 0.90	
264. Elevati (fec 264. 265. 265. Device	59 on 59 00 20 <u>Routing</u> Primary	20 Surf.Area (sq-ft) 20 500 1,010 <u>Invert</u> 254.04'	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF Inlet / Outlet I n= 0.013 Cor	Cum.Sto (cubic-fee 1( 25 5 <b>i Culvert</b> PP, projecting nvert= 254.0- rugated PE, i	1 re t) 0 77 58 , no headwa t' / 252.01' smooth inter	S= 0.0100 '/' Cc= 0.90 ior, Flow Area= 1.77 sf	
264. Elevati (fer 264. 265. 265. Device #1	59 on et) 59 00 20 Routing	20 Surf.Area (sq-ft) 20 500 1,010 Invert	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF Inlet / Outlet I n= 0.013 Cor 10.0' Iong x Head (feet) C	Cum.Sto (cubic-fee 10 25 <b>i Culvert</b> PP, projecting nvert= 254.0, rugated PE, 5 <b>50</b> breadth 0.20 0.40 0.6	1 re t) 0 7 8 , no headwa t' / 252.01' smooth inter <b>Broad-Crees</b> 0 0.80 1.00	S= 0.0100 '/' Cc= 0.90	
264. Elevati (fer 264. 265. 265. Device #1	59 on 59 00 20 <u>Routing</u> Primary	20 Surf.Area (sq-ft) 20 500 1,010 <u>Invert</u> 254.04'	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF Inlet / Outlet I n= 0.013 Cor 10.0' Iong x Head (feet) C 2.50 3.00 3.3	Cum.Sto (cubic-fee 25 <b>I Culvert</b> PP, projecting nvert= 254.04 rrugated PE, i 5 <b>.0' breadth</b> 5 <b>.0' breadth</b> 5 <b>.0' breadth</b>	1 re t <u>)</u> 0 77 88 , no headwa t' / 252.01' smooth inter <b>Broad-Cres</b> 0 0.88 1.00 0 0.80 5.50	S= 0.0100 '/' Cc= 0.90 ior, Flow Area= 1.77 sf ited Rectangular Weir 0 1.20 1.40 1.60 1.80	2.00
264. Elevati (fer 264. 265. 265. Device #1	59 on 59 00 20 <u>Routing</u> Primary	20 Surf.Area (sq-ft) 20 500 1,010 <u>Invert</u> 254.04'	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF Inlet / Outlet I n= 0.013 Cor 10.0' long x Head (feet) 2.50 3.00 3.4 Coef. (Englist	Cum.Sto (cubic-fee 10 25 1 Culvert PP, projecting nvert= 254.00 rugated PE, 1 5.0' breadth 1.20 0.40 0.6 50 4.00 4.50 0 2.34 2.50	1 re t <u>)</u> 0 77 88 4'/252.01' smooth inter <b>Broad-Cres</b> 0 0.80 1.00 0 5.00 5.50 2.70 2.68	S= 0.0100 '/' Cc= 0.90 ior, Flow Area= 1.77 sf ited Rectangular Weir 0 1.20 1.40 1.60 1.80 2.68 2.66 2.65 2.65 2	2.00
264. Elevati (fer 264. 265. 265. Device #1	59 on 59 00 20 <u>Routing</u> Primary	20 Surf.Area (sq-ft) 20 500 1,010 <u>Invert</u> 254.04'	211 Inc.Store (cubic-feet) 0 107 151 Outlet Device 18.0" Round L= 203.0' CF Inlet / Outlet I n= 0.013 Cor 10.0' Iong x Head (feet) C 2.50 3.00 3.3	Cum.Sto (cubic-fee 10 25 1 Culvert PP, projecting nvert= 254.00 rugated PE, 1 5.0' breadth 1.20 0.40 0.6 50 4.00 4.50 0 2.34 2.50	1 re t <u>)</u> 0 77 88 4'/252.01' smooth inter <b>Broad-Cres</b> 0 0.80 1.00 0 5.00 5.50 2.70 2.68	S= 0.0100 '/' Cc= 0.90 ior, Flow Area= 1.77 sf ited Rectangular Weir 0 1.20 1.40 1.60 1.80 2.68 2.66 2.65 2.65 2	2.00

Subscription       Newburgh South Logistics Center         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 1-yr       Rainfall=2.60"         Prepared by Labella Associates       Printed       1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 37	South Logistics C           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 1-yr Rainfall=           Prepared by Labella Associates         Printed 1/4/.           HydroCAD® 10.20-3f s/n 09581         © 2023 HydroCAD Software Solutions LLC         Page
Summary for Pond CB-4:	Peak Elev= 251.80' @ 12.05 hrs Surf.Area= 12 sf Storage= 26 cf Flood Elev= 258.09' Surf.Area= 12 sf Storage= 102 cf
Inflow Area = 4.719 ac, 59.95% Impervious, Inflow Depth = 1.50" for 1-yr event Inflow = 7.98 cfs @ 12.05 hrs, Volume= 0.589 af Outflow = 7.98 cfs @ 12.05 hrs, Volume= 0.589 af, Atten= 0%, Lag= 0.1 min Primary = 7.98 cfs @ 12.05 hrs, Volume= 0.589 af Routed to Pond CB-5 : Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 254.17' @ 12.05 hrs Surf.Area= 12 sf Storage= 26 cf Flood Elev= 263.70' Surf.Area= 24 sf Storage= 140 cf Plug-Flow detention time= 0.2 min calculated for 0.589 af (100% of inflow) Center-of-Mass det. time= 0.1 min (820.1 - 820.0)	Plug-Flow detention time= 0.1 min calculated for 0.596 af (100% of inflow)         Center-of-Mass det. time= 0.1 min ( 820.9 - 820.8 )         Volume       Invert       Avail.Storage       Storage Description         #1       249.60'       105 cf       STRUCTURE (Prismatic)Listed below (Recalc)         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       0         249.60       12       0       0         258.09       12       102       102         258.30       20       3       105
Volume Invert Avail.Storage Storage Description	Device Routing Invert Outlet Devices
Volume     Invert     Avail.storage     Storage Description       #1     252.01'     140 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     263.70'     8,379 cf     Custom Stage Data (Prismatic)Listed below (Recalc)       8,519 cf     Total Available Storage       Elevation     Surf.Area     Inc.Store       (feet)     (sq-ft)     (cubic-feet)       252.01     12     0     0       263.70     12     140     140       Elevation     Surf.Area     Inc.Store     Cum.Store       (feet)     (sq-ft)     (cubic-feet)     (cubic-feet)       263.70     12     0     0       263.70     12     0     0       263.70     12     0     0       263.70     12     0     0       263.70     147     147	Bender         Roduing         Invert         Outer Devices           #1         Primary         249.60'         18.0''         Round Culvert           L=         178.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 249.60' / 245.40'         S= 0.0236 '/'         Cc= 0.900 n= 0.013           #2         Primary         258.09'         20.0' long x 5.0'         breadth Broad-Crested Rectangular Weir Head (feet)         0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.0 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English)         2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88           Primary OutFlow Max=8.08 cfs @ 12.05 hrs HW=251.80'         TW=247.68'         (Dynamic Tailwater)           1=Culvert         (Inlet Controls 8.08 cfs @ 4.57 fps)         2=Broad-Crested Rectangular Weir         Controls 0.00 cfs)
265.00         15,493         8,232         8,379	Summary for Pond CB-6:
Device       Routing       Invert       Outlet Devices         #1       Primary       252.01' <b>18.0" Round Culvert</b> L= 241.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 252.01' / 249.60' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         Primary OutFlow Max=7.97 cfs @ 12.05 hrs       HW=254.17' TW=251.80' (Dynamic Tailwater)         1=Culvert (Inlet Controls 7.97 cfs @ 4.51 fps)         Summary for Pond CB-5:         Inflow Area =       4.814 ac, 59.93% Impervious, Inflow Depth =         1.49" for 1-yr event         Inflow =       8.10 cfs @ 12.05 hrs, Volume=         0.596 af         Outfurg       0.01 of 1.02 how by hypervious	Inflow Area = 5.014 ac, 60.23% Impervious, Inflow Depth = 1.46" for 1-yr event Inflow = 8.34 cfs @ 12.05 hrs, Volume= 0.611 af Outflow = 8.33 cfs @ 12.05 hrs, Volume= 0.611 af, Atten= 0%, Lag= 0.1 min Primary = 8.33 cfs @ 12.05 hrs, Volume= 0.611 af Routed to Pond CB-23 : Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 247.69' @ 12.05 hrs Surf.Area= 9 sf Storage= 21 cf Flood Elev= 248.93' Surf.Area= 9 sf Storage= 32 cf Plug-Flow detention time= 0.1 min calculated for 0.611 af (100% of inflow) Center-of-Mass det. time= 0.1 min (822.3 - 822.2 )
Outflow         =         8.10 cfs @         12.05 hrs, Volume=         0.596 af, Atten= 0%, Lag= 0.1 min           Primary         =         8.10 cfs @         12.05 hrs, Volume=         0.596 af           Routed to Pond CB-6 :         0.596 af         0.596 af	Volume         Invert         Avail.Storage         Storage Description           #1         245.40'         36 cf         STRUCTURE (Prismatic)Listed below (Recalc)
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	

Elevati	<u>AD® 10.20</u>	Surf.Area	Inc.Store	Cum.Store	Page 39	Eleva
Elevali (fee		Sun Area (sq-ft)	(cubic-feet)	(cubic-feet)		Eleva (fe
245.4	<i>.</i>	9	0	0		243
248. 249.:		9 20	32 5	32 36		244 245
	Routing		rt Outlet Devic			Device
#1 #2	Primary Primary		L= 85.0' CF Inlet / Outlet n= 0.013 Cc 3' <b>20.0' long &gt;</b> Head (feet) 2.50 3.00 3 Coef. (Englis	I Culvert P, projecting, no headwall, Ke- nvert= 245.40' / 242.40' S= 0. rugated PE, smooth interior, F 5.0' breadth Broad-Crested F ).20 0.40 0.60 0.80 1.00 1.2 50 4.00 4.50 5.00 5.50 n) 2.34 2.50 2.70 2.68 2.68 6 2.68 2.70 2.74 2.79 2.88	0353 '/' Cc= 0.900 low Area= 1.77 sf Rectangular Weir 0 1.40 1.60 1.80 2.00 2.66 2.65 2.65 2.65	#1
Primary	/ OutFlov	w Max=8 32 cf	s@ 12.05 hrs F	N 047 001 TIM 044 701 (D	· - · · · ·	Deima
	ulvert (In	let Controls 8.	32 cfs @ 4.71 fp ular Weir ( Contr		amic Tailwater)	Prima -1=C -2=E
	ulvert (In	let Controls 8.	32 cfs @ 4.71 fp ular Weir( Contr	)	amic Tailwater)	T-1=0
Langlow A Inflow A Inflow Outflow Primary	ulvert (In road-Cres 	let Controls 8. sted Rectang 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ 8.54 cfs @	32 cfs @ 4.71 fp ular Weir ( Contr Summa	) sls 0.00 cfs) y for Pond CB-7: s, Inflow Depth = 2.26" for me= 0.537 af me= 0.537 af me= 0.537 af	1-yr event	T-1=0
Langle 2=Bi Inflow A Inflow Outflow Primary Rout Routing Peak El	ulvert (In road-Cres = = ed to Por by Dyn-S ev= 240.5	let Controls 8. <b>sted Rectang</b> 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ 8.54 cfs @ ad PF-1 : Pretr Stor-Ind metho 51' @ 12.04 hr	32 cfs @ 4.71 fp ular Weir ( Contr Summa 99.06% Impervio 12.04 hrs, Volu 12.04 hrs, Volu 12.04 hrs, Volu eatment Forebay d, Time Span= 0	) sls 0.00 cfs) y for Pond CB-7: s, Inflow Depth = 2.26" for me = 0.537 af me = 0.537 af me = 0.537 af 00-72.00 hrs, dt= 0.01 hrs sf Storage= 32 cf	1-yr event	Inflow Unflow Outflov Primar
Lange Content of the second se	Juvert (In road-Cres = = ed to Por by Dyn-S ev= 240.5 lev= 243. ow detent	let Controls 8. <b>sted Rectang</b> 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ ad PF-1 : Pretr Stor-Ind metho 51' @ 12.04 hr 50' Surf.Area ion time= 0.4 r	32 cfs @ 4.71 fp ular Weir( Contr Summa 09.06% Impervio 12.04 hrs, Volu 12.04 hrs, Volu 12.04 hrs, Volu 22.04 hrs, Volu eatment Forebay d, Time Span= 0 s Surf.Area= 20 = 58 sf Storage	) sls 0.00 cfs) y for Pond CB-7: s, Inflow Depth = 2.26" for me= 0.537 af, me= 0.537 af, Atten= 0 me= 0.537 af 00-72.00 hrs, dt= 0.01 hrs sf Storage= 32 cf = 92 cf 0.537 af (100% of inflow)	1-yr event	Inflow Inflow Outflov Primar Rou Routin Peak E
Lange Content of the second se	vivert (In rea = = = ed to Por by Dyn-5 lev= 240.5 lev= 243. bw detent of-Mass c	let Controls 8. <b>sted Rectang</b> 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ 8.54 cfs @ a.54 cfs @ a.54 cfs @ 12.04 hr 50' Surf.Area ion time= 0.4 r let. time= 0.2 r	32 cfs @ 4.71 fp ular Weir ( Contr Summa 99.06% Impervio 12.04 hrs, Volu 12.04 hrs, Volu 12.04 hrs, Volu 22.04 hrs, Volu eatment Forebay d, Time Span= C s Surf.Area= 20 = 58 sf Storage nin calculated fo	) Is 0.00 cfs) <b>y for Pond CB-7:</b> Is, Inflow Depth = 2.26" for me= 0.537 af me= 0.537 af, Atten= 0 me= 0.537 af 00-72.00 hrs, dt= 0.01 hrs sf Storage= 32 cf = 92 cf 0.537 af (100% of inflow) 1)	1-yr event	Inflow Inflow Outflo Primar Routin Peak E Flood I Plug-F
2=Bi Inflow A Inflow Outflow Primary Routing Peak El Flood E Plug-Flc Center-	vivert (In rea = = = ed to Por by Dyn-5 lev= 240.5 lev= 243. bw detent of-Mass c	let Controls 8. <b>sted Rectang</b> 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ 8.54 cfs @ ad PF-1 : Pretr Stor-Ind metho 51' @ 12.04 hr 50' Surf.Area ion time= 0.4 r let. time= 0.2 r vert Avail.5 91' 50' 8	32 cfs @ 4.71 fp ular Weir ( Contr Summa 99.06% Impervio 12.04 hrs, Volu 12.04 hrs, Volu 12.04 hrs, Volu eatment Forebay d, Time Span= 0 s Surf.Area= 20 = 58 sf Storage nin calculated fo nin ( 775.3 - 775 Storage Storag 92 cf STRUG ,702 cf Custor	) sls 0.00 cfs) y for Pond CB-7: s, Inflow Depth = 2.26" for me = 0.537 af me = 0.537 af, Atten = 0 0.537 af (0.00% of inflow) 1) Description TURE (Prismatic)Listed below 1 Stage Data (Prismatic)Listed	1-yr event )%, Lag= 0.0 min (Recalc)	Inflow Inflow Outflov Primar Routin Peak E Flood I Plug-F Center
Langle 2=Bi	urea = = = ed to Por by Dyn-5 ev= 240.5 lev= 243. bw detent of-Mass c Inv 238.	let Controls 8. <b>sted Rectang</b> 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ 8.54 cfs @ ad PF-1 : Pretr Stor-Ind metho 51' @ 12.04 hr 50' Surf.Area ion time= 0.4 r let. time= 0.2 r vert Avail.5 91' 50' 8	32 cfs @ 4.71 fp ular Weir ( Contr Summa 99.06% Impervio 12.04 hrs, Volu 12.04 hrs, Volu 12.04 hrs, Volu 22.04 hrs, Volu eatment Forebay d, Time Span= C s Surf.Area= 20 = 58 sf Storage nin calculated fo nin ( 775.3 - 775 Storage Storage 92 cf STRUC	) sls 0.00 cfs) y for Pond CB-7: s, Inflow Depth = 2.26" for me = 0.537 af me = 0.537 af, Atten = 0 0.537 af (0.00% of inflow) 1) Description TURE (Prismatic)Listed below 1 Stage Data (Prismatic)Listed	1-yr event )%, Lag= 0.0 min (Recalc)	Inflow Inflow Outflo Primar Routin Peak E Flood I Plug-F Center <u>Volum</u> #1
Langle 2=Bi	ulvert (In road-Cres = = = ed to Por by Dyn-5 ev= 240.9 lev= 243. bw detent of-Mass c Inv 238. 243.	let Controls 8. <b>sted Rectang</b> 2.850 ac, 9 8.55 cfs @ 8.54 cfs @ 8.54 cfs @ ad PF-1 : Pretr Stor-Ind metho 51' @ 12.04 hr 50' Surf.Area ion time= 0.4 r let. time= 0.2 r vert Avail.5 91' 50' 8	32 cfs @ 4.71 fp ular Weir ( Contr Summa 99.06% Impervio 12.04 hrs, Volu 12.04 hrs, Volu 12.04 hrs, Volu eatment Forebay d, Time Span= 0 s Surf.Area= 20 = 58 sf Storage nin calculated fo nin ( 775.3 - 775 Storage Storag 92 cf STRUG ,702 cf Custor	) sls 0.00 cfs) y for Pond CB-7: s, Inflow Depth = 2.26" for me = 0.537 af me = 0.537 af, Atten = 0 0.537 af (0.00% of inflow) 1) Description TURE (Prismatic)Listed below 1 Stage Data (Prismatic)Listed	1-yr event )%, Lag= 0.0 min (Recalc)	Inflow Inflow Outflo Primar Routin Peak E Flood I Plug-F Center <u>Volum</u> #1

<b>3_App J_Post</b> Prepared by Lab HydroCAD® 10.20	ella Associates	5			
	o ( )		0 01		
Elevation	Surf.Area	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
(feet) 243.50	(sq-ft) 38		(cubic-leet) 0		
243.50	1.938	494	494		
245.00	14,477	8,208	8,702		
210.00	,	0,200	0,102		
Device Routing		Outlet Devices			
#1 Primary #2 Primary		L= 81.0' CPP, Inlet / Outlet Inv n= 0.013 Corru <b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)	projecting, no he ert= 238.91' / 238 gated PE, smootl <b>0' breadth Broac</b> 0 0.40 0.60 0.8 4.00 4.50 5.00	2.68 2.68 2.66 2.65 2.65 2	2.00
-1=Culvert (Ba	arrel Controls 8.5	12.04 hrs HW= 2 cfs @ 4.33 fps) r Weir ( Controls		3.93' (Dynamic Tailwater)	
		Summary	or Pond CB-8	:	
Inflow Area = Inflow = Outflow = Primary = Routed to Pon	4.72 cfs @ 12 4.72 cfs @ 12	2.04 hrs, Volume 2.04 hrs, Volume 2.04 hrs, Volume	= 0.297 a = 0.297 a	af, Atten= 0%, Lag= 0.0 min	
Routing by Dyn-S Peak Elev= 240.7 Flood Elev= 244.3	'9' @ 12.04 hrs	Surf.Area= 12 sf	Storage= 15 cf	01 hrs	
Plug-Flow detenti Center-of-Mass d				nflow)	
Volume Inv	ert Avail.Stor	rage Storage D	escription		
#1 239.				isted below (Recalc)	
#2 244.3				natic)Listed below (Recalc)	
	4,89	98 cf Total Avai	able Storage		
Elevation (feet) 239.53 244.30	Surf.Area (sq-ft) 12 12	Inc.Store (cubic-feet) 0 57	Cum.Store (cubic-feet) 0 57		

Elevation	Surf.Area	Inc.Store	Cum.Store				Elevation	Surf.Area	Inc.Store	Cum.Store	
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)				(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)	
244.30 245.00	12 8,154	0 2,858	0 2,858				244.05 245.00	9 8,154	0 3.877	0 3,877	
245.20	11,676	1,983	4,841				245.20	11,676	1,983	5,860	
vice Routing	g Invert	Outlet Devices	s				Device Rout	ing Invert	Outlet Device	S	
#1 Primar #2 Primar	,	Inlet / Outlet Ir n= 0.013 Corr <b>10.0' long x 5</b> Head (feet) 0. 2.50 3.00 3.5 Coef. (English	I Culvert PP, projecting, no headwa nvert= 239.53' / 238.81' rugated PE, smooth inter 5.0' breadth Broad-Cres .20 0.40 0.60 0.80 1.00 50 4.00 4.50 5.00 5.50 1) 2.34 2.50 2.70 2.68 56 2.68 2.70 2.74 2.79	S= 0.0050 '/' C ior, Flow Area= sted Rectangula 0 1.20 1.40 1.6 2.68 2.66 2.65	1.77 sf <b>ar Weir</b> 60 1.80 2.00		#1 Prim: #2 Prim:	2	L= 204.0' CF Inlet / Outlet II n= 0.013 Cor <b>10.0' long x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English	PP, projecting, no headwall, H nvert= 240.55' / 239.53' S= rugated PE, smooth interior, 5.0' breadth Broad-Crested .20 0.40 0.60 0.80 1.00 1. 50 4.00 4.50 5.00 5.50 n) 2.34 2.50 2.70 2.68 2.68	0.0050 '/' Cc= 0.900 Flow Area= 1.77 sf I Rectangular Weir .20 1.40 1.60 1.80 2.0 8 2.66 2.65 2.65 2.65
-1=Culvert (E	ow Max=4.71 cfs ( Barrel Controls 4.7 ested Rectangula	@ 12.04 hrs HV 1 cfs @ 4.02 fp	N=240.79' TW=238.93' os)		rater)		2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 Primary OutFlow Max=2.12 cfs @ 12.04 hrs HW=241.46' TW=240.79' (Dynamic Tailwater) 1=Culvert (Outlet Controls 2.12 cfs @ 2.70 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs) Summary for Pond DET-1: Detention Basin				
		Summary	y for Pond CB-9:								
Inflow Area =			s, Inflow Depth = 2.06"	for 1-yr event			[44] Hint: Outle	et device #2 is belo	w defined storag	ge	
nflow = Dutflow = Primary = Routed to Po	2.14 cfs @ 12 2.14 cfs @ 12 ond CB-8 :	2.04 hrs, Volum 2.04 hrs, Volum 2.04 hrs, Volum	ne= 0.130 af, Att ne= 0.130 af	en= 0%, Lag= (	0.0 min		Inflow Area = Inflow = Outflow = Primary =	5.25 cfs @ 1 0.30 cfs @ 1 0.30 cfs @ 1	I2.37 hrs, Volun I7.58 hrs, Volun I7.58 hrs, Volun	ne= 0.654 af, Atten=	r 1-yr event 94%, Lag= 312.6 min
	.46' @ 12.04 hrs	Surf.Area= 9 sf		5			Secondary =	Pond DP-1 : Gidne 0.00 cfs @ Pond DP-1 : Gidne	0.00 hrs, Volun	ne= 0.000 af	
Peak Elev= 241	1.05' Surf.Area=		0.400 C(4000) C: C )							00-72.00 hrs, dt= 0.01 hrs 321 sf Storage= 19,575 cf	
Peak Elev= 241 Flood Elev= 244 Plug-Flow deten	4.05' Surf.Area= ^ ntion time= 0.4 min det. time= 0.2 min							36.50' Surf.Area=			
Peak Elev= 241 Flood Elev= 244 Plug-Flow deten Center-of-Mass Volume In	ntion time= 0.4 min det. time= 0.2 min nvert Avail.Sto	ı ( 793.9 - 793.7 rage Storage I	7) Description				Flood Elev= 2	36.50' Surf.Area=	17,706 sf Stora	age= 64,365 cf	
Peak Elev= 241 Flood Elev= 244 Plug-Flow deten Center-of-Mass <u>/olume In</u> #1 240	ntion time= 0.4 min det. time= 0.2 min nvert Avail.Sto 0.55' 3 4.05' 5,86	i ( 793.9 - 793.7 rage Storage I 32 cf STRUCT 50 cf Custom	7) Description TURE (Prismatic)Listed b Stage Data (Prismatic)	pelow (Recalc)	ecalc)		Flood Elev= 23 Plug-Flow dete		17,706 sf Stora	age= 64,365 cf v precedes inflow)	
Peak Elev= 241 Flood Elev= 244 Plug-Flow deten Center-of-Mass <u>/olume In</u> #1 240	ntion time= 0.4 min det. time= 0.2 min nvert Avail.Sto 0.55' 3 4.05' 5,86	i ( 793.9 - 793.7 <u>rage Storage I</u> 32 cf <b>STRUCT</b>	7) Description TURE (Prismatic)Listed b Stage Data (Prismatic)	pelow (Recalc)	ecalc)		Flood Elev= 2 Plug-Flow dete Center-of-Mas	36.50' Surf.Area= ention time= (not ca s det. time= 827.1	17,706 sf Stora	age= 64,365 cf v precedes inflow) 359.8)	
Peak Elev= 241 Flood Elev= 244 Plug-Flow deten Center-of-Mass <u>/olume In</u> #1 240	ntion time= 0.4 min det. time= 0.2 min <u>overt Avail.Sto</u> 0.55' 3 4.05' 5,86 5,86 Surf.Area	i ( 793.9 - 793.7 rage Storage I 32 cf STRUCT 50 cf Custom	7) Description TURE (Prismatic)Listed b Stage Data (Prismatic)	pelow (Recalc)	ecalc)		Flood Elev= 23 Plug-Flow dete Center-of-Mas <u>Volume</u>	36.50' Surf.Area= ention time= (not ca s det. time= 827.1 Invert Avail.Sto	17,706 sf Stora alculated: outflov min ( 1,686.9 - 8 orage Storage	age= 64,365 cf v precedes inflow) 359.8)	ed below (Recalc)

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HydroCAD	0® 10.20-3	t s/n 09581 © 2	2023 HydroCAD	Software Solution	is LLC	Page
Elevation	n 5	Surf.Area	Inc.Store	Cum.Store		
(feet)	)	(sq-ft)	(cubic-feet)	(cubic-feet)		
232.00	)	11,095	0	0		
		12,455	11,775	11,775		
		13,886	13,171	24,946		
		15,369	14,628	39,573		
236.00 237.00		16,908 18,504	16,139 17,706	55,712 73,418		
Device	Routing	Invert	Outlet Device	s		
	Primary	231.91'	12.0" Round			
	,			, projecting, no		
						.0047 '/' Cc= 0.900
						low Area= 0.79 sf
	Device 1	231.91'				to weir flow at low heads
#3	Device 1	233.65'				ectangular Weir
				.20 0.40 0.60		
#4	Primary	236.05'		1) 2.80 2.92 3.		low to Wetland
#4	Filliary	230.05				0 1.40 1.60 1.80 2.00
				50 4.00 4.50 5		0 1.40 1.00 1.00 2.00
						2.66 2.65 2.65 2.65
				6 2.68 2.70 2		
#5	Secondar	y 236.50'		5.0' breadth En		
		-				0 1.40 1.60 1.80 2.00
				50 4.00 4.50 5		
						2.66 2.65 2.65 2.65
#0	D	000.051		6 2.68 2.70 2		
#6	Primary	233.65'		Culvert X 2.00 , end-section c		Ko= 0 500
			Inlet / Outlet In n= 0.013 Cor	nvert= 233.65' / rugated PE, sm	233.50' S= 0 poth interior, F	.0050 '/' Cc= 0.900 Flow Area= 0.79 sf
			17.58 hrs HV 3.26 cfs potent	N=233.61' TW=	U.UU (Dynar	nic railwater)
			trols 0.30 cfs @			
			ular Weir (Cor			
			land (Controls			
		ntrols 0.00 cfs)		0.00 0137		
Şeconda	ry OutFlo	w Max=0.00 c	fs @ 0.00 hrs H	HW=232.00' TV	V=0.00' (Dyna	amic Tailwater)

### Summary for Pond DIV-2: Diversion 2

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Prepare	d by Labe	<b>)evelop_32</b> lla Associates			VY-32142-0	lewburgh Sou 0 24-hr S1 1		fall=2.6
Seconda	= 2 = 2 = 2 ed to Pond ary =	1.95 cfs @ 12 2.02 cfs @ 12 2.02 cfs @ 12 PF-2 : Pretrea	78% Imperviou 2.04 hrs, Volui 2.04 hrs, Volui 2.04 hrs, Volui tment Forebay 0.00 hrs, Volui tion Basin	me= f me= f me= f	.418 af	for 1-yr eve en= 0%, Lag		
Peak Ele	ev= 240.46'	@ 12.04 hrs	Time Span= 0. Surf.Area= 24 24 sf Storage	sf Storage=				
			calculated for (775.1 - 775.		1% of inflow)			
Volume	Inver		rage Storage					
#1	236.06	20	07 cf Pondin	g before Wei	r (Prismatic	Listed below	(Recalc)	
Elevatio (fee		urf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Stor (cubic-fee				
236.0 244.6		24 24	0 207	20	0 )7			
Device	Routing	Invert	Outlet Device	es				
#1	Primary Device 3	236.06' 240.50'	L= 44.0' CP Inlet / Outlet I n= 0.013 Co <b>5.0' long x 0</b> Head (feet) (	d Outlet Pipe P, projecting, Invert= 236.06 rrugated PE, s 0.5' breadth E 0.20 0.40 0.6	no headwall, 6' / 235.50' 5 smooth interio <b>Broad-Creste</b> 60 0.80 1.00	, Ke= 0.900 S= 0.0127 '/' or, Flow Area e <b>d Rectangu</b>	a= 3.14 sf	
#3	Secondary	/ 236.06'	24.0" Round L= 45.0' CP Inlet / Outlet	h) 2.80 2.92 d Outlet Pipe P, projecting, Invert= 236.06 rrugated PE, s	to Detention no headwall, 5' / 235.83'	<b>n</b> , Ke= 0.900 S= 0.0051 '/'		
			@ 12.04 hrs I (Inlet Controls			(Dynamic Ta	ailwater)	
<sup>1</sup> —3=Ou	tlet Pipe to	Detention (	fs @ 0.00 hrs Controls 0.00 c <b>ular Weir</b> ( Co	sfs)		(Dynamic T	ailwater)	
		Sumn	nary for Pon	d DP-1: Gi	dneytown	Creek		
[40] Hint	: Not Descr	ibed (Outflow=	Inflow)					
Inflow Ai Inflow Primary	=	7.52 cfs @ 12	15% Imperviou 2.32 hrs, Volui 2.32 hrs, Volui	me=	8.582 af	for 1-yreve en= 0%, Lag		

 Sewburgh South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 1-yr Rainfall=2.60"

 Prepared by Labella Associates
 Printed 1/4/2024

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

## Summary for Pond P-1: Wet Pond

Inflow Area =	16.392 ac, 75.	.11% Impervious, Inflow D	Depth = 1.92" for 1-yr event
Inflow =	39.50 cfs @ 1	2.05 hrs, Volume=	2.618 af
Outflow =	0.39 cfs @ 2	4.09 hrs, Volume=	1.931 af, Atten= 99%, Lag= 722.3 min
Primary =	0.39 cfs @ 2	4.09 hrs, Volume=	1.931 af
Routed to Por	nd DP-1 : Gidney	vtown Creek	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Routed to Por	nd DP-1 : Gidney	vtown Creek	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 237.99' @ 24.09 hrs Surf.Area= 78,631 sf Storage= 89,854 cf Flood Elev= 239.50' Surf.Area= 84,891 sf Storage= 177,145 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 1,479.0 min ( 2,269.2 - 790.2 )

Volume	Inv	ert Avail.Sto	rage	Storage	e Description	
#1	232.	00'				natic)Listed below (Recalc)
					cf Overall x 0.09	
#2	236.	00' 208,2	29 cf	Extend	led Detention (F	Prismatic)Listed below (Recalc)
		208,2	29 cf	Total A	vailable Storage	
Elevatio	on	Surf.Area	Inc.	Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-	-feet)	(cubic-feet)	
232.0	00	12,694		0	0	
233.0	00	13,630	13	3,162	13,162	
234.0	00	14,592	14	4,111	27,273	
235.0	00	15,579	15	5,086	42,359	
236.0	00	23,780	19	9,680	62,038	
Elevatio	n	Surf.Area	Inc	Store	Cum.Store	
(fee		(sq-ft)	(cubic		(cubic-feet)	
236.0	/	23.780	(cubic	0	0	
230.0		50,853	3	7,317	37,317	
238.0		54,875		2.864	90.181	
230.0		58,999		2,004 5,937	147,118	
233.0		63,223		1,111	208,229	
210.		00,220	Ŭ	.,	200,220	
Device	Routing	Invert	Outle	t Devic	es	
#1	Primary	235.10'	12.0"	Roun	d Culvert From	OCS
	,		L= 20	0.0' CF	P, projecting, no	headwall, Ke= 0.900
			Inlet /	Outlet	Invert= 235.10' /	235.00' S= 0.0050 '/' Cc= 0.900
			n= 0.0	013 Co	prrugated PE, sm	ooth interior, Flow Area= 0.79 sf
#2	Device 2	1 235.10'	3.0" \	Vert. C	Pv Orifice C= 0	0.600 Limited to weir flow at low heads
#3	Device 2	1 238.00'	4.0' le	ong x	0.5' breadth Bro	ad-Crested Rectangular Weir
			Head	(feet)	0.20 0.40 0.60	0.80 1.00

#4         Primary         238.00'         12.0" Round Culvers to Floodplain X 2.00 L= 33.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert 238.00' 255.00' S= 0.09097' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Areas 0.79 sf           #5         Primary         238.40'         10.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64           #6         Secondary         239.50'         20.0' long x 10.0' breadth Brengrency Overflow Weir 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 2.64           Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'         (Dynamic Tailwater)           =2CIPV Orifice Controls 0.39 cfs @ 8.01 fps)         23-Broad-Crested Rectangular Weir (Controls 0.00 cfs)           3eroad-Crested Rectangular Weir (Controls 0.00 cfs)         Summary for Pond PF-1: Pretreatment Forebay           Inflow Area =         14.810 ac, 83.14% Impervious, Inflow Depth = 1.98" for 1-yr event Inflow =         36.57 cfs @ 12.05 hrs, Volume=         2.443 af           Outflow weir         Suff Areas 7.899 sf. Storage 1.703 cf         Pieze 7.893 sf. 24.33 af         Atten= 1%, Lag= 0.5 min           Primary         36.57 cfs @ 12.05 hrs, Volume=         2.443 af         Pieze 1.9 min           Outflow         =         36.57 cfs @ 12.05 hrs, Suff Area 7.899 sf. Storage 1.703 cf         Pieze 1.9 min Calculated for 2.443 af (100% of inflo	#4         Primary         238.00'         12.0" Round Culverts to Floodplain X 2.00 L= 33.0" CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outel invert= 238.00' 235.00" S= 0.0909 /* Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area 0.79 sf           #5         Primary         238.40'         10.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64           #6         Secondary         239.50'         20.0' long x 10.0' breadth Emergency Overflow Weir 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 2.64           Primary         0.015 cost 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 2.64           Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'         (Dynamic Tailwater)           =2CPV Orifice (Orifice Controls 0.39 cfs @ 24.09 hrs HW=237.90' TW=0.00'         (Dynamic Tailwater)           =2CPv Orifice (Orifice Controls 0.39 cfs @ 24.09 hrs HW=232.00' TW=0.00'         (Dynamic Tailwater)           =2cPv Orifice (Orifice Controls 0.00 cfs)         Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00'         (Dynamic Tailwater)           =4Culverts to Floodplain (Controls 0.00 cfs)         Secondary OutFlow Max=0.00 cfs @ 12.04 hrs, Volume= 2.443 af         Controls 0.00 cfs)           Secondary OutFlow Max=0.00 cfs @ 12.04 hrs, Volume= 2.443 af         Controls 0.00 cfs)         Secondary Cotrifice (Controls 0.00 cfs)	Prepared	by Labella	<b>velop_321</b> 4 Associates			(-32142-00 24-hi		
#4       Primary       238.00'       12.0" Round Culverts to Floodplain X 2.00 L= 33.0' CPP, end-section conforming to fill, Ke= 0.500 intet / Outlet Invert= 238.00' / 235.00' S= 0.0909 /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Areae 0.79 sf         #5       Primary       238.40'       10.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64         #6       Secondary       239.50'       20.0' long x 10.0' breadth Emergency Overflow Weir 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'       (Dynamic Tailwater)         =2CPV Orifice (Onfice Controls 0.39 cfs @ 6.01 fps)	#4       Primary       238.00'       12.0'' Round Culverts to Floodplain X 2.00 L= 33.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 238.00' / 235.00' S= 0.0909 /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area 0.79 sf         #5       Primary       238.40'       10.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64         #6       Secondary       239.50'       20.0' long x 10.0' breadth Emergency Overflow Weir 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'       (Dynamic Tailwater)         =2CPV Orifice (Onfice Controls 0.39 cfs @ 4.62 cfs potential flow) =2=CPV Orifice (Onfice Controls 0.30 cfs)         =3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)         =4=Culverts to Floodplain (Controls 0.00 cfs)         5=condary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater)         =6=Emergency Overflow Weir (Controls 0.00 cfs)         Secondary OutFlow Max=0.814% Impervious, Inflow Depth = 1.98'' for 1-yr event Inflow a 36.50 cfs @ 12.05 hrs, Volume= 2.443 af         Inflow Area = 14.810 ac, 83.14% Impervious, Inflow Depth = 1.98'' for 1-yr event Inflow = 36.50 cfs @ 12.05 hrs, Volume= 2.443 af         Primary = 36.57 cfs @ 12.05 hrs, Volume= 2.443 af         Primary = 36.57 cfs @ 12.05 hrs, Volume= 2.443 af         Primary = 38.50' strie Quitar Area= 7.899 s	HydroCAD	® 10.20-3f s/	'n 09581 © 20	23 HydroCAD	Software Solution	ons LLC		Page 4
#5       Primary       238.40"       10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (fet) 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 2.64         #6       Secondary       239.50"       20.0' long x 10.0' breadth Emergency Overflow Weir 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'       (Dynamic Tailwater) 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'       (Dynamic Tailwater) 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'       (Dynamic Tailwater)         -2=CPv Orifice Controls 0.39 cfs @ 8.01 fps) -3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)         5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)         Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00'         Secondary OutFlow Max=0.00 cfs @ 12.04 hrs, Volume=         2.443 af         Nuthow = 36.57 cfs @ 12.05 hrs, Volume=         2.443 af         Nuthow = 36.57 cfs @ 12.05 hrs, Volume=         2.443 af         Nuthow = 36.57 cfs @ 12.05 hrs, Volume=         2.443 af         Routed to Pond P-1: Wet Pond	#5       Primary       238.40"       10.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64         #6       Secondary       239.50"       20.0' long x 10.0' breadth Emergency Overflow Weir 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00"       (Dynamic Tailwater) 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00"       (Dynamic Tailwater) 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00"       (Dynamic Tailwater) Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00"       (Dynamic Tailwater) Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64         Primary Error OCS (Passes 0.39 cfs @ 4.62 cfs potential flow) -3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)       5         Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00'       (Dynamic Tailwater) Controls 0.00 cfs)         Secondary OutFlow Max=0.00 cfs @ 12.04 hrs, Volume=       2.443 af         Inflow Area =       14.810 ac, 83.14% Impervious, Inflow Depth = 1.98" for 1-yr event Inflow =         Inflow Area = <t< td=""><td>#4 F</td><td>Primary</td><td>238.00'</td><td><b>12.0" Round</b> L= 33.0' CP Inlet / Outlet I</td><td><b>Culverts to F</b> P, end-section of nvert= 238.00</td><td>loodplain X 2.00 conforming to fill, / 235.00' S= 0.09</td><td>09 '/' Cc= 0.9</td><td></td></t<>	#4 F	Primary	238.00'	<b>12.0" Round</b> L= 33.0' CP Inlet / Outlet I	<b>Culverts to F</b> P, end-section of nvert= 238.00	loodplain X 2.00 conforming to fill, / 235.00' S= 0.09	09 '/' Cc= 0.9	
#6       Secondary       239.50'       20.0' long x 10.0' breadth Emergency Overflow Weir         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       2.63       2.69       2.64         Primary OutFlow Max=0.39 cfs       @ 2.40       9 hrs       HW=237.99'       TW=0.00'       (Dynamic Tailwater)         1=Culvert From OCS (Passes       0.39 cfs       @ 8.01 fps)	#6       Secondary       239.50'       20.0' iong x 10.0' breadth Emergency Overflow Weir 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 2.64         Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=237.99' TW=0.00'       (Dynamic Tailwater) 1=Culvert From OCS (Passes 0.39 cfs of 4.62 cfs potential flow) -3=Broad-Crested Rectangular Weir (Controls 0.00 cfs) -3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)         -3=Eroad-Crested Rectangular Weir (Controls 0.00 cfs)         -4=Culverts to Floodplain (Controls 0.00 cfs)         -5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)         -5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)         -6=Emergency Overflow Wax=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -6=Emergency Overflow Weir (Controls 0.00 cfs)         Secondary OutFlow Max=0.00 cfs @ 1.04 hrs, Volume=         -6=Emergency Overflow Weir (Controls 0.00 cfs)         Secondary Controls 0.39 cfs @ 12.04 hrs, Volume=         -2.443 af         nflow =       36.57 cfs @ 12.05 hrs, Volume=         -2.443 af         Nutflow =       36.57 cfs @ 12.05 hrs, Volume=         -2.443 af         Routed to Pond P-1 : Wet Pond         Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         -264 Elev= 238.93'@ 12.05 hrs       Surf.Area= 7.899 sf         -1004 Elev= 239.50'       Surf.Area= 8,510 sf         -2	#5 F	Primary	238.40'	10.0' long x Head (feet) (	10.0' breadth I 0.20 0.40 0.60	Broad-Crested Re 0.80 1.00 1.20	ectangular We 1.40 1.60	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	#6 S	Secondary	239.50'	20.0' long x Head (feet) (	10.0' breadth I 0.20 0.40 0.60	Emergency Over 0.80 1.00 1.20	flow Weir 1.40 1.60	
Summary for Pond PF-1: Pretreatment ForebayInflow Area =14.810 ac, 83.14% Impervious, Inflow Depth =1.98" for 1-yr eventInflow =36.90 cfs @12.04 hrs, Volume=2.443 afOutflow =36.57 cfs @12.05 hrs, Volume=2.443 af, Atten=Primary =36.57 cfs @12.05 hrs, Volume=2.443 afRouted to Pond P-1 : Wet PondRouting by Dyn-Stor-Ind method, Time Spane 0.00-72.00 hrs, dt= 0.01 hrsRouting by Dyn-Stor-Ind method, Time Spane 0.00-72.00 hrs, dt= 0.01 hrsPeak Elev=238.93' @ 12.05 hrsSuff.Area =8,510 sfStorage =1,703 cfFlood Elev=239.50'Suff.Area =8,510 sfStorage =4,249 cfPlug-Flow detention time=1.9 min calculated for 2.443 af (100% of inflow)Center-of-Mass det. time=1.9 min (786.3 - 784.3 )VolumeInvertAvail.Storage#1235.00'0 cfPretreatment Forebay (Prismatic)Listed below (Recalc) 7,202 cf Overall x 0.0% Voids#2238.50'9,918 cfOterflow (Prismatic)Listed below (Recalc) 7,202 df Overflow (Prismatic)Listed below (Recalc)9,918 cfTotal Available StorageElevationSurf.AreaInc.Store (cubic-feet)235.00496000236.001,348922237.002,2571,8032,7405,465	Summary for Pond PF-1: Pretreatment ForebayInflow Area =14.810 ac, 83.14% Impervious, Inflow Depth =1.98" for 1-yr eventInflow =36.90 cfs @12.04 hrs, Volume=2.443 afOutflow =36.57 cfs @12.05 hrs, Volume=2.443 afPrimary =36.57 cfs @12.05 hrs, Volume=2.443 afRouted to Pond P-1 : Wet PondRouting by Dyn-Stor-Ind method, Time Spane 0.00-72.00 hrs, dt= 0.01 hrsRouted to Pond P-1 : Wet PondRouted to Pond P-1 : Surf.Area= 7,899 sfStorage= 1,703 cfFlood Elev= 238.93' @ 12.05 hrsSurf.Area= 7,899 sfPlug-Flow detention time= 1.9 min calculated for 2.443 af (100% of inflow)Center-of-Mass det. time= 1.9 min (786.3 - 784.3)VolumeInvert#1235.00'0 cfPretreatment Forebay (Prismatic)_Listed below (Recalc) 7,202 cf Overall x 0.0% Voids#2238.50'9,918 cfTotal Available StorageElevationSurf.AreaInc.StoreCum.Store (cubic-feet)235.0049600236.001,348922922237.002,257238.003,223237.002,257238.003,2232,7405,465	1 −2=C −3=B −4=Culv −5=Broa Şecondar	Pv Orifice( road-Creste verts to Floc ad-Crested	Orifice Contr ed Rectangu odplain ( Con Rectangular Max=0.00 cfs	ols 0.39 cfs @ lar Weir( Con trols 0.00 cfs Weir( Contro @ 0.00 hrs	⊉ 8.01 <sup>′</sup> fps) htrols 0.00 cfs) ) ols 0.00 cfs) HW=232.00′ T	,	ic Tailwater)	
Inflow       =       36.90 cfs @       12.04 hrs, Volume=       2.443 af         Outflow       =       36.57 cfs @       12.05 hrs, Volume=       2.443 af, Atten= 1%, Lag= 0.5 min         Primary       =       36.57 cfs @       12.05 hrs, Volume=       2.443 af, Atten= 1%, Lag= 0.5 min         Primary       =       36.57 cfs @       12.05 hrs, Volume=       2.443 af         Routed to Pond P-1 : Wet Pond       Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs       Peak Elev= 238.93' @ 12.05 hrs       Surf.Area= 7,899 sf       Storage= 1,703 cf         Flood Elev=       239.90' Surf.Area=       8,510 sf       Storage= 4,249 cf       Storage= 1,703 cf         Plug-Flow detention time= 1.9 min calculated for 2.443 af (100% of inflow)       Center-of-Mass det. time= 1.9 min (786.3 - 784.3 )       Volume       Not Storage         Volume       Invert       Avail.Storage       Storage Description       7,202 cf Overall x 0.0% Voids         #1       235.00'       0,918 cf       Overflow (Prismatic)Listed below (Recalc)       7,202 cf Overall x 0.0% Voids         #2       238.50'       9,918 cf       Overflow (Prismatic)Listed below (Recalc)       9,918 cf         Total Available Storage       Elevation       Surf.Area       Inc. Store       Cum.Store         (feet)       (sq-ft)       (cub	Inflow       =       36.90 cfs @       12.04 hrs, Volume=       2.443 af         Outflow       =       36.57 cfs @       12.05 hrs, Volume=       2.443 af         Primary       =       36.57 cfs @       12.05 hrs, Volume=       2.443 af         Routed to Pond P-1 : Wet Pond       Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs       2.443 af         Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs       Peak Elev= 238.93' @ 12.05 hrs       Surf.Area= 7,899 sf         Flood Elev=       239.50' Surf.Area= 8,510 sf       Storage= 4,249 cf         Plug-Flow detention time= 1.9 min calculated for 2.443 af (100% of inflow)       Center-of-Mass det. time= 1.9 min (786.3 - 784.3 )         Volume       Invert       Avail.Storage       Storage Description         #1       235.00'       0 of       Pretreatment Forebay (Prismatic)_isted below (Recalc) 7,202 cf Overall x 0.0% Voids         #2       238.50'       9,918 cf       Overflow (Prismatic)_Listed below (Recalc)         9,918 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         235.00       496       0       0         236.00       1,348       922	-o-Eme	argency Ove			,	atment Foreba	ay	
Flood Elev= 239.50'       Surf.Area= 8,510 sf       Storage = 4,249 cf         Plug-Flow detention time= 1.9 min (alculated for 2.443 af (100% of inflow)         Center-of-Mass det. time= 1.9 min (786.3 - 784.3 )         Volume       Invert       Avail.Storage         #1       235.00'       0 cf         Pretreatment Forebay (Prismatic)_Listed below (Recalc)         7,202 cf Overall x 0.0% Voids         #2       238.50'         9,918 cf       Overflow (Prismatic)_Listed below (Recalc)         9,918 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store         (feet)       (sq-ft)       (cubic-feet)         235.00       496       0         235.00       1,348       922         237.00       2,257       1,803       2,725         238.00       3,223       2,740       5,465	Flood Elev= 239.50'       Surf.Area= 8,510 sf       Storage = 4,249 cf         Plug-Flow detention time= 1.9 min (786.3 - 784.3 )         Volume       Invert       Avail.Storage       Storage Description         #1       235.00'       0 cf       Pretreatment Forebay (PrismaticListed below (Recalc) 7,202 cf Overall x 0.0% Voids         #2       238.50'       9,918 cf       Overflow (PrismaticListed below (Recalc) 7,202 cf Overall x 0.0% Voids         #2       238.50'       9,918 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         235.00       496       0       0         236.00       1,348       922       922         237.00       2,257       1,803       2,725         238.00       3,223       2,740       5,465	Inflow Outflow Primary Routed	= 36.9 = 36.5 = 36.5 I to Pond P-1	0 cfs @ 12. 57 cfs @ 12. 57 cfs @ 12. 1 : Wet Pond	04 hrs, Volui 05 hrs, Volui 05 hrs, Volui	me= 2.4 me= 2.4 me= 2.4	143 af 143 af, Atten= 1% 143 af		I
Center-of-Mass det. time= 1.9 min ( 786.3 - 784.3 )           Volume         Invert         Avail.Storage         Storage Description           #1         235.00'         0 cf         Pretreatment Forebay (Prismatic)_isted below (Recalc) 7,202 cf Overall x 0.0% Voids           #2         238.50'         9,918 cf         Overflow (Prismatic)_Listed below (Recalc)           9,918 cf         Total Available Storage           Elevation         Surf.Area         Inc.Store           (feet)         (sq-ft)         (cubic-feet)           235.00         496         0           235.00         1,348         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	Center-of-Mass det. time= 1.9 min ( 786.3 - 784.3 )           Volume         Invert         Avail.Storage         Storage Description           #1         235.00'         0 cf         Pretreatment Forebay (Prismatic)Listed below (Recalc) 7,202 cf Overall x 0.0% Voids           #2         238.50'         9,918 cf         Overflow (Prismatic)Listed below (Recalc)           9,918 cf         Total Available Storage           Elevation         Surf.Area         Inc.Store           (feet)         (sq-ft)         (cubic-feet)           235.00         496         0           235.00         1,348         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465						= 1,703 cf		
#1         235.00'         0 cf         Pretreatment Forebay (Prismatic)Listed below (Recalc) 7,202 cf Overall x 0.0% Voids           #2         238.50'         9,918 cf         Overflow (Prismatic)Listed below (Recalc)           9,918 cf         Total Available Storage           Elevation         Surf.Area (feet)         Inc.Store (sq-ft)         Cum.Store (cubic-feet)           235.00         496         0         0           235.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	#1         235.00'         0 cf         Pretreatment Forebay (Prismatic) isted below (Recalc) 7,202 cf Overall x 0.0% Voids           #2         238.50'         9,918 cf         Overflow (Prismatic) listed below (Recalc)           9,918 cf         Total Available Storage           Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465						o of inflow)		
#2         238.50'         9,918 of 9,918 of 9,918 of 9,918 of         7,202 of Overall x 0.0% Voids Overflow (Prismatic)Listed below (Recalc) 9,918 of           Elevation (feet)         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           235.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	#2         238.50'         9,918 cf         Overflow (Prismatic)Listed below (Recalc)           9,918 cf         Overflow (Prismatic)Listed below (Recalc)           9,918 cf         Total Available Storage           Elevation         Surf.Area (feet)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           235.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465								
9,918 cf         Total Available Storage           Elevation (feet)         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	9,918 cf         Total Available Storage           Elevation (feet)         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465				7,202 cf	Overall x 0.09	6 Voids		:)
Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	#2	200.00						
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465			,		0			
235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	235.00         496         0         0           236.00         1,348         922         922           237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465								
236.001,348922922237.002,2571,8032,725238.003,2232,7405,465	236.001,348922922237.002,2571,8032,725238.003,2232,7405,465					/.			
237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465	237.00         2,257         1,803         2,725           238.00         3,223         2,740         5,465								
238.00 3,223 2,740 5,465	238.00 3,223 2,740 5,465								
	238.50 3,726 1,737 7,202								
238.50 3,726 1,737 7,202		238.50		3,726	1,737	7,202			

3 App J Post-Develop 32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 1-yr Rainfall=2.60"
Prepared by Labella Associates	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software S	Solutions LLC Page 47

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
238.50	3,726	0	0	
239.00	4,244	1,993	1,993	
240.00	5,323	4,784	6,776	
240.50	7,246	3,142	9,918	
Device Routing	g Invert	Outlet Devices		

 
 #1
 Primary
 238.50'
 50.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet)
 Description

 (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
 2.64

Primary OutFlow Max=36.52 cfs @ 12.05 hrs HW=238.93' TW=236.96' (Dynamic Tailwater) 1=Broad-Crested Rectangular Weir (Weir Controls 36.52 cfs @ 1.69 fps)

# Summary for Pond PF-2: Pretreatment Forebay

Inflow Area =	8.123 ac,	88.14% Impervious, Inflov	w Depth = 2.19" for 1-yr event	
Inflow =	23.14 cfs @	12.04 hrs, Volume=	1.484 af	
Outflow =	20.19 cfs @	12.05 hrs, Volume=	1.483 af, Atten= 13%, Lag= 0.6 min	
Primary =	20.19 cfs @	12.05 hrs, Volume=	1.483 af	
Routed to	Pond BIO-1 : Filt	ration Bioretention (2.5ft fil	lter media)	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 236.11' @ 12.38 hrs Surf.Area= 14,792 sf Storage= 4,478 cf Flood Elev= 236.50' Surf.Area= 15,398 sf Storage= 7,696 cf

Plug-Flow detention time= 93.3 min calculated for 1.483 af (100% of inflow) Center-of-Mass det. time= 93.3 min ( 871.2 - 777.8 )

Volume	Invert	Avail.	Storage	Storag	ge Description	
#1	232.00'		0 cf			(Prismatic)Listed below (Recalc)
					4 cf Overall x 0.09	
#2	235.50'		2,118 cf	STOR	AGE ABOVE (Pr	ismatic)Listed below (Recalc)
		1:	2,118 cf	Total /	Available Storage	
	•			~	0 0	
Elevation	Su	rf.Area		.Store	Cum.Store	
(feet)		(sq-ft)	(cubi	c-feet)	(cubic-feet)	
232.00		2,149		0	0	
233.00		3,434		2,792	2,792	
234.00		4,791		4.113	6,904	
235.00		6,213		5,502	12,406	
235.50		6,937		3,288	15.694	
		-,		-,	- ,	
Elevation	Su	rf.Area	Inc	.Store	Cum.Store	
(feet)		(sq-ft)	(cubi	c-feet)	(cubic-feet)	
235.50		6,937		0	0	
236.00		7,693		3,658	3,658	
237.00		9,228		8,461	12,118	
		, -		, -	, -	

	J_Post-Development by Labella			ed 1/4/202
			2023 HydroCAD Software Solutions LLC	Page 4
Device	Routing	Invert		
#1	Primary	235.50'	<b>40.0' long x 22.0' breadth Broad-Crested Rectangular V</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.65	
Primary	outFlow Ma	x=18.12 cfs <b>Rectangula</b>	@ 12.05 hrs HW=235.98' TW=235.93' (Dynamic Tailwate r Weir (Weir Controls 18.12 cfs @ 0.94 fps)	r)

Newburgh South Logistics Centr NY-32142-00 24-hr S1 10-yr Rainfall=4.6 Printed 1/4/202 tware Solutions LLC Page 5		<b>3_App J_Post-Dev</b> Prepared by Labella HydroCAD® 10.20-3f s/	Newburgh South Logistics Center 2 24-hr S1 10-yr Rainfall=4.69" Printed 1/4/2024 Page 49	42-00 NY-32142-00 24	_App J_Post-Develop_32142 repared by Labella Associates ydroCAD® 10.20-3f s/n 09581 © 2023
rea=112,817 sf 98.41% Impervious Runoff Depth=4.45 Tc=6.0 min CN=98 Runoff=12.90 cfs 0.961 a	2 <b>4:</b> R	SubcatchmentPS-24	ited-CN	pan=0.00-72.00 hrs, dt=0.01 hrs, 7201 poir y SCS TR-20 method, UH=SCS, Weighted n-Stor-Ind method - Pond routing by Dyn-	Runoff by S
Area=23,503 sf 23.00% Impervious Runoff Depth=3.38 Tc=6.0 min CN=88 Runoff=2.26 cfs 0.152 a	25:	SubcatchmentPS-25	% Impervious Runoff Depth=2.71" CN=81 Runoff=3.30 cfs 0.308 af	Runoff Area=59,320 sf 46.38% In Flow Length=321' Tc=14.2 min CN	ubcatchmentPS-1:
f Area=23,847 sf 0.00% Impervious Runoff Depth=2.62 Tc=6.0 min CN=80 Runoff=1.81 cfs 0.120 a	26:	SubcatchmentPS-26	% Impervious Runoff Depth=2.54" CN=79 Runoff=0.82 cfs 0.055 af	Runoff Area=11,265 sf 67.79% In Tc=6.0 min CN	ubcatchmentPS-10:
f Area=54,566 sf 4.64% Impervious Runoff Depth=2.71 Tc=6.0 min CN=81 Runoff=4.28 cfs 0.283 a	27:	SubcatchmentPS-27	% Impervious Runoff Depth=4.34" CN=97 Runoff=14.08 cfs 1.030 af	Runoff Area=124,140 sf 99.06% In Tc=6.0 min CN=	ubcatchmentPS-11:
rea=1,035,126 sf 6.64% Impervious Runoff Depth=1.81 n=735' Tc=22.4 min CN=70 Runoff=30.04 cfs 3.583 a		SubcatchmentPS-28	% Impervious Runoff Depth=4.45" CN=98 Runoff=19.75 cfs 1.472 af	Runoff Area=172,728 sf 100.00% In Tc=6.0 min CN=	ubcatchmentPS-12:
rea=36,671 sf 100.00% Impervious Runoff Depth=4.45 Tc=6.0 min CN=98 Runoff=4.19 cfs 0.312 a	2 <b>9:</b> R	SubcatchmentPS-29	% Impervious Runoff Depth=4.45" CN=98 Runoff=3.95 cfs 0.294 af	Runoff Area=34,560 sf 100.00% In Tc=6.0 min CN	ubcatchmentPS-13:
Area=32,215 sf 78.33% Impervious Runoff Depth=3.89 Tc=6.0 min CN=93 Runoff=3.45 cfs 0.240 a	3:	SubcatchmentPS-3:	% Impervious Runoff Depth=4.45" CN=98 Runoff=4.02 cfs 0.299 af	Runoff Area=35,140 sf 97.85% In Tc=6.0 min CN	ubcatchmentPS-14:
Area=33,056 sf 85.37% Impervious Runoff Depth=4.11 Tc=6.0 min CN=95 Runoff=3.66 cfs 0.260 a	30:	SubcatchmentPS-30	% Impervious Runoff Depth=3.08" CN=85 Runoff=1.09 cfs 0.072 af		ubcatchmentPS-15:
f Area=22,641 sf 0.00% Impervious Runoff Depth=1.66 th=284' Tc=12.3 min CN=68 Runoff=0.78 cfs 0.072 a		SubcatchmentPS-4:	% Impervious Runoff Depth=3.18" CN=86 Runoff=6.29 cfs 0.419 af		ubcatchmentPS-16:
f Area=3,406 sf 94.86% Impervious Runoff Depth=4.34 Tc=6.0 min CN=97 Runoff=0.39 cfs 0.028 a	i:	SubcatchmentPS-5:	% Impervious Runoff Depth=4.11" CN=95 Runoff=2.89 cfs 0.205 af	Runoff Area=26,060 sf 83.73% In Tc=6.0 min CN	ubcatchmentPS-17:
Area=35,574 sf 96.53% Impervious Runoff Depth=4.34 Tc=6.0 min CN=97 Runoff=4.03 cfs 0.295 a	):	SubcatchmentPS-6:	% Impervious Runoff Depth=4.00" CN=94 Runoff=3.41 cfs 0.239 af	Runoff Area=31,224 sf 79.46% In Tc=6.0 min CN	ubcatchmentPS-18:
f Area=4,143 sf 59.04% Impervious Runoff Depth=2.62 Tc=6.0 min CN=80 Runoff=0.31 cfs 0.021 a	<b>?</b> :	SubcatchmentPS-7:	% Impervious Runoff Depth=4.34" CN=97 Runoff=1.59 cfs 0.116 af	Runoff Area=13,991 sf 95.15% In Tc=6.0 min CN	ubcatchmentPS-19:
f Area=8,693 sf 67.40% Impervious Runoff Depth=2.54 Tc=6.0 min CN=79 Runoff=0.64 cfs 0.042 a	3:	SubcatchmentPS-8:		Runoff Area=52,401 sf 62.82% In Flow Length=139' Tc=7.8 min CN	ubcatchmentPS-2:
Area=2,000 sf 100.00% Impervious Runoff Depth=4.45 Tc=6.0 min CN=98 Runoff=0.23 cfs 0.017 a	):	SubcatchmentPS-9:	% Impervious Runoff Depth=4.45" CN=98 Runoff=0.09 cfs 0.007 af		ubcatchmentPS-20:
ev=236.30' Storage=33,928 cf Inflow=28.46 cfs 3.094 a econdary=0.00 cfs 0.000 af Outflow=24.75 cfs 3.094 a			% Impervious Runoff Depth=3.89" CN=93 Runoff=0.75 cfs 0.052 af		ubcatchmentPS-21:
k Elev=263.66' Storage=666 cf Inflow=3.30 cfs 0.308 a Secondary=0.00 cfs 0.000 af Outflow=6.06 cfs 0.308 a	Primary=6.06 cfs 0.3	Pond CB-1:	% Impervious Runoff Depth=3.79" CN=92 Runoff=1.11 cfs 0.076 af	Runoff Area=10,506 sf 66.97% In Tc=6.0 min CN	ubcatchmentPS-22:
eak Elev=243.63' Storage=88 cf Inflow=4.02 cfs 0.299 a Secondary=0.00 cfs 0.000 af Outflow=4.49 cfs 0.299 a	Primary=4.49 cfs 0.2	Pond CB-10:	% Impervious Runoff Depth=4.34" CN=97 Runoff=10.53 cfs 0.770 af	Runoff Area=92,825 sf 95.28% In Tc=6.0 min CN=	ubcatchmentPS-23:

Pond CB-6: Pea Pond CB-7: Pea Pond CB-8: Pe Pond CB-9: Pe Pond DET-1: Detention Basin Peak Ele Primary=9.94 cfs 2.248 af	ak Elev=254.42' \$ ak Elev=249.13' \$ ak Elev=241.86' \$ eak Elev=241.69' eak Elev=242.13' ev=234.84' Stora Secondary=0.00	Storage=58 cf Storage=34 cf Storage=59 cf Storage=26 c Storage=14 c age=37,070 cf	Inflow=13.60 cfs Outflow=13.56 cfs Inflow=14.19 cfs Outflow=14.18 cfs Inflow=16.59 cfs Outflow=16.69 cfs if Inflow=7.85 cfs Outflow=7.83 cfs f Inflow=3.66 cfs Outflow=3.65 cfs Inflow=28.60 cfs Outflow=9.94 cfs
Pond CB-6: Pea Pond CB-7: Pea Pond CB-8: Pe Pond CB-9: Pe Pond DET-1: Detention Basin Peak Ele Primary=9.94 cfs 2.248 af Pond DIV-2: Diversion 2 Peak	ak Elev=249.13' \$ ak Elev=241.86' \$ eak Elev=241.69' eak Elev=242.13' ev=234.84' Stora Secondary=0.00	Storage=34 cf Storage=59 cf Storage=26 c Storage=14 c age=37,070 cf	Outflow=13.56 cfs Inflow=14.19 cfs Outflow=14.18 cfs Inflow=16.59 cfs Outflow=16.69 cfs outflow=7.85 cfs Outflow=7.83 cfs Outflow=3.66 cfs Outflow=3.65 cfs Inflow=28.60 cfs
Pond CB-7: Pea Pond CB-8: Pe Pond CB-9: Pe Pond DET-1: Detention Basin Peak Ele Primary=9.94 cfs 2.248 af Pond DIV-2: Diversion 2 Peak	ak Elev=241.86' S eak Elev=241.69' eak Elev=242.13' ev=234.84' Stora Secondary=0.00	Storage=59 cf Storage=26 c Storage=14 c age=37,070 cf	Outflow=14.18 cfs Inflow=16.59 cfs Outflow=16.69 cfs outflow=7.85 cfs Outflow=7.83 cfs outflow=3.66 cfs Outflow=3.65 cfs Inflow=28.60 cfs
Pond CB-8: Pe Pond CB-9: Pe Pond DET-1: Detention Basin Peak Ele Primary=9.94 cfs 2.248 af Pond DIV-2: Diversion 2 Peak	eak Elev=241.69' eak Elev=242.13' ev=234.84' Stora Secondary=0.00	Storage=26 c Storage=14 c age=37,070 cf	Outflow=16.69 cfs f Inflow=7.85 cfs Outflow=7.83 cfs f Inflow=3.66 cfs Outflow=3.65 cfs Inflow=28.60 cfs
Pond CB-9: Pe Pond DET-1: Detention Basin Peak Ele Primary=9.94 cfs 2.248 af Pond DIV-2: Diversion 2 Peak	eak Elev=242.13' ev=234.84' Stora Secondary=0.00	Storage=14 c age=37,070 cf	Outflow=7.83 cfs of Inflow=3.66 cfs Outflow=3.65 cfs Inflow=28.60 cfs
Pond DET-1: Detention Basin Peak Ele Primary=9.94 cfs 2.248 af Pond DIV-2: Diversion 2 Peak	ev=234.84' Stora Secondary=0.00	age=37,070 cf	Outflow=3.65 cfs Inflow=28.60 cfs
Primary=9.94 cfs 2.248 af Pond DIV-2: Diversion 2 Peak	Secondary=0.00		
	( Elay=244 021 0		
			Inflow=29.89 cfs Outflow=29.68 cfs
ond DP-1: Gidneytown Creek			Inflow=45.31 cfs rimary=45.31 cfs
Pond P-1: Wet Pond Peak Elev Primary=10.75 cfs 4.532 af S			Inflow=67.61 cfs Outflow=10.75 cfs
<b>Pond PF-1: Pretreatment Forebay</b> Peak E	Elev=239.09' Sto		Inflow=61.74 cfs Outflow=61.39 cfs
Pond PF-2: Pretreatment Forebay Peak E	Elev=236.32' Sto		Inflow=26.02 cfs Outflow=24.32 cfs
Total Runoff Area = 50.078 ac Runo 57.85% Pe			erage Runoff De 5% Impervious =

	Associates Printed 1/4	
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Pond CB-11:	Peak Elev=259.96' Storage=8 cf Inflow=2.89 cfs 0.2	205 a
	18.0" Round Culvert n=0.013 L=216.0' S=0.0100 '/' Outflow=2.89 cfs 0.2	205 a
Pond CB-12:	Peak Elev=258.52' Storage=20 cf Inflow=6.29 cfs 0.4	111 2
-0110 CB-12.	18.0" Round Culvert n=0.013 L=192.0' S=0.0100 '/' Outflow=6.29 cfs 0.4	
ond CB-13:	Peak Elev=257.10' Storage=26 cf Inflow=7.88 cfs 0.5	
	18.0" Round Culvert n=0.013 L=137.0' S=0.0100 '/' Outflow=7.87 cfs 0.5	560 a
ond CB-14:	Peak Elev=255.75' Storage=26 cf Inflow=7.96 cfs 0.5	567 a
	Outflow=7.96 cfs 0.4	567 a
	Deals Elevence 241 Starsger 00 of 1-8	210 -
ond CB-15:	Peak Elev=252.34' Storage=29 cf Inflow=8.71 cfs 0.6 Outflow=8.70 cfs 0.6	
		5.00
Pond CB-16:	Peak Elev=247.25' Storage=64 cf Inflow=9.81 cfs 0.6	
	Outflow=9.80 cfs 0.6	695 a
Pond CB-17:	Peak Elev=244.86' Storage=1,820 cf Inflow=20.30 cfs 1.4	165 a
	af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=17.05 cfs 1.4	
ond CB-18:	Peak Elev=243.54' Storage=135 cf Inflow=30.02 cfs 2.7 Outflow=29.89 cfs 2.1	
		120 8
ond CB-19:	Peak Elev=245.00' Storage=104 cf Inflow=23.65 cfs 1.7	
	Primary=23.63 cfs 1.766 af Secondary=0.00 cfs 0.000 af Outflow=23.63 cfs 1.7	'66 a
ond CB-2:	Peak Elev=263.55' Storage=194 cf Inflow=8.18 cfs 0.6	677 a
	Outflow=8.08 cfs 0.6	
Pond CB-20: Primary=3 91 cfs_0 29	Peak Elev=245.17' Storage=29 cf Inflow=3.95 cfs 0.2 4 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=3.91 cfs 0.2	
1111dry 0.01 010 0.20		04 01
Pond CB-22:	Peak Elev=263.22' Storage=98 cf Inflow=9.70 cfs 0.9	
	Outflow=9.36 cfs 0.9	Э17 г
ond CB-23:	Peak Elev=246.93' Storage=55 cf Inflow=14.41 cfs 1.3	392 a
0	Outflow=14.40 cfs 1.3	
ond CB-24:	Peak Elev=260.81' Storage=114 cf Inflow=0.78 cfs 0.0 12.0" Round Culvert n=0.013 L=26.0' S=0.0100 '/' Outflow=2.37 cfs 0.0	
	12.0 Round Calvert 11-0.013 L-20.0 3-0.01007 Outhow-2.37 cis 0.0	πza
ond CB-25:	Peak Elev=244.94' Storage=51 cf Inflow=15.22 cfs 1.4	
	Primary=12.55 cfs 1.429 af Secondary=2.80 cfs 0.018 af Outflow=15.35 cfs 1.4	47 a
ond CB-3:	Peak Elev=261.94' Storage=158 cf Inflow=10.94 cfs 1.0	)17 a
	Outflow=10.79 cfs 1.0	
Pond CB-4:	Peak Elev=259.84' Storage=94 cf Inflow=13.47 cfs 1.3 18.0" Round Culvert n=0.013 L=241.0' S=0.0100 '/' Outflow=13.29 cfs 1.3	
	18.0° Round Culvert n=0.013 L=241.0° S=0.0100 / Outflow=13.29 cfs 1.3	siz a

ost-De	evelop	32142	-00		Newburgh South Logistics Ce NY-32142-00 24-hr S1 10-yr Rainfall=4
					Printed 1/4/2
0.20-3f	s/n 09581	© 2023	3 HydroCAE	Software S	olutions LLC Page
		Sum	mary fo	r Subcato	chment PS-1:
		12.15	ō hrs, Volu	me=	0.308 af, Depth= 2.71"
				ited-CN, Tii	me Span= 0.00-72.00 hrs, dt= 0.01 hrs
sf) Cl	N Desc	ription			
					)
		-			
13					
ath S	Slope Ve	locity	Capacity	Descriptio	n
			(cfs)		
100 0.0	0500	0.24		Sheet Flo	
					ort n= 0.150 P2= 3.15"
221 0.0	0050	0.49			Concentrated Flow, ss Pasture Kv= 7.0 fps
321 Tc	otal			Short Gra	ss rasture INV- 7.0 lps
		Sum	mary for	Subcatc	hment PS-10:
		12.04	hrs, Volu	me=	0.055 af, Depth= 2.54"
	0 waath!				
					me opan- 0.00-72.00 nrs, at= 0.01 nrs
sf) Cl					
					L. C.
29 36					
	Labella 0.20-3f 3 Pond C S TR-2l 24-hr S sf) Cl 13 8 23 9 94 3 90 9 20 8 07 13 100 0.1 221 0.1 321 Tc 0 Pond C S TR-2l 24-hr S sf) Cl 221 0.1 0 Pond C S TR-2l 24-hr S 5 5 13 13 10 10 13 10 10 10 10 10 10 10 10 10 10	Labella Associa 0.20-3f s/n 09581 3.30 cfs @ Pond CB-1 : S TR-20 method, 24-hr S1 10-yr F sf) CN Desc 13 80 >759 23 98 Pave 90 98 Pave 90 98 Pave 90 98 Pave 90 98 Pave 20 81 Weig 07 53.62 13 46.38 gth Slope Ve (ft/ft) (ff 100 0.0500 221 0.0050 221 0.0050 221 0.0050 221 Total 0.82 cfs @ Pond CB-25 : S TR-20 method, 24-hr S1 10-yr F sf) CN Desc 29 39 >759 36 98 Pave 90 98 Pave 90 98 Pave 91 98 Pave 92 98 Pave 93 98 Pave 94 98 Pave 95 98 Pave 96 98 Pave 97 98 Pave 98 98 98 Pave 98 98 98 Pave 98 98 98 Pave 98 98 98 98 98 98 98 98 98 98 98 98 98 9	Labella Associates 0.20-3f s/n 09581 © 2023 Sum 3.30 cfs @ 12.15 Pond CB-1 : S TR-20 method, UH=S 24-hr S1 10-yr Rainfall sf) CN Description 13 80 >75% Grass 23 98 Paved parki 90 81 Weighted A 07 53.62% Per 13 46.38% Imp gth Slope Velocity off/ft) (ft/sec) 100 0.0500 0.24 221 0.0050 0.49 321 Total Sum 0.82 cfs @ 12.04 Pond CB-25 : S TR-20 method, UH=S 24-hr S1 10-yr Rainfall sf) CN Description 29 39 >75% Grass 36 98 Paved parki 91 0.00 0.0500 0.24 21 0.0050 0.49 321 Total Sum 0.82 cfs @ 12.04 Pond CB-25 : S TR-20 method, UH=S 24-hr S1 10-yr Rainfall sf) CN Description 29 39 >75% Grass 36 98 Paved parki 57 9 Weighted A 29 32.21% Per	0.20-3f s/n 09581 © 2023 HydroCAE           Summary for           3.30 cfs @         12.15 hrs, Volu           Pond CB-1 :         STR-20 method, UH=SCS, Weigh           24-hr S1 10-yr Rainfall=4.69"         sf)           STR-20 method, UH=SCS, Weigh         24-hr S1 10-yr Rainfall=4.69"           34         80         >75% Grass cover, Gc           39         Paved parking, HSG D         94           39         >75% Grass cover, Gc         98           20         81         Weighted Average           07         53.62% Pervious Area         13           46.38% Impervious Area         146.38% Impervious Area           13         40.36% Impervious Area           14         0.0050         0.24           221         0.0050         0.49           321         Total         Summary for           0.82 cfs @         12.04 hrs, Volu           Pond CB-25 :         S         S           S TR-20 method, UH=SCS, Weigh         24-hr S1 10-yr Rainfall=4.69"           26         O         9         >75% Grass cover, Gc           39         >75% Grass cover, Gc         39         >75% Grass cover, Gc           36         CN         Description <td>Labella Associates 0.20-3f s/n 09581 © 2023 HydroCAD Software S Summary for Subcato 3.30 cfs @ 12.15 hrs, Volume= Pond CB-1 : S TR-20 method, UH=SCS, Weighted-CN, Til 24-hr S1 10-yr Rainfall=4.69" sf) CN Description 13 80 &gt;75% Grass cover, Good, HSG D 94 39 &gt;75% Grass cover, Good, HSG A 98 Paved parking, HSG A 20 81 Weighted Average 07 53.62% Pervious Area 13 46.38% Impervious Area 13 46.38% Impervious Area 14 Weighted Average 15 CN Description 16 CN Description 17 Since Velocity Capacity Description 18 Grass: Sh 221 0.0050 0.24 Sheet Flo Grass: Sh 221 0.0050 0.49 Shallow of Short Gra 321 Total Summary for Subcato 0.82 cfs @ 12.04 hrs, Volume= Pond CB-25 : S TR-20 method, UH=SCS, Weighted-CN, Til 24-hr S1 10-yr Rainfall=4.69" sf) CN Description 29 39 &gt;75% Grass cover, Good, HSG A 36 98 Paved parking, HSG A 37 Weighted Average 29 32.21% Pervious Area</td>	Labella Associates 0.20-3f s/n 09581 © 2023 HydroCAD Software S Summary for Subcato 3.30 cfs @ 12.15 hrs, Volume= Pond CB-1 : S TR-20 method, UH=SCS, Weighted-CN, Til 24-hr S1 10-yr Rainfall=4.69" sf) CN Description 13 80 >75% Grass cover, Good, HSG D 94 39 >75% Grass cover, Good, HSG A 98 Paved parking, HSG A 20 81 Weighted Average 07 53.62% Pervious Area 13 46.38% Impervious Area 13 46.38% Impervious Area 14 Weighted Average 15 CN Description 16 CN Description 17 Since Velocity Capacity Description 18 Grass: Sh 221 0.0050 0.24 Sheet Flo Grass: Sh 221 0.0050 0.49 Shallow of Short Gra 321 Total Summary for Subcato 0.82 cfs @ 12.04 hrs, Volume= Pond CB-25 : S TR-20 method, UH=SCS, Weighted-CN, Til 24-hr S1 10-yr Rainfall=4.69" sf) CN Description 29 39 >75% Grass cover, Good, HSG A 36 98 Paved parking, HSG A 37 Weighted Average 29 32.21% Pervious Area

 
 Tc
 Length
 Slope
 Velocity
 Capacity
 Description

 (min)
 (feet)
 (ft/ft)
 (ft/sec)
 (cfs)
 6.0

Direct Entry,

	t-Develop_32142-00 bella Associates	Printed 1/4/202
	-3f s/n 09581 © 2023 HydroCAD Softward	
	Summary for Subca	tchment PS-11:
	-	
Runoff = Routed to Por	14.08 cfs @ 12.04 hrs, Volume= nd CB-7 :	1.030 af, Depth= 4.34"
	R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69"	Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf)	CN Description	
1,165	39 >75% Grass cover, Good, HSG	β Α
436 3,849	98 Paved parking, HSG D 98 Roofs, HSG D	
83,098	98 Roofs, HSG A	
35,592	98 Paved parking, HSG A	
124,140	97 Weighted Average	
1,165 122,975	0.94% Pervious Area 99.06% Impervious Area	
	·	
Tc Length (min) (feet)		otion
6.0 Runoff =	(ft/ft) (ft/sec) (cfs) Direct Summary for Subca	
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- Area (sf)	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description	tchment PS-12:
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 155,036	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= hd CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" <u>CN Description</u> 98 Roofs, HSG D	tchment PS-12: 1.472 af, Depth= 4.45"
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- Area (sf)	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description	tchment PS-12: 1.472 af, Depth= 4.45"
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area	<b>tchment PS-12:</b> 1.472 af, Depth= 4.45" Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 TC Length	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= Id CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description 98 Roofs, HSG D 98 Roofs, HSG D 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity Description	tchment PS-12: 1.472 af, Depth= 4.45" Time Span= 0.00-72.00 hrs, dt= 0.01 hrs tion
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity Descrip (ft/ft) (ft/sec) (cfs)	tchment PS-12: 1.472 af, Depth= 4.45" Time Span= 0.00-72.00 hrs, dt= 0.01 hrs stion Entry,
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity Descrip (ft/ft) (ft/sec) (cfs) Direct Summary for Subca 3.95 cfs @ 12.04 hrs, Volume=	tchment PS-12: 1.472 af, Depth= 4.45" Time Span= 0.00-72.00 hrs, dt= 0.01 hrs stion Entry,
6.0 Runoff = Routed to Por Runoff by SCS Ti NY-32142-00 24- 155,036 17,692 172,728 172,728 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS Ti	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity Descrip (ft/ft) (ft/sec) (cfs) Direct Summary for Subca 3.95 cfs @ 12.04 hrs, Volume= d CB-20 :	tchment PS-12: 1.472 af, Depth= 4.45" Time Span= 0.00-72.00 hrs, dt= 0.01 hrs tion Entry, tchment PS-13:
6.0 Runoff = Routed to Por Runoff by SCS Ti NY-32142-00 24- 155,036 17,692 172,728 172,728 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS Ti	Direct Summary for Subca 19.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted-CN, hr S1 10-yr Rainfall=4.69" CN Description 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity Descrip (ft/ft) (ft/sec) (cfs) Direct Summary for Subca 3.95 cfs @ 12.04 hrs, Volume= d CB-20 : R-20 method, UH=SCS, Weighted-CN,	tchment PS-12: 1.472 af, Depth= 4.45" Time Span= 0.00-72.00 hrs, dt= 0.01 hrs etion Entry, tchment PS-13: 0.294 af, Depth= 4.45"

Subscription       Newburgh South Logistics Center         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 10-yr       Rainfall=4.69"         Prepared by Labella Associates       Printed       1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 55	Subscription         Newburgh South Logistics           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 10-yr Rainfall           Prepared by Labella Associates         Printed 1/           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         P
Area (sf) CN Description	Summary for Subcatchment PS-16:
34,560 98 Roofs, HSG D	
34,560 100.00% Impervious Area	Runoff = 6.29 cfs @ 12.04 hrs, Volume= 0.419 af, Depth= 3.18" Routed to Pond P-1 : Wet Pond
Tc Length Slope Velocity Capacity Description	
(min)         (feet)         (ft/sec)         (cfs)           6.0         Direct Entry,	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"
Summary for Subcatchment PS-14:	Area (sf) CN Description
·	45,151 80 >75% Grass cover, Good, HSG D 23,780 98 Water Surface, 0% imp, HSG D
Runoff = 4.02 cfs @ 12.04 hrs, Volume= 0.299 af, Depth= 4.45" Routed to Pond CB-10 :	68,931 86 Weighted Average
	68,931 100.00% Pervious Area
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)
Area (sf) CN Description	6.0 Direct Entry,
755 80 >75% Grass cover, Good, HSG D 34,385 98 Paved parking, HSG D	Summary for Subcatchment PS-17:
35,140 98 Weighted Average	
755         2.15% Pervious Area           34,385         97.85% Impervious Area	Runoff = 2.89 cfs @ 12.04 hrs, Volume= 0.205 af, Depth= 4.11" Routed to Pond CB-11 :
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"
6.0 Direct Entry,	Area (sf) CN Description
Summary for Subcatchment PS-15:	4,241 80 >75% Grass cover, Good, HSG D 21,819 98 Paved parking, HSG D
Runoff = 1.09 cfs @ 12.04 hrs, Volume= 0.072 af, Depth= 3.08"	26,060 95 Weighted Average
Routed to Pond PF-1 : Pretreatment Forebay	4,241 16.27% Pervious Area 21,819 83.73% Impervious Area
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)
Area (sf) CN Description	6.0 Direct Entry,
8,567 80 >75% Grass cover, Good, HSG D 3,726 98 Water Surface, 0% imp, HSG D	Summary for Subcatchment PS-18:
12,293 85 Weighted Average	
12,293 100.00% Pervious Area	Runoff = 3.41 cfs @ 12.04 hrs, Volume= 0.239 af, Depth= 4.00" Routed to Pond CB-12 :
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
6.0 Direct Entry,	NY-32142-00 24-hr S1 10-vr Rainfall=4.69"

	Newburgh South Logistics Center st-Develop_32142-00 NY-32142-00 24-hr S1 10-yr Rainfall=4.69"	3_App J
Prepared by La	abella Associates Printed 1/4/2024 20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC Page 57	Prepared HydroCAD®
	U-SI SIT 09561 @ 2025 Hydrocad Software Solutions LLC Page 57	HydrocAD
Area (sf)	CN Description	Tc L
6,412		(min)
24,812		7.5
31,224	5 5	0.3
6,412 24.812		0.0
21,012		7.8
Tc Length		
(min) (feet)		
6.0	Direct Entry,	D
	Summary for Subcatchment PS-19:	Runoff Routed
		rioutou
Runoff =	1.59 cfs @ 12.04 hrs, Volume= 0.116 af, Depth= 4.34"	Runoff by
Routed to Por	and CB-13 :	NY-32142
Rupoff by SCS T	TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	Are
	4-hr S1 10-yr Rainfall=4.69"	
	ידיון טר וסיין ועמווומויד.00	
Area (sf)	CN Description	
Area (sf) 678	CN     Description       80     >75% Grass cover, Good, HSG D	
Area (sf) 678 13,313	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D	(min)
Area (sf) 678 13,313 13,991	CN     Description       80     >75% Grass cover, Good, HSG D       98     Paved parking, HSG D       97     Weighted Average	
Area (sf) 678 13,313	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area	(min)
Area (sf) 678 13,313 13,991 678 13,313	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area	(min)
Area (sf) 678 13,313 13,991 678 13,313 Tc Length	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         h       Slope         Velocity       Capacity         Description	(min)6.0 
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet)	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         h       Slope         velocity       Capacity         0       (ft/ft)         (ft/ft)       (ft/sec)	(min)6.0 
Area (sf) 678 13,313 13,991 678 13,313 Tc Length	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         h       Slope         Velocity       Capacity         Description	(min) 6.0 Runoff Routed
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet)	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         h       Slope         velocity       Capacity         0       (ft/ft)         (ft/ft)       (ft/sec)	(min)6.0 Runoff Routed Runoff by
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         h       Slope         Velocity       Capacity         Direct Entry,         Direct Entry,	(min) 6.0 Runoff Routed Runoff by NY-32142
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff =	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       Direct Entry,         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"	(min) 6.0 Runoff Routed Runoff by NY-32142 Are
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       Direct Entry,         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"	(min) 6.0 Runoff Routed Runoff by NY-32142 Are
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       0         96       Picet Entry,         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :         TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	(min) 6.0 Runoff Routed Runoff by : NY-32142: <u>Are</u>
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         h       Slope         Velocity       Capacity         Direct Entry,         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :	(min) 6.0 Runoff Routed Runoff by NY-32142 <u>Are</u>
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       0         96       Pervious Area         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       0         96       (ft/ft) (ft/sec) (cfs)         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @ 12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :         TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         4-hr S1 10-yr Rainfall=4.69"	6.0
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 Area (sf)	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       95.15% Impervious Area         h       Slope       Velocity       Capacity         Direct Entry,       Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :       TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         1-hr S1 10-yr       Rainfall=4.69"         CN       Description	(min) 6.0 Runoff Routed Runoff by NY-32142 <u>Are</u>
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 19,091	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       0         9.15% Grass cover, Good, HSG D       0	(min) 6.0 Runoff Routed Runoff by NY-32142 <u>Are</u> C
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 Area (sf)	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       95.15% Impervious Area         h       Slope       Velocity       Capacity         Direct Entry,         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :         TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         4.hrs 110-yr         Autor Action of the second the secon	(min) 6.0 Runoff Routed Runoff by NY-32142- <u>Are</u> 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 19,091 32,920	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       0         95.15% Impervious Area       0         96       Previous Area         97       Weighted Average         4.85% Pervious Area       95.15% Impervious Area         95.15% Impervious Area       Direct Entry,         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @ 12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :         TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         4-hr S1 10-yr Rainfall=4.69"         CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D	(min) 6.0 Runoff Routed Runoff by NY-32142- Are 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Area (sf) 678 13,313 13,991 678 13,313 Tc Length (min) (feet) 6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 19,091 32,920 390	CN       Description         80       >75% Grass cover, Good, HSG D         98       Paved parking, HSG D         97       Weighted Average         4.85% Pervious Area         95.15% Impervious Area         95.15% Impervious Area         95.15% Impervious Area         96.15% Impervious Area         97         Direct Entry,         Summary for Subcatchment PS-2:         4.94 cfs @       12.06 hrs, Volume=       0.369 af, Depth= 3.68"         ond CB-2 :         TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         4.hr S1 10-yr Rainfall=4.69"         CN       Description         80       >75% Grass cover, Good, HSG D       98         98       Paved parking, HSG D       39       >75% Grass cover, Good, HSG A	(min) 6.0 Runoff Routed Runoff by NY-32142- <u>Are</u> 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

3 App J Post-Develop 32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 10-vr Rainfall=4.69"
Prepared by Labella Associates	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 Hy	ydroCAD Software Solutions LLC Page 58
Tc Length Slope Velocity Ca (min) (feet) (ft/ft) (ft/sec)	apacity Description (cfs)
7.5 100 0.0400 0.22	Sheet Flow,
0.3 39 0.0967 2.18	Grass: Short n= 0.150 P2= 3.15" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
7.8 139 Total	·
Summa	ary for Subcatchment PS-20:
Runoff = 0.09 cfs @ 12.04 hrs Routed to Pond CB-14 :	s, Volume= 0.007 af, Depth= 4.45"
Runoff by SCS TR-20 method, UH=SCS NY-32142-00 24-hr S1 10-yr Rainfall=4.	6, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
777 98 Paved parking,	HSG D
777 100.00% Imper	rvious Area
Tc Length Slope Velocity Ca (min) (feet) (ft/ft) (ft/sec)	apacity Description (cfs)
6.0	Direct Entry,
Summa	ary for Subcatchment PS-21:
Runoff = 0.75 cfs @ 12.04 hrs Routed to Pond CB-15 :	rs, Volume= 0.052 af, Depth= 3.89"
Runoff by SCS TR-20 method, UH=SCS NY-32142-00 24-hr S1 10-yr Rainfall=4.	69", Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
2,127 80 >75% Grass co 4,866 98 Paved parking,	over, Good, HSG D HSG D
6,993 93 Weighted Avera 2,127 30.42% Perviou	
4,866 69.58% Imperv	
Tc Length Slope Velocity Ca (min) (feet) (ft/ft) (ft/sec)	apacity Description (cfs)
6.0	Direct Entry,

lydroCA	D® 10.20-	-3f s/n	ssociates 09581 © 202	23 HydroCAI	D Software S	olutions LLC		Printed 1	Page 59
			Sun	nmary for	Subcatcl	hment PS	-22:		
Runoff Route	= ed to Pon		cfs @ 12.0 6 :	14 hrs, Volu	ime=	0.076 af,	Depth= 3.79	"	
			ethod, UH= 0-yr Rainfa		nted-CN, Tir	ne Span= 0	.00-72.00 hrs	, dt= 0.01 hrs	
A	rea (sf)	CN	Description						
	3,470 7,036	80 98	>75% Gras Paved park		bod, HSG D				
	10,506	92	Weighted A	Average					
	3,470 7,036		33.03% Pe 66.97% Im						
-	,	01.		•					
IC (min)	Length (feet)	Slop (ft/f	e Velocity t) (ft/sec)	Capacity (cfs)	Descriptio	n			
6.0			/ ( /		Direct En	try,			
Dupoff	_	10.52		•	Subcatc				
Route Runoff b NY-3214	i2-00 24-I	d CB-1 R-20 m hr S1 1	cfs @ 12.0 7 : ethod, UH≕ 0-yr Rainfa	14 hrs, Volu SCS, Weigh II=4.69"	ime=	0.770 af,	Depth= 4.34	" , dt= 0.01 hrs	
Route Runoff b NY-3214	ed to Pon y SCS TF I2-00 24-I rea (sf)	d CB-1 R-20 m hr S1 1 <u>CN</u>	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior	14 hrs, Volu SCS, Weigh II=4.69"	ime= nted-CN, Tir	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A	ed to Pon y SCS TF l2-00 24-l rea (sf) 4,379 36,053	d CB-1 R-20 m hr S1 1 <u>CN</u> 80 98	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa <u>Descriptior</u> >75% Gras Paved park	4 hrs, Volu SCS, Weigh II=4.69" ss cover, Go king, HSG I	ime= hted-CN, Tir	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A	ed to Pon y SCS TF l2-00 24-l rea (sf) 4,379 36,053 52,393	d CB-1 R-20 m hr S1 1 <u>CN</u> 80 98 98	cfs @ 12.0 7 : ethod, UH≕ 0-yr Rainfa Descriptior >75% Gras Paved park Roofs, HS0	4 hrs, Volu SCS, Weigh II=4.69" s cover, G king, HSG [ 3 D	ime= hted-CN, Tir	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A	ed to Pon y SCS TF 42-00 24-1 4,379 36,053 52,393 92,825 4,379	d CB-1 R-20 m hr S1 1 <u>CN</u> 80 98	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior >75% Gras Paved part Roofs, HS0 Weighted <i>J</i> 4.72% Per	4 hrs, Volu SCS, Weigh II=4.69" ss cover, Go ss cover, Go ss cover, Go so verage vious Area	ume= nted-CN, Tir pod, HSG D	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A	ed to Pon y SCS TF 2-00 24-1 <u>rea (sf)</u> 4,379 36,053 52,393 92,825	d CB-1 R-20 m hr S1 1 <u>CN</u> 80 98 98	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Description >75% Gras Paved park Roofs, HS0 Weighted A	4 hrs, Volu SCS, Weigh II=4.69" ss cover, Go ss cover, Go ss cover, Go so verage vious Area	ume= nted-CN, Tir pod, HSG D	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A Tc (min)	ed to Pon y SCS TF 42-00 24-1 4,379 36,053 52,393 92,825 4,379	d CB-1 R-20 m hr S1 1 <u>CN</u> 98 98 98 97	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior >75% Gras Paved part Roofs, HS0 Weighted <i>A</i> 4.72% Per 95.28% Im	4 hrs, Volu SCS, Weigh II=4.69" ss cover, Go ss cover, Go ss cover, Go ss cover, Go so cover, Go	ume= hted-CN, Tir bod, HSG D ) ea Descriptio	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A	ed to Pon y SCS TF 12-00 24-1 4,379 36,053 52,393 92,825 4,379 88,446 Length	d CB-1 R-20 m hr S1 1 <u>CN</u> 98 98 98 97 Slop	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior >75% Gras Paved part Roofs, HS0 Weighted <i>A</i> 4.72% Per 95.28% Im	4 hrs, Volu SCS, Weigh II=4.69" ss cover, Go king, HSG I <u>3</u> D Vverage vious Area pervious Ar Capacity	ime= hted-CN, Tir bod, HSG D	0.770 af, ne Span= 0	Depth= 4.34		
Route Runoff b NY-3214 A Tc (min)	ed to Pon y SCS TF 12-00 24-1 4,379 36,053 52,393 92,825 4,379 88,446 Length	d CB-1 R-20 m hr S1 1 <u>CN</u> 98 98 98 97 Slop	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior >75% Gras Paved parl Roofs, HSt Weighted <i>A</i> 4.72% Per 95.28% Im 95.28% Im e Velocity t) (ft/sec)	4 hrs, Volu SCS, Weigł II=4.69" s cover, Go king, HSG I 3 D Average vious Area pervious Ar Capacity (cfs)	ume= hted-CN, Tir bod, HSG D ) ea Descriptio	0.770 af, ne Span= 0 n <b>try,</b>	Depth= 4.34		
Runoff b NY-3214 	ed to Pon y SCS TF 12-00 24-1 4,379 36,053 52,393 92,825 4,379 88,446 Length	d CB-1 R-20 m hr S1 1 <u>CN</u> 80 98 98 98 97 97 Slop (ft/f	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior >75% Gras Paved park Roofs, HSC Weighted A 4.72% Per 95.28% Im e Velocity t) (ft/sec) Sun cfs @ 12.0	14 hrs, Volu SCS, Weigh II=4.69" Socover, Go Sing, HSG I 3 D Vverage vious Area pervious Area (cfs)	ume= hted-CN, Tir bod, HSG D ea Descriptio Direct End Subcatcl	0.770 af, ne Span= 0 n try,	Depth= 4.34	, dt= 0.01 hrs	
Route Runoff b NY-3214 A C (min) 6.0 Runoff Route	ed to Pon y SCS TF 12-00 24-1 4,379 36,053 52,393 92,825 4,379 88,446 Length (feet) = ed to Pon	d CB-1 R-20 m nr S1 1 <u>CN</u> 80 98 98 97 97 Slop (ft/f	cfs @ 12.0 7 : ethod, UH=: 0-yr Rainfa Descriptior >75% Gras Paved parl Roofs, HS( Weighted / 4.72% Per 95.28% Im ve Velocity t) (ft/sec) Sun cfs @ 12.0 8 :	4 hrs, Volu SCS, Weigł II=4.69" s cover, Go s cover, G	ime= hted-CN, Tir bod, HSG D ea Descriptio Direct Ent Subcatcl ime=	0.770 af, ne Span= 0 n try, hment PS 0.961 af,	Depth= 4.34 .00-72.00 hrs 	, dt= 0.01 hrs	

Prepared by Lat		op_32142	2-00	I	VY-32142-00 24-		<i>r Rainfall=4.6</i> Printed 1/4/202
HydroCAD® 10.20			3 HydroCA	D Software So	lutions LLC	Г	Page 6
A							
Area (sf)		Description					
1,790 41,907		Paved park		bod, HSG D			
69,120		Roofs, HSG					
112,817		Veighted A					
1,790		.59% Perv					
111,027	9	18.41% Imp	ervious Ar	ea			
Tc Length		Velocity		Description			
(min) (feet) 6.0	(ft/ft)	(ft/sec)	(cfs)	Direct Entr	7/		
0.0				Direct Lint	у,		
		Sum	mary for	Subcatch	ment PS-25:		
Runoff =	2 26 cf	s@ 12.04	1 hrs Volu	ime=	0.152 af, Depth=	3 38"	
Routed to Pon						0.00	
				nted-CN, Tim	e Span= 0.00-72.	00 hrs, dt= 0	0.01 hrs
NY-32142-00 24-	hr S1 10-	-yr Rainfal	I=4.69"				
Area (sf)	CN E	Description					
12,606	80 >	•75% Gras	s cover, Go	ood, HSG D			
5,405	98 F	Paved park	ing, HSG E	) <sup>´</sup>			
5,405 5,492	98 F 98 V	Paved park Vater Surfa	ing, HSG E ace, 0% im	) <sup>´</sup>			
5,405 5,492 23,503	98 F 98 V 88 V	Paved park Vater Surfa Veighted A	ing, HSG E ace, 0% im verage	p, HSG D			
5,405 5,492 23,503 18,098	98 F 98 V 88 V 7	Paved park Vater Surfa Veighted A '7.00% Per	ing, HSG E ace, 0% im verage vious Area	p, HSG D			
5,405 5,492 23,503	98 F 98 V 88 V 7	Paved park Vater Surfa Veighted A	ing, HSG E ace, 0% im verage vious Area	p, HSG D			
5,405 5,492 23,503 18,098	98 F 98 V 88 V 7	Paved park Vater Surfa Veighted A '7.00% Per	ing, HSG E ace, 0% im verage vious Area pervious Ar	p, HSG D			
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet)	98 F 98 V 88 V 7 2	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp	ing, HSG E ace, 0% im verage vious Area pervious Ar	p, HSG D a rea Description			
5,405 5,492 23,503 18,098 5,405 Tc Length	98 F 98 V 88 V 7 2 Slope	Paved park <u>Vater Surfa</u> Veighted A 7.00% Per 3.00% Imp Velocity	ing, HSG E ace, 0% im verage vious Area pervious Ar Capacity	p, HSG D a ea			
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet)	98 F 98 V 88 V 7 2 Slope	Paved park Vater Surfa Veighted A '7.00% Per '3.00% Imp Velocity (ft/sec)	ing, HSG E ace, 0% im verage vious Area pervious Ar Capacity (cfs)	p, HSG D eea Description Direct Entr			
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0	98 F 98 V 88 V 7 2 Slope (ft/ft)	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec)	ing, HSG E ace, <u>0% im</u> verage vious Area bervious Ar Capacity (cfs) <b>mary for</b>	p, HSG D rea Description Direct Entr	<sup>y,</sup> ment PS-26:	- 0.60"	
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0	98 F 98 V 88 V 7 2 Slope (ft/ft)	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.04	ing, HSG E ace, 0% im, verage vious Area pervious Ar Capacity (cfs) mary for 4 hrs, Volu	p, HSG D rea Description Direct Entr	у,	- 2.62"	
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0	98 F 98 V 88 V 7 2 Slope (ft/ft)	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.04	ing, HSG E ace, 0% im, verage vious Area pervious Ar Capacity (cfs) mary for 4 hrs, Volu	p, HSG D rea Description Direct Entr	<sup>y,</sup> ment PS-26:	- 2.62"	
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0 Runoff = Routed to Pon Runoff by SCS TI	98 F 98 V 88 V 7 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.0 : Detentior hod, UH=S	ing, HSG E ice, 0% im, verage vious Area- capacity (cfs) mary for 4 hrs, Volu- n Basin SCS, Weigt	p, HSG D hea Description Direct Entr Subcatch	<sup>y,</sup> ment PS-26:		0.01 hrs
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0	98 F 98 V 88 V 7 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.0 : Detentior hod, UH=S	ing, HSG E ice, 0% im, verage vious Area- capacity (cfs) mary for 4 hrs, Volu- n Basin SCS, Weigt	p, HSG D hea Description Direct Entr Subcatch	y, ment PS-26: 0.120 af, Depth=		0.01 hrs
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0 Runoff = Routed to Pon Runoff by SCS TI	98 F 98 V 88 V 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met hr S1 10-	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.0 : Detentior hod, UH=S	ing, HSG E lcce, 0% im verage vious Aree capacity (cfs) mary for 4 hrs, Volu Basin SCS, Weigt =4.69"	p, HSG D hea Description Direct Entr Subcatch	y, ment PS-26: 0.120 af, Depth=		0.01 hrs
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0 Runoff = Routed to Pon Runoff by SCS TI NY-32142-00 24-	98 F 98 V 88 V 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met hr S1 10- CN E	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.04 : Detention hod, UH=S yr Rainfal Description	ing, HSG E ice, 0% im verage vious Area Capacity (cfs) mary for 4 hrs, Volu b Basin SCS, Weigf I=4.69"	p, HSG D hea Description Direct Entr Subcatch	y, ment PS-26: 0.120 af, Depth=		0.01 hrs
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0 Runoff = Routed to Pon Runoff by SCS TI NY-32142-00 24- Area (sf)	98 F 98 V 88 V 7 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met hr S1 10- <u>CN E</u> 80 >	Paved park Vater Surfa Veighted A 7.00% Per 3.00% Imp Velocity (ft/sec) Sum s @ 12.04 : Detention hod, UH=S yr Rainfal Description	ing, HSG E (cce, 0% im) verage vious Area capacity (cfs) mary for 4 hrs, Volu b Basin SCS, Weigt =4.69"	p, HSG D ea Description Direct Entr Subcatch ume= nted-CN, Tim pood, HSG D	y, ment PS-26: 0.120 af, Depth=		0.01 hrs
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0 Runoff = Routed to Pon Runoff by SCS TI NY-32142-00 24- <u>Area (sf)</u> 23,847 23,847	98 F 98 V 88 V 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met hr S1 10- N E 80 ≥ 1	Paved park Vater Surfa Veighted A Veighted A Veighted A Second Second Velocity (ft/sec) Sum S@ 12.04 : Detentior hod, UH=S -yr Rainfal Description -75% Grass 00.00% Pe	ing, HSG E lcce, 0% im verage voious Area ervious Are Capacity (cfs) mary for 4 hrs, Volu b Basin SCS, Weigt =4.69" s cover, Ge ervious Are	b) p, HSG D dea Description Direct Entr Subcatch ume= nted-CN, Tim pood, HSG D ra	y, ment PS-26: 0.120 af, Depth= e Span= 0.00-72.		0.01 hrs
5,405 5,492 23,503 18,098 5,405 Tc Length (min) (feet) 6.0 Runoff = Routed to Pon Runoff by SCS TI NY-32142-00 24- <u>Area (sf)</u> 23,847	98 F 98 V 88 V 7 2 Slope (ft/ft) 1.81 cf d DET-1 R-20 met hr S1 10- <u>CN E</u> 80 >	Paved park Vater Surfa Veighted A Veighted A Veighted A Second Second Velocity (ft/sec) Sum S@ 12.04 : Detentior hod, UH=S -yr Rainfal Description -75% Grass 00.00% Pe	ing, HSG E lcce, 0% im verage voious Area ervious Are Capacity (cfs) mary for 4 hrs, Volu b Basin SCS, Weigt =4.69" s cover, Ge ervious Are	b) p, HSG D dea Description Direct Entr Subcatch ume= nted-CN, Tim pood, HSG D ra	y, ment PS-26: 0.120 af, Depth= e Span= 0.00-72.		0.01 hrs

		-Develo ella Ass		-00		NY-32142-00 24		Printed	1/4/2024
				3 HydroCAE	Software So	olutions LLC			Page 61
			Sum	mary for	Subcatch	ment PS-27:			
	= to Pon			4 hrs, Volu Bioretentior	me= n (2.5ft filter	0.283 af, Depth media)	= 2.71"		
			hod, UH=S -yr Rainfal		ted-CN, Tim	ne Span= 0.00-72	.00 hrs, dt=	= 0.01 hrs	
Area	ı (sf)		Description						
	,036 ,530			s cover, Go ing, HSG D	od, HSG D				
	,566 ,036		Veighted A	verage vious Area					
	,030 ,530			ervious Area	a				
Tc Le nin) (	ength (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Descriptior	ı			
6.0					Direct Ent	ry,			
			Sum	-					
011	= to Pon			7 hrs, Volu		3.583 af, Depth	= 1.81"		
outed t	to Pon SCS TF	d DP-1 : R-20 met	s @ 12.23 Gidneytow	7 hrs, Volu n Creek SCS, Weigh	me=			= 0.01 hrs	
outed t off by S 32142-0 Area	to Pon SCS TF 00 24-I 1 (sf)	d DP-1 : R-20 met hr S1 10-	s @ 12.23 Gidneytow hod, UH=S	7 hrs, Volu n Creek SCS, Weigh	me=	3.583 af, Depth		= 0.01 hrs	
couted t off by S 32142-0 <u>Area</u> 45,	to Pon SCS TF 00 24-I 1 <u>(sf)</u> ,884	d DP-1 : R-20 met hr S1 10- <u>CN E</u> 98 F	s @ 12.27 Gidneytow hod, UH=S yr Rainfall Description Paved parki	7 hrs, Volu n Creek CS, Weigh I=4.69"	me= ted-CN, Tim	3.583 af, Depth		= 0.01 hrs	
couted t off by S 32142-0 <u>Area</u> 45,	to Pon SCS TF 00 24-I 1 (sf)	d DP-1 : R-20 met hr S1 10- <u>CN E</u> 98 F 98 F	s @ 12.27 Gidneytow hod, UH=S yr Rainfall Description Paved parki	7 hrs, Volu n Creek SCS, Weigh I=4.69" ing, HSG D ing, HSG A	me= ted-CN, Tim	3.583 af, Depth		= 0.01 hrs	
couted t off by S 32142-0 <u>Area</u> 45, 377, 18,	to Pon SCS TF 20 24-1 ,884 350 ,918 ,580	d DP-1 : R-20 met hr S1 10- <u>CN E</u> 98 F 98 F 77 V 30 V	s @ 12.27 Gidneytow hod, UH=S yr Rainfall Description Paved parki Voods, Goo Voods, Goo	7 hrs, Volu n Creek GCS, Weigh I=4.69" ing, HSG D ing, HSG A od, HSG A	me= ted-CN, Tim	3.583 af, Depth		= 0.01 hrs	
couted t off by S 32142-0 <u>Area</u> 45, 377, 18, 230,	to Pon SCS TF 00 24-1 ,884 350 ,918 ,580 ,060	d DP-1 : R-20 met hr S1 10- <u>CN E</u> 98 F 98 F 77 V 30 V 39 >	s @ 12.23 Gidneytow hod, UH=S -yr Rainfall Description Paved parki Vaved parki Voods, Goo -75% Grass	7 hrs, Volu n Creek CCS, Weigh =4.69" ing, HSG D ing, HSG A od, HSG D od, HSG A s cover, Gc	me= ted-CN, Tim od, HSG A	3.583 af, Depth		= 0.01 hrs	
Routed t off by S 32142-0 <u>Area</u> 45, 377, 18, 230, 339, 1,	to Pon SCS TF 00 24-1 (sf) ,884 350 ,918 ,580 ,060 ,862 ,122	d DP-1 : R-20 met hr S1 10- <u>CN E</u> 98 F 98 F 77 V 30 V 30 V 39 > 80 > 98 V	s @ 12.23 Gidneytow hod, UH=S yr Rainfall Description Paved parki Voods, Goo Voods, Goo 755% Grass Vater Surfa	7 hrs, Volu n Creek 3CS, Weigh I=4.69" Jong, HSG D Jong, HSG A sod, HSG A s cover, Gc ace, HSG A	me= ted-CN, Tim od, HSG A od, HSG D	3.583 af, Depth		= 0.01 hrs	
Routed t off by S 32142-0 <u>Area</u> 45, 377, 18, 230, 339, 1, 21,	to Pon SCS TF 00 24-1 (sf) ,884 350 ,918 ,580 ,060 ,862 ,122 ,350	d DP-1 : R-20 met hr S1 10- <u>CN E</u> 98 F 77 V 30 V 30 > 80 > 80 > 98 V 98 V 98 V	s @ 12.2' Gidneytow hod, UH=S -yr Rainfall Description Paved parki Vaved parki Voods, Goo Voods, Goo 75% Grass -75% Grass -75% Grass Vater Surfa	7 hrs, Volu n Creek CS, Weigh =4.69" ing, HSG D od, HSG D od, HSG A s cover, Gc s cover, Gc s cover, Gc ce, HSG A	me= ted-CN, Tim od, HSG A od, HSG D	3.583 af, Depth		= 0.01 hrs	
Routed t off by S 32142-0 <u>Area</u> 45, 377, 18, 230, 339, 1, 21, 1,035, 966,	to Pon SCS TF 00 24-1 (sf) ,884 350 ,918 ,580 ,060 ,862 ,122 ,350	d DP-1 : <b>CN</b> E 98 F 77 V 30 V 30 V 30 S 80 S 98 V 98 V	s @ 12.23 Gidneytow hod, UH=S yr Rainfall Description Paved parki Vaved parki Voods, Goo 75% Grass 75% Grass Vater Surfa Vater Surfa	7 hrs, Volu n Creek CS, Weigh =4.69" ing, HSG D od, HSG D od, HSG A s cover, Gc s cover, Gc s cover, Gc ce, HSG A	me= ted-CN, Tim od, HSG A od, HSG D	3.583 af, Depth		= 0.01 hrs	
Routed t off by S 32142-0 <u>Area</u> 45, 377, 18, 230, 339, 1, 21, 1,035, 966, 68, Tc Le	to Pon SCS TF 00 24-I (sf) ,884 350 ,918 ,580 ,060 ,862 ,126 ,420 ,706 ength	d DP-1 : R-20 met hr S1 10- CN E 98 F 98 F 77 V 30 V 30 V 30 > 98 V 98 V 98 V 70 V 98 Slope	s @ 12.2 Gidneytow hod, UH=S -yr Rainfall Description Paved parki Paved parki	7 hrs, Volu n Creek GCS, Weigh =4.69" ing, HSG D ing, HSG A od, HSG A scover, Gc scover, Gc cc, HSG A verage vious Area rvious Area Capacity	me= ted-CN, Tim od, HSG A od, HSG D	3.583 af, Depth ne Span= 0.00-72		= 0.01 hrs	
Routed t off by S 32142-0 <u>Area</u> 45, 377, 18, 230, 339, 1, 21, 1,035, 966, 68, Tc Le	to Pon SCS TF 00 24-1 ,884 350 ,918 ,580 ,860 ,862 ,122 ,350 ,126 ,420 ,706	d DP-1 : R-20 met hr S1 10- CN E 98 F 98 F 77 V 30 V 30 V 30 > 80 > 98 V 98 V 98 V 98 V 98 V 98 V 98 G 6	s @ 12.2' Gidneytow hod, UH=S -yr Rainfall Description Paved parki Vaved parki Voods, Goo -75% Grass -75% Grass -75% Grass Voter Surfa Vater Surfa Veighted A 3.36% Per 5.64% Impe	7 hrs, Volu n Creek CS, Weigh =4.69" ing, HSG D od, HSG A od, HSG A od, HSG A s cover, Gc s cover, Gc	me= ted-CN, Tim od, HSG A od, HSG D a Description Sheet Flov	3.583 af, Depth ne Span= 0.00-72	00 hrs, dt=	= 0.01 hrs	
touted t off by S 32142-C <u>Area</u> 45, 377, 18, 230, 339, 1, 21, 1,035, 966, 68, Tc Le nin) (	to Pon CCS TF 00 24-1 (sf) 884 350 918 580 060 060 060 122 350 126 420 706 ength (feet) 100	d DP-1 : R-20 met hr S1 10- CN E 98 F 98 F 77 V 30 V 39 > 98 V 98 V 98 V 98 V 98 V 98 V 98 V 98 Slope (ft/ft)	s @ 12.2 Gidneytow hod, UH=S yr Rainfall Description Paved parki Paved parki Paved parki Paved parki Voods, God 75% Grass 75% Grass 75% Grass Vater Surfa Veter Surfa Veter Surfa Veter Surfa Vater Surfa Veter Surfa Veter Surfa Veter Surfa Veter Surfa Veter Surfa Veter Surfa Veter Surfa Veter Surfa	7 hrs, Volu n Creek GCS, Weigh =4.69" ing, HSG D ing, HSG A od, HSG A scover, Gc scover, Gc cc, HSG A verage vious Area rvious Area Capacity	me= ted-CN, Tim od, HSG A od, HSG D Description Grass: Sho Shallow C	3.583 af, Depth ne Span= 0.00-72	:.00 hrs, dt=	= 0.01 hrs	
touted t off by S 32142-C Area 45, 377, 18, 230, 339, 1, 21, 1,035, 966, 68, Tc Le <u>hin) (</u>	to Pon GCS TF 00 24-1 (sf) .884 350 .918 .580 .060 .862 .122 .350 .126 .420 .706 ength (feet) 100 481	d DP-1 : R-20 met hr S1 10- CN E 98 F 98 F 98 F 77 V 30 V	s @ 12.2' Gidneytow hod, UH=S -yr Rainfall Description Paved parki aved parki aved parki voods, Goo Voods, Goo	7 hrs, Volu n Creek GCS, Weigh =4.69" ing, HSG D ing, HSG A od, HSG A scover, Gc scover, Gc cc, HSG A verage vious Area rvious Area Capacity	me= ted-CN, Tim od, HSG A od, HSG D Description Sheet Floo Grass: Sho Shallow C Short Gras Shallow C	3.583 af, Depth ne Span= 0.00-72	:.00 hrs, dt= = 3.15" w, v,0 fps w,	= 0.01 hrs	

Prepared by Lat		Newburgh South Logistics Center NY-32142-00 24-hr S1 10-yr Rainfall=4.69 Printed 1/4/2024
HydroCAD® 10.20	3f s/n 09581 © 2023 HydroCAD Software	Solutions LLC Page 62
	Summary for Subcat	chment PS-29:
Runoff = Routed to Pon	4.19 cfs @ 12.04 hrs, Volume= d CB-8 :	0.312 af, Depth= 4.45"
	R-20 method, UH=SCS, Weighted-CN, 1 nr S1 10-yr Rainfall=4.69"	Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf)	CN Description	
28,170	98 Paved parking, HSG D	
8,501	98 Paved parking, HSG A	
36,671	98 Weighted Average	
36,671	100.00% Impervious Area	
Tc Length	Slope Velocity Capacity Descript	ion
(min) (feet)	(ft/ft) (ft/sec) (cfs)	
6.0	Direct E	ntry.

Direct Entry,

## Summary for Subcatchment PS-3:

0.240 af, Depth= 3.89" Runoff = 3.45 cfs @ 12.04 hrs, Volume= Routed to Pond CB-22 :

# Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"

A	rea (sf)	CN	Description		
	6,471	80	>75% Gras	s cover, Go	Good, HSG D
	25,183	98	Paved park	ing, HSG E	D
	511	39	>75% Gras	s cover, Go	Good, HSG A
	50	98	Paved park	ing, HSG A	A
	32,215	93	Weighted A	verage	
	6,982		21.67% Per	vious Area	a
	25,233		78.33% Imp	ervious Ar	rea
Tc	Length	Slop		Capacity	
(min)	(feet)	(ft/f	t) (ft/sec)	(cfs)	
6.0					Direct Entry,

#### Summary for Subcatchment PS-30:

Runoff = 3.66 cfs @ 12.04 hrs, Volume= 0.260 af, Depth= 4.11" Routed to Pond CB-9 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"

<b>App J_Pos</b> Prepared by La			2-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 10-yr Rainfall=4.69' Printed 1/4/2024
			3 HydroCAL	D Software Solutions LLC Page 63
Area (sf)	CN	Description	1	
4,835 28,221	80 98	>75% Gras Paved park		iood, HSG D
33,056	95	Weighted A	verage	
4,835 28,221		14.63% Per 85.37% Imp		
,				
Tc Length (min) (feet)				Description
6.0				Direct Entry,
		Sun	nmary fo	or Subcatchment PS-4:
unoff = Routed to Po		cfs @ 12.1 4 :	3 hrs, Volu	ume= 0.072 af, Depth= 1.66"
		,	ll=4.69"	
Area (sf) 6,817 15,824	CN 39 80		s cover, Go	iood, HSG A iood, HSG D
6,817	39	>75% Gras	s cover, Go s cover, Go verage	iood, HSG D
6,817 15,824 22,641 22,641 7c Length (min) (feet)	39 80 68 Slop (ft/ft	>75% Gras >75% Gras Weighted A 100.00% Pe e Velocity t) (ft/sec)	s cover, Go s cover, Go verage ervious Are Capacity	iood, HSG D ea <sup>r</sup> Description
6,817 15,824 22,641 22,641 Tc Length	39 80 68 Slop (ft/ft	>75% Gras >75% Gras Weighted A 100.00% Pe e Velocity t) (ft/sec)	s cover, Go s cover, Go verage ervious Are Capacity	ea Description Sheet Flow,
6,817 15,824 22,641 22,641 7c Length (min) (feet)	39 80 68 Slop (ft/ft 0.020	>75% Gras >75% Gras Weighted A 100.00% Pe e Velocity t) (ft/sec) 0 0.17	s cover, Go s cover, Go verage ervious Are Capacity	ea Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow,
6,817 15,824 22,641 22,641 Tc Length (min) (feet) 9.9 100	39 80 68 Slop (ft/ft 0.020 0.032	>75% Gras >75% Gras Weighted A 100.00% Pe e Velocity t) (ft/sec) 0 0.17	s cover, Go s cover, Go verage ervious Are Capacity	ea p Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15"
6,817 15,824 22,641 22,641 Tc Length (min) (feet) 9.9 100 2.4 184	39 80 68 Slop (ft/ft 0.020 0.032	>75% Gras >75% Gras Weighted A 100.00% Pr e Velocity (ft/sec) 0 0.17 6 1.26	s cover, Go s cover, Go verage ervious Are Capacity (cfs)	ea Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6,817 15,824 22,641 22,641 Tc Length (min) (feet) 9.9 100 2.4 184 12.3 284	39 80 68 Slop (ft/fi 0.020 0.032 Total	>75% Gras >75% Gras Weighted A 100.00% Pr e Velocity (ft/sec) 0 0.17 6 1.26 Sun	s cover, Go s cover, Go Werage ervious Are Capacity (cfs)	ea Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps or Subcatchment PS-5:
6,817 15,824 22,641 22,641 Tc Length (min) (feet) 9.9 100 2.4 184 12.3 284	39 80 68 Slop (ft/ff 0.020 0.032 Total 0.39	>75% Gras >75% Gras Weighted A 100.00% Pi e Velocity t) (ft/sec) 0 0.17 6 1.26 Sun cfs @ 12.0	s cover, Go s cover, Go Werage ervious Are Capacity (cfs)	ea Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps or Subcatchment PS-5:
6,817 15,824 22,641 22,641 Tc Length (min) (feet) 9.9 100 2.4 184 12.3 284 unoff = Routed to Poi unoff by SCS T	39 80 68 Slop (ft/f 0.020 0.032 Total 0.39 nd CB-3 R-20 m	>75% Gras >75% Gras Weighted A 100.00% Pr e Velocity t) (ft/sec) 0 0.17 6 1.26 Sun cfs @ 12.0	Average ervious Are Capacity (cfs) nmary fo 4 hrs, Volu	ea Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps or Subcatchment PS-5:
6,817 15,824 22,641 Tc Length (min) (feet) 9.9 100 2.4 184 12.3 284 unoff = Routed to Por	39 80 68 Slop (ft/f 0.020 0.032 Total 0.39 nd CB-3 R-20 m	>75% Gras >75% Gras Weighted A 100.00% Pr e Velocity t) (ft/sec) 0 0.17 6 1.26 Sun cfs @ 12.0	nmary fo 4 hrs, Volu SCS, Weigt II=4.69"	ea T Description Sheet Flow, Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps T Subcatchment PS-5: ume= 0.028 af, Depth= 4.34"
6,817 15,824 22,641 22,641 Tc Length (min) (feet) 9.9 100 2.4 184 12.3 284 12.3 284 unoff = Routed to Pol unoff by SCS T Y-32142-00 24	39 80 68 Slop (ft/f 0.020 0.032 Total 0.39 nd CB-3 R-20 m -hr S1 1	>75% Gras >75% Gras Yeighted A 100.00% Pr e Velocity (ft/sec) 0 0.17 6 1.26 Sun cfs @ 12.0 : ethod, UH=S 0-yr Rainfal Description	mmary fo 4 hrs, Volu SCS, Weight H=4.69"	iood, HSG D ea <b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.15" <b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps <b>Dr Subcatchment PS-5:</b> ume= 0.028 af, Depth= 4.34" ihted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs iood, HSG D

	d by Lab D® 10.20-				3 Hvdro		) Software	Solut	tions LL(	2		Finited	1/4/20 Page
	Lenath		e Vel		Capa		Descrip						1 ugo
(min)	(feet)	(ft/ft		sec)		cfs)	Descrip	lion					
6.0			/				Direct E	Entry	,				
				Sun	nmary	/ for	r Subca	tchr	nent P	S-6:			
Runoff Route	= ed to Pone		cfs @ :	12.0	4 hrs,	Volu	me=	0	.295 af,	Depth=	4.34"		
	y SCS TF 2-00 24-ł						ted-CN,	Time	Span=	0.00-72.0	0 hrs, d	t= 0.01 hr	s
А	rea (sf)	CN	Descr	iption									
_	1,235	80					od, HSG	D					
	34,319	98			ing, HS								
	<u>20</u> 35,574	<u>98</u> 97			ing, HS verage								
	1.235	97			ious A								
	34,339				perviou		ea						
	Length		e Vel	,		,	Descrip	tion					
(min)	(feet)	(ft/ft	) (ft/	sec)	(	cfs)	<b>D</b> : / <b>F</b>						
6.0							Direct E	ntry	,				
				Sun	nmary	/ for	r Subca	tchr	nent P	S-7:			
Runoff Route	= ed to Pon		cfs @ :	12.04	4 hrs,	Volu	me=	0	.021 af,	Depth=	2.62"		
							ted-CN,	Time	Span=	0.00-72.0	0 hrs, d	t= 0.01 hr	s
NY-3214	2-00 24-1	nr S1 1	0-yr R	ainfal	l=4.69'								
A	rea (sf)	CN	Descr	iption									
	614	80					od, HSG	D					
	1,329	98			ing, HS								
	1,117 1,083	98 39			ing, HS			^					
	4.143	80			verade		od, HSG	~					
	1,697	00			vious								
	2,446				perviou								
Tc (min)	Length (feet)	Slop (ft/ft		ocity /sec)		city cfs)	Descrip	tion					
6.0							Direct E	Intrv					

Newburgh South Logistics Center         S_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 10-yr Rainfall=4.69"         Prepared by Labella Associates         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC	South Logistics Cent           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 10-yr         Rainfall=4.6           Prepared by Labella Associates         Printed 1/4/202         Printed 1/4/202           HydroCAD® 10.20-3f s/n 09581         © 2023 HydroCAD Software Solutions LLC         Page 6
Summary for Subcatchment PS-8:	Peak Elev= 236.30' @ 12.19 hrs Surf.Area= 43,789 sf Storage= 33,928 cf Flood Elev= 236.50' Surf.Area= 44.411 sf Storage= 42,886 cf
Runoff = 0.64 cfs @ 12.04 hrs, Volume= 0.042 af, Depth= 2.54" Routed to Pond CB-6 :	Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 286.7 min(1,106.3 - 819.6)
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"	Volume         Invert         Avail.Storage         Storage Description           #1         235.50'         65,474 cf         Bioretention (Prismatic)Listed below (Recalc)
Area (sf) CN Description	Flaustice Such Area line Steve Our Steve
171 98 Paved parking, HSG D	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
2,834 39 >75% Grass cover, Good, HSG A 5,688 98 Paved parking, HSG A	235.50 41,373 0 0
8,693 79 Weighted Average	236.00 42,881 21,064 21,064
2,834 32.60% Pervious Area	237.00 45,940 44,411 65,474
5,859 67.40% Impervious Area	Device Routing Invert Outlet Devices
	Device         Routing         Invert         Outlet Devices           #1         Discarded         235.50'         0.250 in/hr Exfiltration Through Media over Surface area
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	#1 Discarded 235.50 0.250 in/in Exititation Through Media over Surface area #2 Primary 236.00' 60.0' long x 10.0' breadth Overflow Weir to Det
6.0 Direct Entry,	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
olo Direct Linty,	Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
	#3 Secondary 236.50' 20.0' long x 15.0' breadth Emergency Overflow Weir
Summary for Subcatchment PS-9:	
Summary for Subcatchment PS-9:	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45"	
	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.63
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 :	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 Discarded OutFlow Max=0.25 cfs @ 12.19 hrs HW=236.30' (Free Discharge) 1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.63
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" <u>Area (sf) CN Description</u>	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.63 <b>Discarded OutFlow</b> Max=0.25 cfs @ 12.19 hrs HW=236.30' (Free Discharge) <b>1=Exfiltration Through Media</b> (Exfiltration Controls 0.25 cfs) <b>Primary OutFlow</b> Max=24.46 cfs @ 12.19 hrs HW=236.30' TW=234.06' (Dynamic Tailwater) <b>2=Overflow Weir to Det</b> (Weir Controls 24.46 cfs @ 1.37 fps)
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" <u>Area (sf) CN Description 2,000 98 Paved parking, HSG A</u>	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @ 12.19 hrs       HW=236.30'       (Free Discharge)         1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @ 12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps)       Secondary OutFlow Max=0.00 cfs @ 0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" <u>Area (sf) CN Description</u>	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @ 12.19 hrs       HW=236.30'       (Free Discharge)         1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)       Primary OutFlow Max=24.46 cfs @ 12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps)       1.37 fps)       1.37 fps)
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" <u>Area (sf) CN Description 2,000 98 Paved parking, HSG A</u>	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @ 12.19 hrs       HW=236.30'       (Free Discharge)       1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @ 12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps)       Secondary OutFlow Max=0.00 cfs @ 0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" <u>Area (sf) CN Description</u> <u>2,000 98 Paved parking, HSG A</u> 2,000 100.00% Impervious Area Tc Length Slope Velocity Capacity Description	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @ 12.19 hrs       HW=236.30'       (Free Discharge)         1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @ 12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps)       Secondary OutFlow Max=0.00 cfs @ 0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         3=Emergency Overflow Weir ( Controls 0.00 cfs)       0.00 cfs)       1.37 fps)
Runoff       =       0.23 cfs @       12.04 hrs, Volume=       0.017 af, Depth= 4.45"         Routed to Pond CB-23 :       :         Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         NY-32142-00 24-hr S1 10-yr       Rainfall=4.69"         Area (sf)       CN       Description         2,000       98       Paved parking, HSG A         2,000       100.00% Impervious Area         Tc       Length       Slope         Velocity       Capacity       Description         (min)       (ftert)       (ft/ft)         6.0       Direct Entry,	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.63 Discarded OutFlow Max=0.25 cfs @ 12.19 hrs HW=236.30' (Free Discharge) -1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs) Primary OutFlow Max=24.46 cfs @ 12.19 hrs HW=236.30' TW=234.06' (Dynamic Tailwater) -2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=235.50' TW=0.00' (Dynamic Tailwater) -3=Emergency Overflow Weir ( Controls 0.00 cfs) Summary for Pond CB-1: [58] Hint: Peaked 0.35' above defined flood level [90] Warning: Qout>Qin may require smaller dt or Finer Routing
Runoff       =       0.23 cfs @       12.04 hrs, Volume=       0.017 af, Depth= 4.45"         Routed to Pond CB-23 :	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.63 Discarded OutFlow Max=0.25 cfs @ 12.19 hrs HW=236.30' (Free Discharge) 1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs) Primary OutFlow Max=24.46 cfs @ 12.19 hrs HW=236.30' TW=234.06' (Dynamic Tailwater) 2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=235.50' TW=0.00' (Dynamic Tailwater) 3=Emergency Overflow Weir (Controls 0.00 cfs) Summary for Pond CB-1: [58] Hint: Peaked 0.35' above defined flood level
Runoff       =       0.23 cfs @       12.04 hrs, Volume=       0.017 af, Depth= 4.45"         Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         NY-32142-00 24-hr S1 10-yr       Rainfall=4.69"         Area (sf)       CN       Description         2,000       98       Paved parking, HSG A         2,000       100.00% Impervious Area         Tc       Length       Slope         Velocity       Capacity       Description         6.0       Direct Entry,         Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media)	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)         -1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)       Primary OutFlow Max=24.46 cfs @       12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @       1.37 fps)       Secondary OutFlow Max=0.00 cfs @       0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir ( Controls 0.00 cfs)       Summary for Pond CB-1:       [58] Hint: Peaked 0.35' above defined flood level       [90] Warning: Qoul>Qin may require smaller dt or Finer Routing       [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)
Runoff       =       0.23 cfs @       12.04 hrs, Volume=       0.017 af, Depth= 4.45"         Routed to Pond CB-23 :       Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         NY-32142-00 24-hr S1 10-yr       Rainfall=4.69"         Area (sf)       CN       Description         2,000       98       Paved parking, HSG A         2,000       100.00% Impervious Area         Tc       Length       Slope         (ft/ft)       (ft/scc)       (cfs)         6.0       Direct Entry,         Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media)         Inflow Area =       9.376 ac, 76.99% Impervious, Inflow Depth = 3.96" for 10-yr event	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @ 12.19 hrs       HW=236.30'       (Free Discharge)       1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @ 12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @ 1.37 fps)       Secondary OutFlow Max=0.00 cfs @ 0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir ( Controls 0.00 cfs)       Summary for Pond CB-1:       [58] Hint: Peaked 0.35' above defined flood level       [90] Warning: Qout>Quir may require smaller dt or Finer Routing
Runoff       =       0.23 cfs @       12.04 hrs, Volume=       0.017 af, Depth= 4.45"         Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         NY-32142-00 24-hr S1 10-yr       Rainfall=4.69"         Area (sf)       CN       Description         2,000       98       Paved parking, HSG A         2,000       100.00% Impervious Area         Tc       Length       Slope         Velocity       Capacity       Description         6.0       Direct Entry,         Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media)	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)         -1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @       12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @       1.37 fps)       Secondary OutFlow Max=0.00 cfs @       0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir ( Controls 0.00 cfs)       Summary for Pond CB-1:       [58]       Hint: Peaked 0.35' above defined flood level       [90] Warning: Qout>Qin may require smaller dt or Finer Routing       [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)       Inflow Area =       1.362 ac, 46.38% Impervious, Inflow Depth =       2.71" for 10-yr event       Inflow =       3.30 cfs @       12.15 hrs, Volume=       0.308 af       Outflow =       0.308 af       0.00 frs @       12.15 hrs, Volume=       0.308 af       Atten= 0%, Lag= 5.3 min
Runoff=0.23 cfs @12.04 hrs, Volume=0.017 af, Depth= 4.45"Routed to Pond CB-23 :Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69"Area (sf)CNDescription2,00098Paved parking, HSG A2,000100.00% Impervious AreaTcLengthSlopeVelocityCapacityDescription(min)(feet)(ft/ft)(ft/ft)(ft/sec)(cfs)Direct Entry,Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media)Inflow Area =9.376 ac, 76.99% Impervious, Inflow Depth =3.96" for 10-yr eventInflow =24.46 cfs @12.05 hrs, Volume=3.094 af,Outflow =24.75 cfs @12.19 hrs, Volume=1.033 af	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)         -1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @       12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @       1.37 fps)       Secondary OutFlow Max=0.00 cfs @       0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir ( Controls 0.00 ofs)       Summary for Pond CB-1:       [58] Hint: Peaked 0.35' above defined flood level       [90] Warning: Qout>Qin may require smaller dt or Finer Routing       [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)       Inflow Area =       1.362 ac, 46.38% Impervious, Inflow Depth = 2.71" for 10-yr event Inflow =       3.30 cfs @       12.15 hrs, Volume=       0.308 af       Atten= 0%, Lag= 5.3 min Primary =       6.06 cfs @       12.24 hrs, Volume=       0.308 af       Dutlow, Lag= 5.3 min Primary =       6.06 cfs @       12.24 hrs, Volume=       0.308 af       Dutlow, Lag= 5.3 min Primary =       0.308 af       Dutlow =       6.06 cfs @       12.24 hrs, Volume=
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" Area (sf) CN Description 2,000 98 Paved parking, HSG A 2,000 100.00% Impervious Area Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 Direct Entry, Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media) Inflow Area = 9.376 ac, 76.99% Impervious, Inflow Depth = 3.96" for 10-yr event inflow = 28.46 cfs @ 12.05 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 1.033 af Primary = 24.49 cfs @ 12.19 hrs, Volume= 2.061 af	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" Area (sf) CN Description 2,000 98 Paved parking, HSG A 2,000 100.00% Impervious Area Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 Direct Entry, Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media) Inflow Area = 9.376 ac, 76.99% Impervious, Inflow Depth = 3.96" for 10-yr event Inflow = 28.46 cfs @ 12.05 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 1.033 af Primary = 24.49 cfs @ 12.19 hrs, Volume= 2.061 af Routed to Pond DET-1 : Detention Basin	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)         -1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)       Primary OutFlow Max=24.46 cfs @       1.37 fps)         Secondary OutFlow Max=0.00 cfs @       0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir (Controls 0.00 cfs)       Summary for Pond CB-1:       [58] Hint: Peaked 0.35' above defined flood level       [90] Warning: Qout>Qin may require smaller dt or Finer Routing       [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)         Inflow Area =       1.362 ac, 46.38% Impervious, Inflow Depth = 2.71" for 10-yr event Inflow =       3.30 cfs @       12.15 hrs, Volume=       0.308 af         Outflow =       6.06 cfs @       12.24 hrs, Volume=       0.308 af       Atten=0%, Lag= 5.3 min Primary =       6.06 cfs @       12.24 hrs, Volume=       0.308 af
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" Area (sf) CN Description 2,000 98 Paved parking, HSG A 2,000 100.00% Impervious Area Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 Direct Entry, Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media) Inflow Area = 9.376 ac, 76.99% Impervious, Inflow Depth = 3.96" for 10-yr event inflow = 28.46 cfs @ 12.05 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 1.033 af Primary = 24.49 cfs @ 12.19 hrs, Volume= 2.061 af Routed to Pond DET-1: Detention Basin Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)         -1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @       12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @       1.37 fps)       Secondary OutFlow Max=0.00 cfs @       0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir ( Controls 0.00 ofs)       Summary for Pond CB-1:       Summary for Pond CB-1:       [58] Hint: Peaked 0.35' above defined flood level       [90] Warning: Qout>Qin may require smaller dt or Finer Routing       [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)       Inflow Area = 1.362 ac, 46.38% Impervious, Inflow Depth = 2.71" for 10-yr event Inflow = 3.30 cfs @       12.15 hrs, Volume= 0.308 af       0.308 af, Atten= 0%, Lag= 5.3 min Primary = 6.06 cfs @       12.24 hrs, Volume= 0.308 af         Primary =       6.06 cfs @       12.24 hrs, Volume= 0.308 af       0.308 af       Routed to Pond CB-2:       Secondary = 0.00 cfs @       0.00 hrs, Volume= 0.000 af       Routed to Pond CB-11 :       0.00 ofs
Runoff = 0.23 cfs @ 12.04 hrs, Volume= 0.017 af, Depth= 4.45" Routed to Pond CB-23 : Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 10-yr Rainfall=4.69" Area (sf) CN Description 2,000 98 Paved parking, HSG A 2,000 100.00% Impervious Area Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 Direct Entry, Summary for Pond BIO-1: Filtration Bioretention (2.5ft filter media) Inflow Area = 9.376 ac, 76.99% Impervious, Inflow Depth = 3.96" for 10-yr event Inflow = 28.46 cfs @ 12.05 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 3.094 af Outflow = 24.75 cfs @ 12.19 hrs, Volume= 1.033 af Primary = 24.49 cfs @ 12.19 hrs, Volume= 2.061 af Routed to Pond DET-1 : Detention Basin	Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60         Coef. (English)       2.68       2.70       2.64       2.63       2.64       2.63         Discarded OutFlow Max=0.25 cfs @       12.19 hrs       HW=236.30'       (Free Discharge)       1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)         Primary OutFlow Max=24.46 cfs @       12.19 hrs       HW=236.30'       TW=234.06'       (Dynamic Tailwater)         -2=Overflow Weir to Det (Weir Controls 24.46 cfs @       1.37 fps)       Secondary OutFlow Max=0.00 cfs @       0.00 hrs       HW=235.50'       TW=0.00'       (Dynamic Tailwater)         -3=Emergency Overflow Weir ( Controls 0.00 cfs)       Summary for Pond CB-1:       [58] Hint: Peaked 0.35' above defined flood level       [90] Warning: Qout>Qin may require smaller dt or Finer Routing       [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)       Inflow Area = 1.362 ac, 46.38% Impervious, Inflow Depth = 2.71" for 10-yr event       Inflow = 3.30 cfs @       12.24 hrs, Volume= 0.308 af       Outflow = 6.06 cfs @       12.24 hrs, Volume= 0.308 af       Outflow = 6.06 cfs @       12.24 hrs, Volume= 0.308 af       Numer = 0

3_App J_Post-Devel Prepared by Labella As HydroCAD® 10.20-3f s/n 0		Newburgh South Logistics Center       3_App J_Post-Develop_32142-00         00 24-hr S1 10-yr Rainfall=4.69"       3_App J_Post-Develop_32142-00         Printed 1/4/2024       Prepared by Labella Associates         Page 67       HydroCAD® 10.20-3f s/n 09581 © 2023 Hydro
	17 hrs Surf.Area= 3,646 sf Storage= 666 c Area= 18 sf Storage= 32 cf	Sum
	0.5 min calculated for 0.308 af (100% of inflo	() [58] Hint: Peaked 0.13' above defined flood [90] Warning: Qout>Qin may require smalle [87] Warning: Oscillations may require smalle
	vail.Storage Storage Description	Inflow Area = 0.807 ac, 97.85% Impe
#1 259.81' #2 263.31'	32 cf STRUCTURE (Prismatic)Liste 11,903 cf Custom Stage Data (Prismatic)	
#2 200.01	11,935 cf Total Available Storage	Primary = 4.49 cfs @ 12.12 hrs, Primary = 4.49 cfs @ 12.12 hrs, Routed to Pond CB-18 :
Elevation Surf.Ar		Secondary = 0.00 cfs @ 0.00 hrs,
(feet) (sq-		Routed to Pond CB-18 :
259.81 263.31	9 0 0 9 32 32	Routing by Dyn-Stor-Ind method, Time Spa Peak Elev= 243.63'@ 12.06 hrs Surf.Area
Elevation Surf.Ar	a Inc.Store Cum.Store	Flood Elev= 243.50' Suff.Area= 32 sf Sto
(feet) (sq-		
263.31	9 0 0	Plug-Flow detention time= (not calculated:
264.00 7,1		Center-of-Mass det. time= 0.3 min ( 750.2 -
265.00 11,6	9 9,418 11,903	Volume Invert Avail.Storage Sto
Device Routing	Invert Outlet Devices	#1 239.00' 54 cf <b>ST</b>
	59.81' 18.0" Round Culvert	#2 243.50' 5,338 cf <b>Cu</b>
,	L= 227.0' CPP, projecting, no head	
	Inlet / Outlet Invert= 259.81' / 257.5	
#2 Primary	n= 0.013 Corrugated PE, smooth ir 64.55' <b>10.0' long x 5.0' breadth Broad-C</b>	
"Z Thinkiy	Head (feet) 0.20 0.40 0.60 0.80	
	2.50 3.00 3.50 4.00 4.50 5.00 5.	243.50 12
	Coef. (English) 2.34 2.50 2.70 2.6	
#3 Secondary	2.65 2.67 2.66 2.68 2.70 2.74 2. 64.71' <b>10.0' long x 5.0' breadth Broad-C</b>	
#0 Occorridary	Head (feet) 0.20 0.40 0.60 0.80	
	2.50 3.00 3.50 4.00 4.50 5.00 5.	0 244.00 1.744 4
	Coef. (English) 2.34 2.50 2.70 2.6 2.65 2.67 2.66 2.68 2.70 2.74 2.	
		Device Routing Invert Outlet D
	22 cfs @ 12.24 hrs HW=263.54' TW=262.7	#1 Thindry 203:00 <b>24:0</b>
	rols 5.22 cfs @ 2.95 fps) t <b>angular Weir</b> ( Controls 0.00 cfs)	L= 240.
	ungular men ( Controls 0.00 cis)	Inlet / O n= 0.013
	=0.00 cfs @ 0.00 hrs HW=259.81' TW=259	5' (Dynamic Tailwater) #2 Secondary 244.60' 10.0' lo
└─3=Broad-Crested Red	tangular Weir (Controls 0.00 cfs)	Head (fe
		2.50 3.
		Coef. (E 2 65 2 (
		265.21

3_App J_Post-Develop_321 Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2	3	NY-32142-00	ewburgh South Logistics Center 24-hr S1 10-yr Rainfall=4.69" Printed 1/4/2024 Page 68						
	Summary for Pond CB-10:								
[58] Hint: Peaked 0.13' above defi [90] Warning: Qout>Qin may requ [87] Warning: Oscillations may req	ire smaller dt or Fine		=11)						
Inflow = 4.02 cfs @ 12 Outflow = 4.49 cfs @ 12 Primary = 4.49 cfs @ 12 Routed to Pond CB-18 :	85% Impervious, Inf 2.04 hrs, Volume= 2.12 hrs, Volume= 2.12 hrs, Volume= 0.00 hrs, Volume=	0.299 af	for 10-yr event en= 0%, Lag= 5.0 min						
Routing by Dyn-Stor-Ind method, Peak Elev= 243.63' @ 12.06 hrs Flood Elev= 243.50' Surf.Area= 3	Surf.Area= 494 sf	Storage= 88 cf							
Plug-Flow detention time= (not cal Center-of-Mass det. time= 0.3 min Volume Invert Avail.Sto	(750.2 - 749.9)								
	v	(Prismatic)Listed b							
			isted below (Recalc)						
	92 cf Total Availabl								
		01							
Elevation Surf.Area (feet) (sq-ft)		um.Store ubic-feet)							
239.00 12	0	0							
243.50 12	54	54							
		-							
Elevation Surf.Area (feet) (sq-ft)		um.Store ubic-feet)							
243.50 20	(cubic-ieet) (ci	0							
244.00 1,744	441	441							
244.70 12,247	4,897	5,338							
Device Routing Invert	Outlet Devices								
#1 Primary 239.00'		ert							
#2 Secondary 244.60'	L= 240.0' CPP, pr Inlet / Outlet Invertane 0.013 Corrugat 10.0' long x 5.0' b Head (feet) 0.20 0 2.50 3.00 3.50 4.0 Coef. (English) 2.3	ojecting, no headwal = 239.00' / 237.80' ed PE, smooth interior readth Broad-Crest 0.40 0.60 0.80 1.00 00 4.50 5.00 5.50	S= 0.0050 '/' Cc= 0.900 or, Flow Area= 3.14 sf ted Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.68 2.66 2.65 2.65 2.65						

	Newburgh South Logistics Center
3 App J Post-Develop 32142-00	NY-32142-00 24-hr S1 10-yr Rainfall=4.69"
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Primary OutFlow Max=0.00 cfs @ 12.12 hrs HW=242.97' TW=243.01' (Dynamic Tailwater) -1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=239.00' TW=237.08' (Dynamic Tailwater)

#### Summary for Pond CB-11:

Inflow Area =	0.598 ac, 83.73% Impervious, Inflow	Depth = 4.11" for 10-yr event
Inflow =	2.89 cfs @ 12.04 hrs, Volume=	0.205 af
Outflow =	2.89 cfs @ 12.04 hrs, Volume=	0.205 af, Atten= 0%, Lag= 0.0 min
Primary =	2.89 cfs @ 12.04 hrs, Volume=	0.205 af
Routed to Pon	id CB-12 :	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 259.96' @ 12.04 hrs Surf.Area= 9 sf Storage= 8 cf Flood Elev= 263.05' Surf.Area= 18 sf Storage= 36 cf

Plug-Flow detention time= 0.2 min calculated for 0.205 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 774.0 - 773.9 )

Volume	Inve	ert Avai	I.Stor	age Stora	ge Description	
#1	259.0	)5'	3	6 cf STRU	JCTURE (Prism	atic)Listed below (Recalc)
#2	263.0	)5'	1,26	3 cf Cust	om Stage Data	(Prismatic)Listed below (Recalc)
			1,29	9 cf Total	Available Storag	je
					-	
Elevation		Surf.Area		Inc.Store	Cum.Stor	e
(feet)		(sq-ft)		(cubic-feet)	(cubic-fee	<u>t)</u>
259.05		9		0		0
263.05		9		36	3	6
Elevation		Surf.Area		Inc.Store	Cum.Stor	e
(feet)		(sq-ft)		(cubic-feet)	(cubic-fee	<u>t)</u>
263.05		9		0		0
263.65		4,200		1,263	1,26	3
Device F	Routing	In	vert	Outlet Dev	ices	
#1 F	rimary	259	.05'	18.0" Rou	nd Culvert	

L= 216.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 259.05' / 256.89' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

**Primary OutFlow** Max=2.88 cfs @ 12.04 hrs HW=259.96' TW=258.51' (Dynamic Tailwater) **1=Culvert** (Inlet Controls 2.88 cfs @ 2.56 fps)

Prepared by	ost-Develop_3 Labella Associat 0.20-3f s/n 09581 @	es		7-32142-00 24-h	rgh South Logisti <i>r S1 10-yr Rain</i> Printed	
		Summary	for Pond C	B-12:		
Inflow Area = Inflow = Outflow = Primary = Routed to	6.29 cfs @ 6.29 cfs @	1.40% Impervious 12.04 hrs, Volum 12.04 hrs, Volum 12.04 hrs, Volum	ne= 0. ne= 0.	444 af	10-yr event %, Lag= 0.1 min	
Peak Elev= 2	yn-Stor-Ind method 58.52' @ 12.04 hrs 263.05' Surf.Area=	Surf.Area= 12 s	of Storage= 2			
Center-of-Ma	tention time= 0.3 m ss det. time= 0.2 m	nin ( 777.5 - 777.3	)	% of inflow)		
	256.89'	torage Storage I 74 cf STRUCT 868 cf Custom	URE (Prisma	atic)Listed below Prismatic)Listed		
		942 cf Total Ava			/	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet			
256.89 263.05	12 12	0 74	( 74			
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet			
263.05 263.82	12 4,839	0 1,868	( 1,868			
Device Rou	ting Inver	t Outlet Devices	6			
#1 Prin	nary 256.89	L= 192.0' CP Inlet / Outlet In	P, projecting, wert= 256.89		= 0.900 0100 '/'    Cc= 0.90 low Area= 1.77 sf	
	Flow Max=6.27 cfs (Inlet Controls 6.2			V=257.09' (Dyna	amic Tailwater)	
		Summary	for Pond C	B-13:		
Inflow Area = Inflow = Outflow = Primary =	7.88 cfs @ 7.87 cfs @	4.10% Impervious 12.04 hrs, Volum 12.04 hrs, Volum 12.04 hrs, Volum	ne= 0. ne= 0.	560 af	10-yr event %, Lag= 0.1 min	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Routed to Pond CB-14 :

3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 10-yr Rainfall=4.69"           Prepared by Labella Associates         Printed         1/4/2024           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 71	3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 10-yr Rainfall=4         Prepared by Labella Associates       Printed 1/4/2         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Pag
Peak Elev= 257.10' @ 12.04 hrs Surf.Area= 12 sf Storage= 26 cf Flood Elev= 263.13' Surf.Area= 24 sf Storage= 98 cf	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
Plug-Flow detention time= 0.2 min calculated for 0.560 af (100% of inflow) Center-of-Mass det. time= 0.2 min(773.8-773.7)	253.60         12         0         0           262.48         12         107         107           262.50         20         0         107
Volume Invert Avail.Storage Storage Description	Device Routing Invert Outlet Devices
#1     254.97'     98 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     263.13'     1,289 cf     Custom Stage Data (Prismatic)Listed below (Recalc)       1,387 cf     Total Available Storage	#1 Primary 253.60' <b>18.0" Round Culvert</b> L= 180.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 253.60' / 249.91' S= 0.0205 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
ElevationSurf.AreaInc.StoreCum.Store(feet)(sq-ft)(cubic-feet)(cubic-feet)254.971200263.13129898	#2         Primary         262.48'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)         Display           262.48'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)         0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English)         2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           263.13         12         0         0           263.87         3,473         1,289         1,289	Primary OutFlow Max=7.95 cfs @ 12.04 hrs HW=255.75' TW=252.33' (Dynamic Tailwater) -1=Culvert (Inlet Controls 7.95 cfs @ 4.50 fps) -2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)
Device Routing Invert Outlet Devices	Summary for Pond CB-15:
<ul> <li>#1 Primary 254.97' 18.0" Round Culvert L = 137.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 254.97' / 253.60' S= 0.0100 // Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf</li> <li>Primary OutFlow Max=7.79 cfs @ 12.04 hrs HW=257.09' TW=255.75' (Dynamic Tailwater) 1=Culvert (Inlet Controls 7.79 cfs @ 4.41 fps)</li> </ul>	Inflow Area = 1.815 ac, 82.97% Impervious, Inflow Depth = 4.09" for 10-yr event Inflow = 8.71 cfs @ 12.04 hrs, Volume= 0.619 af Outflow = 8.70 cfs @ 12.04 hrs, Volume= 0.619 af, Atten= 0%, Lag= 0.1 min Primary = 8.70 cfs @ 12.04 hrs, Volume= 0.619 af Routed to Pond CB-16 :
Summary for Pond CB-14:	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 252.34' @ 12.04 hrs Surf.Area= 12 sf Storage= 29 cf Flood Elev= 253.61' Surf.Area= 12 sf Storage= 44 cf
Inflow Area =         1.654 ac, 84.27% Impervious, Inflow Depth =         4.11" for 10-yr event           Inflow =         7.96 cfs @         12.04 hrs, Volume=         0.567 af           Outflow =         7.96 cfs @         12.04 hrs, Volume=         0.567 af, Atten= 0%, Lag= 0.1 min	Plug-Flow detention time= 0.1 min calculated for 0.619 af (100% of inflow) Center-of-Mass det. time= 0.1 min(774.9 - 774.7)
Primary = 7.96 cfs @ 12.04 hrs, Volume= 0.567 af Routed to Pond CB-15 :	Volume Invert Avail.Storage Storage Description
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 255.75' @ 12.04 hrs Surf.Area= 12 sf Storage= 26 cf	#1 249.91' 47 cf <b>STRUCTURE (Prismatic)</b> Listed below (Recalc) Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
Flood Elev= 262.48' Surf.Area= 12 sf Storage= 107 cf Plug-Flow detention time= 0.2 min calculated for 0.567 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 773.7 - 773.5 )	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Volume Invert Avail.Storage Storage Description	Device Routing Invert Outlet Devices
#1 253.60' 107 cf STRUCTURE (Prismatic)Listed below (Recalc)	#1 Primary 249.91' <b>18.0" Round Culvert</b> L= 180.0' CPP, projecting, no headwall, Ke= 0.900 Iniet / Outlet Invert= 249.91' / 241.94' S= 0.0443 '/' Cc= 0.900

Sewburgh South Logistics Center         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 10-yr Rainfall=4.69"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 73	3_App J_Post-Develop_32142-00 NY-32142-0 Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC
#2 Primary 253.61' 20.0' long x 5.0' breadth Broad-Crested Rectangular Weir	Summary for Pond CB-17:
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88	[58] Hint: Peaked 0.56' above defined flood level [87] Warning: Oscillations may require smaller dt or Finer Routing (sever
rimary OutFlow Max=8.70 cfs @ 12.04 hrs HW=252.34' TW=247.23' (Dynamic Tailwater) ─1=Culvert (Inlet Controls 8.70 cfs @ 4.92 fps) ─2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)	Inflow Area =         4.187 ac, 88.32% Impervious, Inflow Depth =         4.20'           Inflow =         20.30 cfs @         12.04 hrs, Volume=         1.465 af           Outflow =         17.05 cfs @         12.14 hrs, Volume=         1.465 af           Primary =         17.05 cfs @         12.14 hrs, Volume=         1.465 af
Summary for Pond CB-16:	Routed to Pond CB-18 : Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Inflow Area =       2.056 ac, 81.10% Impervious, Inflow Depth =       4.06" for 10-yr event         Inflow =       9.81 cfs @       12.04 hrs, Volume=       0.695 af         Outflow =       9.80 cfs @       12.04 hrs, Volume=       0.695 af, Atten= 0%, Lag= 0.1 min         Primary =       9.80 cfs @       12.04 hrs, Volume=       0.695 af         Routed to Pond CB-17 :       0.04 hrs, Volume=       0.695 af	Routed to Pond PF-2 : Pretreatment Forebay Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af Routed to Pond DP-1 : Gidneytown Creek Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 h Peak Elev= 244.86' @ 12.09 hrs Surf.Area= 6,187 sf Storage= 1,820 c
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 247.25'@ 12.05 hrs Surf.Area= 12 sf Storage= 64 cf Flood Elev= 247.58' Surf.Area= 12 sf Storage= 68 cf	Flood Elev= 244.30' Surf.Area= 40 sf Storage= 96 cf Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 0.3 min (767.8 - 767.5 )
Plug-Flow detention time= 0.1 min calculated for 0.695 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 776.8 - 776.7 )	Volume         Invert         Avail.Storage         Storage Description           #1         239.50'         96 cf         STRUCTURE (Prismatic)Listed           #2         244.30'         18,411 cf         Custom Stage Data (Prismatic)
Volume         Invert         Avail.Storage         Storage Description           #1         241.94'         72 cf         STRUCTURE (Prismatic)Listed below (Recalc)	18,507 cf Total Available Storage
	Elevation Surf.Area Inc.Store Cum.Store
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	(feet) (sq-ft) (cubic-feet) (cubic-feet) 239.50 20 0 0
241.94 12 0 0	244.30 20 96 96
247.58         12         68         68           247.85         20         4         72	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
Device Routing Invert Outlet Devices	$\frac{(1001)}{244.30}  20  0  0$
#1 Primary 241.94' <b>18.0" Round Culvert</b> L= 194.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.94' / 240.00' S= 0.0100 '/ Cc= 0.900	245.00         7,740         2,716         2,716           245.35         12,368         3,519         6,235           246.00         25,096         12,176         18,411
n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf #2 Primary 247.58' <b>20.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b>	Device Routing Invert Outlet Devices
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88	#1 Primary 239.50' <b>24.0" Round Culvert</b> L= 192.0' CPP, projecting, no headw Inlet / Outlet Invert= 239.50' / 237.58'
Primary OutFlow Max=9.66 cfs @ 12.04 hrs HW=247.24' TW=244.71' (Dynamic Tailwater) -1=Culvert (Outlet Controls 9.66 cfs @ 5.47 fps) -2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)	#2         Primary         245.26'         10.0' long x 5.0' breadth Broad-Cre Head (feet)         0.20         0.40         0.60         0.80         1.0'           2.50         3.00         3.50         4.00         6.50         5.50         5.00 <td< td=""></td<>
	Coef. (English) 2.34 2.50 2.70 2.68 2.65 2.67 2.66 2.68 2.70 2.74 2.79 #3 Secondary 245.34' <b>10.0' long x 5.0' breadth Broad-Cre</b>

			Sı	ummary for Pon	d CB-17:	
		0.56' above cillations may		ood level smaller dt or Finer R	outing (sev	erity=10)
flow Area	=	4.187 ac.	88.32% I	mpervious. Inflow D	epth = $4.2$	20" for 10-yr event
flow :	=			rs, Volume=	1.465 af	
utflow :					1.465 af,	Atten= 16%, Lag= 6.1 min
imary :	=	17.05 cfs @	12.14 h	rs, Volume=	1.465 af	
Routed t	o Pon	d CB-18 :				
econdary :	=	0.00 cfs @	0.00 h	rs, Volume=	0.000 af	
Routed t	o Pon	d PF-2 : Pret	reatment	Forebay		
ertiary :	=	0.00 cfs @	0.00 h	rs, Volume=	0.000 af	
Routed t	o Pon	d DP-1 : Gidi	neytown	Creek		
eak Elev=	244.8	6' @ 12.09 h	rs Surf./	Span= 0.00-72.00 h Area= 6,187 sf Stor Storage= 96 cf		
		on time= (not et. time= 0.3		ed: outflow precedes 7.8 - 767.5)	inflow)	
olume	Inve	ert Avail.	Storage	Storage Descriptio	า	
#1	239.5	50'	96 cf	STRUCTURE (Pris	smatic)List	ed below (Recalc)
#2	244.3	30' 18	8,411 cf	Custom Stage Da	ta (Prismat	tic)Listed below (Ŕecalc)

Newburgh South Logistics Center NY-32142-00 24-hr S1 10-yr Rainfall=4.69" Printed 1/4/2024

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Elevation (feet)		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
244.30	)	20	0	0	
245.00	)	7.740	2,716	2.716	
245.35	5	12,368	3,519	6,235	
246.00	)	25,096	12,176	18,411	
Device I	Routing	Invert	Outlet Devices		
#1	Primary	239.50'	24.0" Round (	Culvert	
	,		Inlet / Outlet Inv n= 0.013 Corru	vert= 239.50' / ugated PE, smo	o headwall, Ke= 0.900 237.58' S= 0.0100 '/' Cc= 0.900 ooth interior, Flow Area= 3.14 sf
#2	Primary	245.26'	Head (feet) 0.2 2.50 3.00 3.50	20 0.40 0.60 0 4.00 4.50 5	
#3 \$	Secondar	y 245.34'	2.65 2.67 2.66	3 2.68 2.70 2	70 2.68 2.68 2.66 2.65 2.65 2.65 .74 2.79 2.88 oad-Crested Rectangular Weir

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2.50 3.00 3.50 4.0 Coef. (English) 2.3 2.65 2.67 2.66 2.6 #4 Tertiary 245.40' <b>10.0' long x 5.0' b</b> Head (feet) 0.20 0 2.50 3.00 3.50 4.0 Coef. (English) 2.3	4 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 38 2.70 2.74 2.79 2.88 readth Broad-Crested Rectangular Weir 40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00	Elevation (feet) 243.50 244.75 <u>Device Routin</u> #1 Primar
Primary OutFlow Max=16.64 cfs @ 12.14 hrs HW=24 1=Culvert (Inlet Controls 16.64 cfs @ 5.30 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00		#2 Primar
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=2 -3=Broad-Crested Rectangular Weir( Controls 0.00		
Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=239.	50' TW=0.00' (Dynamic Tailwater)	Primary OutFlo
Summary for F	Pond CB-18:	
[58] Hint: Peaked 0.04' above defined flood level [87] Warning: Oscillations may require smaller dt or Fin [80] Warning: Exceeded Pond CB-10 by 1.04' @ 11.98		[80] Warning: E: Inflow Area =
Inflow Area =         7.583 ac, 92.78% Impervious, Infl           Inflow =         30.02 cfs @         12.10 hrs, Volume=           Outflow =         29.89 cfs @         12.08 hrs, Volume=           Primary =         29.89 cfs @         12.08 hrs, Volume=           Routed to Pond DIV-2 : Diversion 2         12.08 hrs, Volume=	low Depth = 4.31" for 10-yr event 2.726 af 2.726 af, Atten= 0%, Lag= 0.0 min 2.726 af	Inflow = Outflow = Primary = Routed to Pc Secondary = Routed to Pc
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72. Peak Elev= 243.54' @ 12.05 hrs Surf.Area= 312 sf S Flood Elev= 243.50' Surf.Area= 40 sf Storage= 128 d	Storage= 135 cf	Routing by Dyn- Peak Elev= 245 Flood Elev= 245
Plug-Flow detention time= (not calculated: outflow prec Center-of-Mass det. time= 0.1 min ( 759.7 - 759.6 )	edes inflow)	Plug-Flow deter Center-of-Mass
Volume Invert Avail.Storage Storage Descr		Volume Ir
	(Prismatic)Listed below (Recalc) e Data (Prismatic)Listed below (Recalc) e Storage	#1 239 #2 245
Elevation Surf.Area Inc.Store Co	um.Store Jbic-feet)	Elevation (feet)
<u>237.08</u> 20 0	0	239.82

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Elevatio	on Si	urf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft) (	cubic-feet)	(cubic-feet)	
243.5		20	0	0	
244.7	5	7,740	4,850	4,850	
Device	Routing		Outlet Devices		
#1	Primary		Inlet / Outlet In	, projecting, no headwa nvert= 237.08' / 236.06'	all, Ke= 0.900 ' S= 0.0159 '/' Cc= 0.900 erior, Flow Area= 4.91 sf
#2	Primary		Head (feet) 0. 2.50 3.00 3.5	20 0.40 0.60 0.80 1. 0 4.00 4.50 5.00 5.5	ested Rectangular Weir .00 1.20 1.40 1.60 1.80 2.00 .0 3 2.68 2.66 2.65 2.65 2.65
—2=Br	oad-Creste	d Rectangular	,	s 0.00 cfs) for Pond CB-19:	
801 War	nina: Excee	ded Pond CB-2		12.01 hrs (5.15 cfs 0.0	13 af)
nflow A	0		, ,	, Inflow Depth = 4.45	
nflow		3.65 cfs @ 12			
Outflow Primary		3.63 cfs @ 12 3.63 cfs @ 12			Atten= 0%, Lag= 0.1 min
		PF-1 : Pretreatr		ie- 1.700 ai	
Seconda		0.00 cfs @ 0	.00 hrs, Volum	ne= 0.000 af	
Routina	by Dyn-Stor	-Ind method T	ime Span= 0 0	0-72.00 hrs, dt= 0.01 h	nrs
Peak Ĕle	ev= 245.00'	@ 12.04 hrs S	Surf.Area= 20 s	of Storage= 104 cf	
Flood El	ev= 245.95'	Surf.Area= 40	) sf Storage=	123 cf	
		time= 0.1 min time= 0.1 min		1.766 af (100% of inflov )	N)
	Invert	Avail.Stora	age Storage	Description	
	239.82' 245.95'			URE (Prismatic)Listed	d below (Recalc) <b>c)</b> Listed below (Recalc)
Volume #1	245.95			ailable Storage	
Volume		urf.Area	Inc.Store	Cum.Store	
<u>/olume</u> #1	n Si	Jrt.Area		(cubic-feet)	
/olume #1 #2			cubic-feet)	(00010 1001)	
<u>/olume</u> #1 #2 Elevatio	t) 2		cubic-feet) 0 123	0 123	

3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 10-yr Rainfall=4.69"           Prepared by Labella Associates         Printed 1/4/2024           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 77	3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 10-yr Rainfall=4.6         Prepared by Labella Associates       Printed 1/4/202         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 7
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
245.95         20         0         0           246.60         150         55         55	263.36         12         0         0           264.00         4,336         1,391         1,391           265.00         21,139         12,738         14,129
evice Routing Invert Outlet Devices	
#1       Primary       239.82'       24.0" Round Culvert L= 254.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.82' / 238.55' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf         #2       Secondary       245.95'       2.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32	Device         Routing         Invert         Outlet Devices           #1         Primary         257.54' <b>18.0"</b> Round Culvert L= 251.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 257.54' / 255.03' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         264.55' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
Primary OutFlow Max=23.59 cfs @ 12.04 hrs HW=244.99' TW=239.09' (Dynamic Tailwater) —1=Culvert (Barrel Controls 23.59 cfs @ 7.51 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=239.82' TW=239.53' (Dynamic Tailwater) —2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)	2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 <b>Primary OutFlow</b> Max=7.64 cfs @ 12.24 hrs HW=262.75' TW=260.87' (Dynamic Tailwater) <b>1=Culvert</b> (Outlet Controls 7.64 cfs @ 4.32 fps) <b>2=Broad-Crested Rectangular Weir</b> ( Controls 0.00 cfs)
Summary for Pond CB-2:	Summary for Pond CB-20:
[58] Hint: Peaked 0.19' above defined flood level         [80] Warning: Exceeded Pond CB-1 by 1.16' @ 12.04 hrs (6.20 cfs 0.016 af)         Inflow Area =       2.565 ac, 54.09% Impervious, Inflow Depth = 3.17" for 10-yr event         Inflow =       8.18 cfs @ 12.24 hrs, Volume=       0.677 af         Outflow =       8.08 cfs @ 12.24 hrs, Volume=       0.677 af, Atten= 1%, Lag= 0.1 min         Primary =       8.08 cfs @ 12.24 hrs, Volume=       0.677 af         Routed to Pond CB-22 :       12.24 hrs, Volume=       0.677 af	Inflow Area =       0.793 ac,100.00% Impervious, Inflow Depth =       4.45" for 10-yr event         Inflow =       3.95 cfs @       12.04 hrs, Volume=       0.294 af         Outflow =       3.91 cfs @       12.04 hrs, Volume=       0.294 af         Primary =       3.91 cfs @       12.04 hrs, Volume=       0.294 af         Routed to Pond CB-19 :       0.00 cfs @       0.00 hrs, Volume=       0.000 af         Routed to Pond CB-10 :       Tertiary =       0.00 cfs @       0.00 hrs, Volume=       0.000 af         Routed to Pond CB-18 :         0.000 af
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 263.55' @ 12.07 hrs Surf.Area= 1,308 sf Storage= 194 cf Flood Elev= 263.36' Surf.Area= 24 sf Storage= 70 cf	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 245.17' @ 12.05 hrs Surf.Area= 9 sf Storage= 29 cf Flood Elev= 245.95' Surf.Area= 18 sf Storage= 36 cf
Plug-Flow detention time= 0.3 min calculated for 0.677 af (100% of inflow) Center-of-Mass det. time= 0.2 min(819.0-818.8)	Plug-Flow detention time= 0.4 min calculated for 0.294 af (100% of inflow) Center-of-Mass det. time= 0.2 min(750.1 - 749.9)
Volume         Invert         Avail.Storage         Storage Description           #1         257.54'         70 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         263.36'         14,129 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           14,199 cf         Total Available Storage	Volume         Invert         Avail.Storage         Storage Description           #1         241.97'         36 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         245.95'         171 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           206 cf         Total Available Storage
	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)

Prepare	ed by Labe	<b>Develop_32</b> ella Associates f s/n 09581 © 2			142-00 24-hr S1 10-	h Logistics Center <i>yr Rainfall=4.69"</i> Printed 1/4/2024 Page 79
Elevatio (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
245.9	95	9	0	0		
246.9	90	350	171	171		
Device	Routing	Invert	Outlet Devices			
#1	Primary	241.97'				
			Inlet / Outlet Inv	ert= 241.97' / 23	headwall, Ke= 0.900 39.81' S= 0.0050 '/' th interior, Flow Area	
#2	Seconda	ry 245.95'	Head (feet) 0.2 2.50 3.00 3.50	0 0.40 0.60 0. 4.00 4.50 5.0	<b>Id-Crested Rectangu</b> 80 1.00 1.20 1.40 1 0 5.50 0 2.68 2.68 2.66 2.6	.60 1.80 2.00
			2.65 2.67 2.66			
#3	Tertiary	245.95'	Head (feet) 0.2 2.50 3.00 3.50	0 0.40 0.60 0.4 4.00 4.50 5.0 2.34 2.50 2.70	2.68 2.68 2.66 2.6	.60 1.80 2.00

Primary OutFlow Max=2.98 cfs @ 12.04 hrs HW=245.09' TW=244.99' (Dynamic Tailwater) 1=Culvert (Outlet Controls 2.98 cfs @ 0.95 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=241.97' TW=239.00' (Dynamic Tailwater)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=241.97' TW=237.08' (Dynamic Tailwater) -3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

#### Summary for Pond CB-22:

[80] Warning: Exceeded Pond CB-2 by 0.22' @ 12.02 hrs (2.62 cfs 0.003 af)

Inflow Area =	3.304 ac, 59	9.52% Impe	ervious, Inflow D	epth = 3.33	" for 10-yr e	event
Inflow =	9.70 cfs @	12.04 hrs,	Volume=	0.917 af		
Outflow =	9.36 cfs @	12.24 hrs,	Volume=	0.917 af, A	tten= 3%, La	g= 12.1 min
Primary =	9.36 cfs @	12.24 hrs,	Volume=	0.917 af		
Routed to Por	nd CB-3 :					

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 263.22' @ 12.05 hrs Surf.Area= 12 sf Storage= 98 cf Flood Elev= 263.26' Surf.Area= 24 sf Storage= 99 cf

Plug-Flow detention time= 0.2 min calculated for 0.917 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 810.5 - 810.4 )

	10.20	-01 3/11 00001 1	© 2023 HydroCAD	Conware Colutions	LLC Pag
Volume			torage Storage		
#1 #2	255. 263.				)Listed below (Recalc) smatic)Listed below (Recalc)
#2	203.			ailable Storage	
Elevati	on	Surf.Area	Inc.Store	Cum.Store	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)	
255.0 263.:		12 12	0 99	0 99	
Elevati		Surf.Area	Inc.Store	Cum.Store	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)	
263. 264.		12 3,123	0 1,160	0 1,160	
265.		13,500	8,312	9,471	
Device	Routing	Inve	rt Outlet Devices 3' 18.0" Round		
			2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6	50 4.00 4.50 5.0 ) 2.34 2.50 2.7 56 2.68 2.70 2.7	0 2.68 2.68 2.66 2.65 2.65 2.65
Ê—1=Ci	ulvert (In	let Controls 8.3	33 cfs @ 4.72 fps) ular Weir (Contro	)	
Ê—1=Ci	ulvert (In	let Controls 8.3	33 cfs @ 4.72 fps) Ilar Weir (Contro	)	
1=Ci 2=Br	ulvert (In oad-Cres	let Controls 8.3 sted Rectangu	33 cfs @ 4.72 fps) Ilar Weir (Contro	) Is 0.00 cfs)	
[58] Hin Inflow A Inflow Outflow Primary	ulvert (Ini road-Cres t: Peaked .rea = = = = =	let Controls 8.3 sted Rectangu 1 0.20' above d 5.060 ac, 6 14.41 cfs @ 14.40 cfs @	33 cfs @ 4.72 fps) Jar Weir ( Contro Summary efined flood level	) <b>for Pond CB-</b> s, Inflow Depth = ne= 1.39; ne= 1.39;	<b>23:</b> 3.30" for 10-yr event 2 af 2 af, Atten= 0%, Lag= 0.0 min
[58] Hin Inflow A Inflow Outflow Primary Routing Peak El	ulvert (Ini road-Cress t: Peaked rea = = = ed to Por by Dyn-S ev= 246.5	let Controls 8.3 <b>sted Rectangu</b> 1 0.20' above d 5.060 ac, 6 14.41 cfs @ 14.40 cfs @ 14.40 cfs @ 14.40 cfs @ 14.40 cfs @ 3' @ 12.05 hrs 3' @ 12.05 hrs	33 cfs @ 4.72 fps] Jar Weir ( Contro Summary efined flood level 0.59% Impervious 12.04 hrs, Volun 12.04 hrs, Volun	) is 0.00 cfs) for Pond CB- s, Inflow Depth = ne= 1.39; ne= 1.39; ne= 1.39; 00-72.00 hrs, dt= sf Storage= 55 of	<b>23:</b> 3.30" for 10-yr event 2 af 2 af, Atten= 0%, Lag= 0.0 min 2 af 0.01 hrs

HydroCAL		Associates n 09581 © 20	23 HydroCAD So	oftware Sol	lutions LLC			Page 81	Hydro
Volume	Invert	Avail.Stora	ige Storage De	escription					Elev
#1	242.40'	56	ocf STRUCTU	RE (Prisi	matic)Listed b	elow (Reca	lc)		(
Elevatio (feet		Area (sq-ft) (	Inc.Store cubic-feet)	Cum.Sto (cubic-fe					25 26
242.4		12	0		0				Elev
246.7		12 20	52 4		52 56				(
247.0	0	20	4		90				26
Device	Routing	Invert	Outlet Devices						26
#1	Primary		18.0" Round C						26
			L= 135.0' CPP Inlet / Outlet Inv					0	26
			n= 0.013 Corru						Devic
#2	Primary	246.73'	<b>24.0' long x 5.0</b> Head (feet) 0.20 2.50 3.00 3.50	<b>)' breadth</b> 0 0.40 0.	<b>Broad-Crest</b> .60 0.80 1.00	ed Rectan	gular Weiı	•	#
		x=14.33 cfs (	Coef. (English) 2.65 2.67 2.66 @ 12.04 hrs HW fs @ 5.37 fps)	2.34 2.50 2.68 2.7	0 2.70 2.68 2 0 2.74 2.79	2.88		2.65	Prima 1—1=
-1=Cul	lvert (Inlet Co	x=14.33 cfs ( ontrols 9.49 c	2.65 2.67 2.66	2.34 2.50 2.68 2.7 /=246.93' trols 4.84	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fps	2.88 (Dynamic <sup>*</sup>		2.65	<b>€_</b> 1=
1=Cul 2=Bro	lvert (Inlet Co oad-Crested	x=14.33 cfs ( ontrols 9.49 c <b>Rectangular</b>	2.65 2.67 2.66 12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary fo	2.34 2.50 2.68 2.7 /=246.93' trols 4.84	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fps	2.88 (Dynamic <sup>*</sup>		2.65	
1=Cul 2=Brc [58] Hint:	Ivert (Inlet Co bad-Crested Peaked 0.31	x=14.33 cfs ( ontrols 9.49 c <b>Rectangular</b> ' above defin	2.65 2.67 2.66 2.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary for ed flood level	2.34 2.50 2.68 2.7 /=246.93' trois 4.84 or Pond	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fps CB-24:	2.88 (Dynamic <sup>*</sup>		2.65	<b>1</b> = [58] ⊦ [90] ∨
1=Cul 2=Brc [58] Hint: [90] Warr	Ivert (Inlet Co bad-Crested Peaked 0.31 hing: Qout>Q	x=14.33 cfs ( ontrols 9.49 c <b>Rectangular</b> ' above defin in may requir	2.65 2.67 2.66 12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary fo	2.34 2.50 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b>	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fps CB-24: ing	2.88 (Dynamic <sup>-</sup> इ)		2.65	<b>1=</b> [58] ⊦
[58] Hint: [90] Warr [87] Warr	Vert (Inlet Co bad-Crested Peaked 0.31 ning: Qout>Q ning: Oscillati	x=14.33 cfs ( ontrois 9.49 c <b>Rectangular</b> ' above defin in may requir ons may requ	2.65 2.67 2.66 12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary fe ed flood level e smaller dt or F irie smaller dt or	2.34 2.50 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b> finer Rout	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: CB-24: ing uting (severity	2.88 (Dynamic <sup>-</sup> s) =13)	Tailwater)	2.65	☐_1= [58] H [90] V Inflow Inflow Outflot
[58] Hint: [90] Warr [87] Warr	Peaked 0.31 ning: Qout>Q ning: Oscillati ea = 0.	x=14.33 cfs ( ontrois 9.49 c <b>Rectangular</b> ' above defin in may requir ons may requ 520 ac, 0.00	2.65 2.67 2.66 () 12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary for ed flood level e smaller dt or F iire smaller dt or 0% Impervious,	2.34 2.50 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b> Finer Rout Inflow De	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: CB-24: ing uting (severity epth = 1.66"	2.88 (Dynamic <sup>-</sup> s) =13)	Tailwater)	2.65	☐_1= [58] ŀ [90] ↓ Inflow Outfld Prima
[58] Hint: [90] Warr [87] Warr Inflow Ard Inflow Outflow Primary	Vert (Inlet Co bad-Crested Peaked 0.31 ning: Qout>Q ning: Oscillati ea = 0.7 = 0.7 = 2.3 = 2.5	x=14.33 cfs ( ontrois 9.49 c Rectangular ' above defin in may requir ons may requi 520 ac, 0.00 8 cfs @ 12. 7 cfs @ 12. 97 cfs @ 12.	2.65 2.67 2.66 12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary fe ed flood level e smaller dt or F irie smaller dt or	2.34 2.5( 2.68 2.7 /=246.93' trols 4.84 or Pond Finer Rout Finer Rout Inflow De =	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: CB-24: ing uting (severity	2.88 (Dynamic <sup>-</sup> s) =13) for 10-yr e	Tailwater) event		☐_1= [58] H [90] V Inflow Inflow Outflot
[58] Hint: [90] Warr [87] Warr Inflow An Inflow Outflow Primary Route	Vert (Inlet Co pad-Crested Peaked 0.31 ning: Qout>Q ning: Qout>Q ning: Oscillati ea = 0.7 = 0.7 = 2.3 d to Pond CE	x=14.33 cfs ( ontrols 9.49 c Rectangular ' above defin in may requir ons may requir 520 ac, 0.00 '8 cfs @ 12. '7 cfs @ 12. '7 cfs @ 12. '-3 :	2.65 2.67 2.66 2.12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con' Summary for ed flood level e smaller dt or F uire smaller dt or F uire smaller dt or G 0% Impervious, 13 hrs, Volume 16 hrs, Volume	2.34 2.5( 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b> Finer Rout Finer Ro Inflow De = = =	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: CB-24: ing uting (severity epth = 1.66" 0.072 af 0.072 af, Atte 0.072 af	2.88 (Dynamic <sup>-</sup> s) =13) for 10-yr e en= 0%, La	Tailwater) event		t_1= [58] ⊨ [90] ↓ Inflow Outfla Prima Re Seco Re Routi
1=Cul 2=Bro [58] Hint: [90] Warn [87] Warn Inflow Arn Inflow Arn Inflow Outflow Primary Route Routing I Peak Ele	Ivert (Inlet Co bad-Crested Peaked 0.31 ning: Qout>Q ning: Oscillati ea = 0.7 = 2.3 = 2.3 d to Pond CE by Dyn-Stor-II v= 260.81' @	x=14.33 cfs ( ontrois 9.49 c Rectangular ' above defin in may requir ons may requir 520 ac, 0.00 8 cfs @ 12. 7 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 14 cfs @ 12. 14 cfs @ 12. 15 cfs @ 12. 15 cfs @ 12. 15 cfs @ 12. 15 cfs @ 12. 16 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 18 cfs @ 12. 19 cfs @ 12. 1	2.65 2.67 2.66 2.12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary for ed flood level e smaller dt or F uire smaller dt or 0% Impervious, 13 hrs, Volume 16 hrs, Volume	2.34 2.50 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b> finer Rout Finer Ro Inflow De = = - 72.00 hrs f Storage	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: CB-24: ing uting (severity epth = 1.66" 0.072 af 0.072 af 0.072 af 0.072 af	2.88 (Dynamic <sup>-</sup> s) =13) for 10-yr e en= 0%, La	Tailwater) event		t_1= [58] H [90] V Inflow Outfl Prima Rc Secco Rc
[58] Hint: [90] Warr [87] Warr Inflow Arr Inflow Outflow Primary Route Routing I Peak Ele Flood Ele Plug-Flov	Vert (Inlet Co bad-Crested Peaked 0.31 ning: Qout>Q ning: Oscillati ea = 0. = 0.7 = 2.3 ed to Pond CE by Dyn-Stor-Ir v= 260.81' @ ev= 260.50' \$	x=14.33 cfs ( ontrois 9.49 c Rectangular ' above defin in may requir ons may requir 520 ac, 0.0 8 cfs @ 12. 520 ac, 0.0 8 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 13 cfs @ 12. 14 method, T 12.11 hrs S Surf.Area= 8 me = (not calc	2.65 2.67 2.66 2.12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary fe ed flood level e smaller dt or F uire smaller dt or 0% Impervious, 13 hrs, Volume 16 hrs, Volume 16 hrs, Volume ime Span= 0.00 Surf.Area= 627 s	2.34 2.50 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b> infor Rout Finer Ro Inflow De = = -72.00 hrs f Storage cf	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: <b>CB-24:</b> ing uting (severity epth = 1.66" 0.072 af 0.072 af 0.072 af 0.072 af s, dt= 0.01 hrs e= 114 cf	2.88 (Dynamic <sup>-</sup> s) =13) for 10-yr e en= 0%, La	Tailwater) event		€_1= [58] H [90] V Inflow Inflow Outflo Prima Ro Seco Ro Routi Peak
[58] Hint: [90] Wari [87] Wari Inflow An Inflow An Inflo	Ivert (Inlet Co pad-Crested Peaked 0.31 ning: Qout>Q ning: Oscillati ea = 0.7 = 2.5 ed to Pond CE py Dyn-Stor-In v= 260.81' @ ev= 260.50' w detention tii f-Mass det. tii	x=14.33 cfs ( ontrois 9.49 c Rectangular ' above defin in may requir ons may requir ons may requir 520 ac, 0.00 '8 cfs @ 12. 77 cfs @ 12. 77 cfs @ 12. 77 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. -3 : nd method, T 12.11 hrs S Surf.Area= 8 me= (not calc me= 0.3 min (	2.65 2.67 2.66 2.12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary fe ed flood level e smaller dt or F ire smaller dt or S smaller dt or F ire smaller dt or F ire smaller dt or F ire smaller dt or S smaller dt or F ire smaller dt or S smaller dt o	2.34 2.5( 2.68 2.7 /=246.93' trols 4.84 <b>or Pond</b> iner Rout Finer Ro Inflow De = = -72.00 hrs f Storagi cf	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: CB-24: ing uting (severity epth = 1.66" 0.072 af 0.072 af, Atte 0.072 af s, dt= 0.01 hrs e= 114 cf inflow)	2.88 (Dynamic <sup>-</sup> s) =13) for 10-yr e en= 0%, La	Tailwater) event		t_1= [58] H [90] V Inflow Outflo Prima Routi Peak Flood Plug- Cente <u>Volur</u>
[58] Hint: [90] Warr [87] Warr Inflow Arr Inflow Outflow Primary Route Routing I Peak Ele Flood Ele Plug-Flov	Vert (Inlet Co bad-Crested Peaked 0.31 ning: Qout>Q ning: Oscillati ea = 0. = 0.7 = 2.3 ed to Pond CE by Dyn-Stor-Ir v= 260.81' @ ev= 260.50' \$	x=14.33 cfs ( ontrols 9.49 c Rectangular ' above defin in may requir ons may requir ons may requir 520 ac, 0.00 '8 cfs @ 12. 52 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 17 cfs @ 12. 13 cm thethod, T 12.11 hrs S Surf.Area= 8 me= (not calc me= 0.3 min ( Avail.Stora	2.65 2.67 2.66 2.12.04 hrs HW fs @ 5.37 fps) Weir (Weir Con Summary for ed flood level e smaller dt or F uire smaller dt or F 0% Impervious, 13 hrs, Volume 16 hrs, Volume 16 hrs, Volume ime Span= 0.00 Surf.Area= 627 s sf Storage= 16 ulated: outflow p	2.34 2.50 2.68 2.7 /=246.93' trols 4.84 or Pond inflow De = = -72.00 hrs f Storage cf precedes i escription	0 2.70 2.68 2 0 2.74 2.79 TW=244.93' cfs @ 1.03 fp: <b>CB-24:</b> ing uting (severity epth = 1.66" 0.072 af 0.072 af 0.072 af 0.072 af 0.072 af e = 114 cf	2.88 (Dynamic <sup>-</sup> s) =13) for 10-yr e en= 0%, La	Tailwater) event g= 2.3 min		€_1= [58] H [90] V Inflow Inflow Outflo Prima Routi Peak Flooc Plug- Cente

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			2023 HydroCAD	Software Solution	ons LLC Page
Elevation	ı	Surf.Area	Inc.Store	Cum.Store	
(feet)	)	(sq-ft)	(cubic-feet)	(cubic-feet)	
256.50	)	4	0	0	
260.50	)	4	16	16	
Elevation	า	Surf.Area	Inc.Store	Cum.Store	
(feet)	)	(sq-ft)	(cubic-feet)	(cubic-feet)	
260.50		4	0	0	
261.00		1,000	251	251	
262.00		4,450	2,725	2,976	
263.00		6,787	5,619	8,595	
264.00	)	9,737	8,262	16,857	
	Routing				
#1 I	Primary	256.50			
					headwall, Ke= 0.900
			n= 0.013 Co	rugated PE. sm	256.24' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Coi s @ 12.16 hrs H <sup>1</sup> )4 cfs @ 2.60 fps	rugated PE, sm W=260.64' TW )	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater)
			n= 0.013 Coi s @ 12.16 hrs H <sup>1</sup> )4 cfs @ 2.60 fps	rugated PE, sm N=260.64' TW	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater)
1=Culv	vert (Inl	et Controls 2.0	n= 0.013 Coi s @ 12.16 hrs H <sup>1</sup> )4 cfs @ 2.60 fps	rugated PE, sm W=260.64' TW ) 9 <b>for Pond CI</b>	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater)
-1=Culv 58] Hint:	<b>vert</b> (Inl Peaked	et Controls 2.0 0.24' above de	n= 0.013 Coi s @ 12.16 hrs H' )4 cfs @ 2.60 fps <b>Summary</b>	rugated PE, sm W=260.64' TW ) 7 <b>for Pond CI</b>	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b>
58] Hint: 90] Warn nflow Are	vert (Inl Peaked ing: Qo	et Controls 2.0 0.24' above du t>Qin may rec 5.318 ac, 6	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> V4 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou	rugated PE, sm N=260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> n = 3.27" for 10-yr event
58] Hint: 90] Warn nflow Are nflow	vert (Inl Peaked ing: Qo	et Controls 2.0 0.24' above de tt>Qin may rec 5.318 ac, 6 15 22 cfs @	n= 0.013 Col s @ 12.16 hrs H <sup>1</sup> l4 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs Volur	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 14	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>B-25:</b> n = 3.27" for 10-yr event 47 af
58] Hint: 90] Warn nflow Are nflow Dutflow	vert (Inl Peaked iing: Qoi ea =	et Controls 2.0 0.24' above de tt>Qin may red 5.318 ac, 6 15.22 cfs @ 15.35 cfs @	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> l4 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 hrs, Volur	rugated PE, sm <i>N</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>B-25:</b> n = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min
58] Hint: 90] Warn nflow Are nflow Dutflow Primary	vert (Inl Peaked ing: Qoo ea = = = = =	et Controls 2.0 0.24' above de 1t>Qin may ree 5.318 ac, 6 15.32 cfs @ 15.35 cfs @ 12.55 cfs @	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur	rugated PE, sm <i>N</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>B-25:</b> n = 3.27" for 10-yr event 47 af
58] Hint: 90] Warn nflow Are nflow Dutflow Primary Routed	vert (Inl Peaked ing: Qoo ea = = = = d to Pon	et Controls 2.0 0.24' above du tt>Qin may rec 5.318 ac, 6 15.22 cfs @ 15.35 cfs @ 12.55 cfs @ d PF-1 : Pretre	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> 44 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 hrs, Volur aatment Forebay	rugated PE, sm N=260.64' TW or for Pond CI r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>B-25:</b> n = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min 29 af
58] Hint: 90] Warn nflow Are nflow Outflow Primary Routed Secondar	vert (Inl Peaked ing: Qou ea = = = = d to Pon y =	et Controls 2.0 0.24' above du tt>Qin may rec 5.318 ac, 6 15.22 cfs @ 15.35 cfs @ 12.55 cfs @ d PF-1 : Pretre	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur	rugated PE, sm N=260.64' TW or for Pond CI r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>B-25:</b> n = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min
58] Hint: 90] Warn nflow Are nflow Dutflow Primary Routed Secondar Routed	vert (Inl Peaked ing: Qoo ea = = = d to Pon y = d to Pon	et Controls 2.0 0.24' above du tz>Qin may rev 5.318 ac, 6 15.22 cfs @ 12.55 cfs @ d PF-1 : Pretre 2.80 cfs @ d CB-7 :	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.05 hrs, Volur 12.05 hrs, Volur 22.05 hrs, Volur	rugated PE, sm N=260.64' TW for Pond CI r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 0.0	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> 1 = 3.27" for 10-yr event 147 af 147 af, Atten= 0%, Lag= 0.1 min 129 af
58] Hint: 90] Warn nflow Are nflow 20tflow 20tflow Primary Routed Secondar Routed Routing b	vert (Inl Peaked iing: Qoi ea = = = d to Pon y = d to Pon y Dyn-S	et Controls 2.0 0.24' above du tt>Qin may rec 5.318 ac, 6 15.22 cfs @ 15.35 cfs @ 12.55 cfs @ d PF-1 : Pretre 2.80 cfs @ d CB-7 : tor-Ind method	n= 0.013 Cor s @ 12.16 hrs H 04 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 0.0 00-72.00 hrs, di	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> (47 af (47 af, Atten= 0%, Lag= 0.1 min (29 af) (18 af) (18 af)
58] Hint: 90] Warn Inflow Are Inflow Outflow Primary Routed Secondar Routed Routing b Peak Elev	vert (Inl Peaked ing: Qot ea = = = d to Pon y = d to Pon y Dyn-S v= 244.9	et Controls 2.0 0.24' above du tt>Qin may red 5.318 ac, 6 15.22 cfs @ 12.55 cfs @ 12.55 cfs @ 2.80 cfs @ d CB-7 : tor-Ind methoo 4' @ 12.05 hrs	n= 0.013 Col s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 22.05 hrs, Volur 12.05 hrs, Volur d, Time Span= 0. s Suff.Area= 29	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 0.0 00-72.00 hrs, di sf Storage= 5	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> (47 af (47 af, Atten= 0%, Lag= 0.1 min (29 af) (18 af) (18 af)
58] Hint: 90] Warn nflow Are nflow Dutflow Primary Routed Secondar Routed Route	vert (Inl Peaked ing: Qot ea = = = d to Pon y = d to Pon y Dyn-S v= 244.9	et Controls 2.0 0.24' above du tt>Qin may red 5.318 ac, 6 15.22 cfs @ 12.55 cfs @ 12.55 cfs @ 2.80 cfs @ d CB-7 : tor-Ind methoo 4' @ 12.05 hrs	n= 0.013 Cor s @ 12.16 hrs H 04 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 0.0 00-72.00 hrs, di sf Storage= 5	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> (47 af (47 af, Atten= 0%, Lag= 0.1 min (29 af) (18 af) (18 af)
58) Hint: 90) Warn Inflow Are Inflow Outflow Primary Routes Secondar Routing b Peak Elev Flood Elev Plug-Flow	vert (Inl Peaked ing: Qoi ea = = d to Pon y = d to Pon y Dyn-S v= 244.2 v = 244.3	et Controls 2.0 0.24' above du tt>Qin may rec 5.318 ac, 6 15.22 cfs @ 12.55 cfs @ 12.55 cfs @ 4 DF-1 : Pretre 2.80 cfs @ d CB-7 : tor-Ind methoo 4' @ 12.05 hrs '0' Surf.Area= on time= 0.1 m	n= 0.013 Col s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 s Surf.Area= 29 = 24 sf Storage= nin calculated for	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 0.0 00-72.00 hrs, di sf Storage= 5' = 48 cf 1.447 af (100%	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> 1 = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min 129 af 118 af t= 0.01 hrs 1 cf
58] Hint: 90] Warn nflow Are nflow Dutflow Primary Routed Secondar Routed Routing b Peak Elev Flood Elev Plug-Flow Center-of-	vert (Inl Peaked ing: Qou ea = = = d to Pon y = d to Pon y Dyn-S y= 244.9 v = 244.1 v detenti -Mass d	et Controls 2.0 0.24' above du tzQin may rec 5.318 ac, 6 15.22 cfs @ 12.55 cfs @ d PF-1 : Pretre 2.80 cfs @ d CB-7 : tor-Ind method 4' @ 12.05 hrs 70' Surf.Area: on time= 0.1 m et. time= 0.1 m	n= 0.013 Col s @ 12.16 hrs H <sup>1</sup> l4 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur d, Time Span= 0. s Surf.Area= 29 = 24 sf Storage= hin calculated for nin ( 805.0 - 804.1	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 1.4 ne= 0.0 00-72.00 hrs, dt sf Storage= 5' = 48 cf 1.447 af (100% 9 )	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> 1 = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min 129 af 118 af t= 0.01 hrs 1 cf
58] Hint: 90] Warn nflow Are nflow Dutflow Primary Routed Secondar Routed Secondar Routed Flow Center of Couting b Peak Elev Flow Center of Volume	vert (Inl Peaked ing: Qou a = = = d to Pon y = d to Pon y Dyn-S v= 244.3 v = 244.3 v detenti -Mass d	et Controls 2.0 0.24' above du tt>Qin may red 5.318 ac, 6 15.22 cfs @ 15.35 cfs @ 12.55 cfs @ d PF-1 : Pretre 2.80 cfs @ d CB-7 : tor-Ind methood 4' @ 12.05 hrs 70' Surf.Area= on time= 0.1 m et. time= 0.1 m et. Avail.S	n= 0.013 Cor s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.05 hrs, Volur 12.05 hrs, Volur 13.05 hrs, Volur 14.05 hrs, Volur 15.05 hrs, Volur 15.05 hrs, Volur 10.05 hrs,	rugated PE, sm <i>N</i> =260.64' TW <b>for Pond CI</b> r Finer Routing s, Inflow Depth ne= 1.4 ne= 1.4 ne= 1.4 ne= 0.0 00-72.00 hrs, di sf Storage= 5 = 48 cf 1.447 af (100% 9) Description	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> 1 = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min 29 af 118 af t= 0.01 hrs 1 cf
58] Hint: 90] Warn nflow Are nflow Dutflow Primary Routed Secondar Routed Routing b Peak Elev Flood Elev Plug-Flow Center-of-	vert (Inl Peaked ing: Qou ea = = = d to Pon y = d to Pon y Dyn-S y= 244.9 v = 244.1 v detenti -Mass d	et Controls 2.0 0.24' above du tt>Qin may red 5.318 ac, 6 15.22 cfs @ 15.35 cfs @ 12.55 cfs @ 12.55 cfs @ d CF-1 : Pretre 2.80 cfs @ d CF-7 : tor-Ind method 4' @ 12.05 hrs 70' Surf.Area: on time=0.1 m et. time= 0.1 m et. Avail.S 70'	n= 0.013 Col s @ 12.16 hrs H <sup>1</sup> 14 cfs @ 2.60 fps <b>Summary</b> efined flood level quire smaller dt o 0.94% Imperviou 12.04 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 12.05 hrs, Volur 4, Time Span= 0. s Surf.Area= 29 = 24 sf Storage= nin calculated for nin ( 805.0 - 804.3 torage Storage 48 cf structur	rugated PE, sm <i>W</i> =260.64' TW ) r <b>for Pond CI</b> r, Finer Routing s, Inflow Depth me= 1.4 me= 1.4 me= 1.4 me= 0.0 00-72.00 hrs, di sf Storage= 5' = 48 cf 1.447 af (100% 9) <u>Description</u> re ( <b>Prismatic</b> )L	nooth interior, Flow Area= 0.79 sf =260.18' (Dynamic Tailwater) <b>3-25:</b> 1 = 3.27" for 10-yr event 47 af 47 af, Atten= 0%, Lag= 0.1 min 129 af 118 af t= 0.01 hrs 1 cf

Prepared by Labella Associates Printed 1/4/2024 HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC Page 83	3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 10-yr Rainfall=4         Prepared by Labella Associates       Printed 1/4/2         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
244.70         12         0         0           245.10         20         6         6	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Device         Routing         Invert         Outlet Devices           #1         Primary         240.70' <b>18.0'' Round Culvert</b>	Device Routing Invert Outlet Devices
#2       Secondary       244.70'       L= 82.0'       CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.70' / 230.00'       S= 0.0207 '/'       Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         #2       Secondary       244.70'       10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88	#1       Primary       254.04' <b>18.0" Round Culvert</b> L= 203.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 254.04' / 252.01' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         #2       Primary       265.15' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
— <b>1=Culvert</b> (Inlet Controls 12.54 cfs @ 7.09 fps) econdary OutFlow Max=2.66 cfs @ 12.05 hrs HW=244.93' TW=241.82' (Dynamic Tailwater) — <b>2=Broad-Crested Rectangular Weir</b> (Weir Controls 2.66 cfs @ 1.14 fps)	Primary OutFlow Max=9.19 cfs @ 12.13 hrs HW=260.80' TW=258.45' (Dynamic Tailwater) 1=Culvert (Outlet Controls 9.19 cfs @ 5.20 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)
Summary for Pond CB-3:	Summary for Pond CB-4:
80] Warning: Exceeded Pond CB-24 by 1.84' @ 12.18 hrs (4.06 cfs 0.026 af) nflow Area = 3.902 ac, 52.30% Impervious, Inflow Depth = 3.13" for 10-yr event nflow = 10.94 cfs @ 12.13 hrs, Volume= 1.017 af Dutflow = 10.79 cfs @ 12.13 hrs, Volume= 1.017 af, Atten= 1%, Lag= 0.1 min	Inflow Area =       4.719 ac, 59.95% Impervious, Inflow Depth =       3.34" for 10-yr event         Inflow =       13.47 cfs @       12.04 hrs, Volume=       1.312 af         Outflow =       13.29 cfs @       12.04 hrs, Volume=       1.312 af, Atten= 1%, Lag= 0.2 min         Primary =       13.29 cfs @       12.04 hrs, Volume=       1.312 af         Routed to Pond CB-5 :       12.04 hrs, Volume=       1.312 af
Primary = 10.79 cfs @ 12.13 hrs, Volume= 1.017 af Routed to Pond CB-4 :	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 259.84' @ 12.05 hrs Surf.Area= 12 sf Storage= 94 cf Flood Elev= 263.70' Surf.Area= 24 sf Storage= 140 cf
	Plug-Flow detention time= 0.1 min calculated for 1.312 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( $802.0 - 801.9$ )
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 261.94' @ 12.05 hrs Surf.Area= 20 sf Storage= 158 cf Flood Elev= 264.59' Surf.Area= 40 sf Storage= 211 cf	
Peak Elev= 261.94'@ 12.05 hrs Surf.Area= 20 sf Storage= 158 cf Flood Elev= 264.59' Surf.Area= 40 sf Storage= 211 cf Plug-Flow detention time= 0.3 min calculated for 1.017 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 814.4 - 814.2 )	Volume         Invert         Avail.Storage         Storage Description           #1         252.01'         140 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         263.70'         8,379 cf         Custom Stage Data (Prismatic)Listed below (Recalc)
Peak Elev= 261.94' @ 12.05 hrs Surf.Area= 20 sf Storage= 158 cf Flood Elev= 264.59' Surf.Area= 40 sf Storage= 211 cf Plug-Flow detention time= 0.3 min calculated for 1.017 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 814.4 - 814.2 ) /olume Invert Avail.Storage Storage Description	#1 252.01' 140 cf STRUCTURE (Prismatic)Listed below (Recalc)
Peak Elev= 261.94' @ 12.05 hrs Surf.Area= 20 sf Storage= 158 cf Flood Elev= 264.59' Surf.Area= 40 sf Storage= 211 cf Plug-Flow detention time= 0.3 min calculated for 1.017 af (100% of inflow) Center-of-Mass det. time= 0.2 min (814.4 - 814.2)	#1     252.01'     140 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     263.70'     8,379 cf     Custom Stage Data (Prismatic)Listed below (Recalc)

 South Logistics
 Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 10-yr
 Rainfall=4.69"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
263.70	12	0	0
264.00	970	147	147
265.00	15,493	8,232	8,379

 
 Device
 Routing
 Invert
 Outlet Devices

 #1
 Primary
 252.01'
 **18.0" Round Culvert** L= 241.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 252.01' / 249.60'
 S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=13.00 cfs @ 12.04 hrs HW=259.69' TW=254.39' (Dynamic Tailwater) -1=Culvert (Outlet Controls 13.00 cfs @ 7.35 fps)

### Summary for Pond CB-5:

Inflow Area =	4.814 ac, 59.93% Impervious, Inflow	Depth = 3.32" for 10-yr event
Inflow =	13.60 cfs @ 12.04 hrs, Volume=	1.333 af
Outflow =	13.56 cfs @ 12.04 hrs, Volume=	1.333 af, Atten= 0%, Lag= 0.2 min
Primary =	13.56 cfs @ 12.04 hrs, Volume=	1.333 af
Routed to Po	ond CB-6 :	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 254.42' @ 12.04 hrs Surf.Area= 12 sf Storage= 58 cf Flood Elev= 258.09' Surf.Area= 12 sf Storage= 102 cf

Plug-Flow detention time= 0.1 min calculated for 1.333 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 802.7 - 802.6 )

Volume	Inv	ert Avail.Sto	rage St	orage D	escription	
#1	249.0	50' 10	05 cf <b>S</b> T	RUCTU	JRE (Prismat	tic)Listed below (Recalc)
Elevatio (fee		Surf.Area (sq-ft)	Inc.Sto (cubic-fe		Cum.Store (cubic-feet)	
249.6	50	12		0	0	
258.0	)9	12	1	02	102	
258.3	30	20		3	105	
Device	Routing	Invert	Outlet [	)evices		
#1	Primary	249.60'	18.0" F	Round C	Culvert	
#2	Primary	258.09'	Inlet / C n= 0.01 <b>20.0' lo</b> Head (fr 2.50 3. Coef. (E	utlet Inv 3 Corru <b>ng x 5.</b> eet) 0.2 00 3.50 English)	vert= 249.60' / gated PE, sm 0' breadth Bi 0 0.40 0.60 4.00 4.50 5 2.34 2.50 2	no headwall, Ke= 0.900 /245.40' S= 0.0236'/' Cc= 0.900 nooth interior, Flow Area= 1.77 sf <b>road-Crested Rectangular Weir</b> 0.80 1.00 1.20 1.40 1.60 1.80 2.00 5.00 5.50 .70 2.68 2.68 2.66 2.65 2.65 2.65 2.74 2.79 2.88

-1=Ci	y OutFlow M ulvert (Inlet (	ax=13.50 cfs Controls 13.50	@ 12.04 hrs H 0 cfs @ 7.64 fps r Weir ( Control	W=254.39' T		(Dynamic Ta	Page ilwater)
			Summary	for Pond	CB-6:		
[58] Hin	t: Peaked 0.2	0' above defi	ned flood level				
Inflow A Inflow Outflow Primary Rout	= 14 = 14	.19 cfs @ 12 .18 cfs @ 12 .18 cfs @ 12	23% Impervious 2.04 hrs, Volum 2.04 hrs, Volum 2.04 hrs, Volum	ne= 1 ne= 1	.375 af	for 10-yr eve en= 0%, Lag=	
Peak ĔĬ Flood E Plug-Flo	ev= 249.13' ( lev= 248.93' ow detention t	0 12.05 hrs Surf.Area= 9 time= 0.1 min	Time Span= 0.0 Surf.Area= 16 s sf Storage= 3 calculated for 1 ( 804.0 - 803.9	sf Storage= 32 cf 1.375 af (100	34 cf		
Volume	Invert	Avail.Stor	rage Storage	Description			
#1			<u> </u>				
#1	245.40'	3	6 cf STRUCT		atic)Listed b	elow (Recalc)	
Elevati (fe	on Su et)	rf.Area (sq-ft)	6 cf STRUCT Inc.Store (cubic-feet)		e	oelow (Recalc)	
Elevati	on Su et) 40 93	rf.Area	Inc.Store	URE (Prism Cum.Stor (cubic-feet	e ) ) 2	oelow (Recalc)	
Elevati (fe 245. 248.	on Su et) 40 93 25	rf.Area (sq-ft) 9 9 20	Inc.Store (cubic-feet) 0 32	URE (Prisma Cum.Stor (cubic-feet 3: 3: 3:	e ) ) 2	oelow (Recalc)	
Elevati (fer 245. 248. 249.	on Su et) 40 93 25	rf.Area (sq-ft) 9 9 20	Inc.Store (cubic-feet) 0 32 5 Outlet Devices <b>18.0" Round</b> L= 85.0' CPP Inlet / Outlet Ir	Cum.Stor (cubic-feet 33 34 Culvert , projecting, r ivert= 245.40	, 2 2 5 mo headwall	, Ke= 0.900 S= 0.0353 1/	Cc= 0.900
Elevati (fer 245. 248. 249. Device	on Su et) 40 93 25 Routing	rf.Area (sq-ft) 9 9 20 Invert	Inc.Store (cubic-feet) 0 32 5 Outlet Devices 18.0" Round L= 85.0' CPP Inlet / Outlet In n= 0.013 Corr 20.0' long x 5	URE (Prisma Cum.Stor (cubic-feel 3: 3: <b>Culvert</b> , projecting, r , projecting, r , vert= 245.40 ugated PE, s 5.0' breadth I 20 0.40 0.61 0 4.00 4.50 ) 2.34 2.50	no headwall 22 5 7/242.40' mooth inter <b>Broad-Cres</b> 0 0.80 1.00 5.00 5.50 2.70 2.68	, Ke= 0.900 S= 0.0353 '/ ' or, Flow Area <b>ted Rectangu</b> ) 1.20 1.40 1 2.68 2.66 2.6	Cc= 0.900 = 1.77 sf I <b>lar Weir</b> .60 1.80 2.00

 South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 10-yr
 Rainfall=4.69"

 Prepared by Labella Associates
 Printed 1/4/2024
 1/4/2024

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#### Summary for Pond CB-7:

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area =	2.850 ac, 99.06% Impervious, Inflow Depth = 4.41" for 10-yr event	
Inflow =	16.59 cfs @ 12.04 hrs, Volume= 1.048 af	
Outflow =	16.69 cfs @ 12.04 hrs, Volume= 1.048 af, Atten= 0%, Lag= 0.0 min	
Primary =	16.69 cfs @ 12.04 hrs, Volume= 1.048 af	
Routed to Po	nd PF-1 : Pretreatment Forebay	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 241.86' @ 12.04 hrs Surf.Area= 20 sf Storage= 59 cf Flood Elev= 243.50' Surf.Area= 58 sf Storage= 92 cf

Plug-Flow detention time= 0.4 min calculated for 1.048 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 758.6 - 758.4 )

Volume	Inv	ert Avail.Sto	orage Stora	ge Description	
#1	238.	91'	92 cf STRI	JCTURE (Prismati	ic)Listed below (Recalc)
#2	243.	50' 8,7	02 cf Cust	om Stage Data (Pi	rismatic)Listed below (Recalc)
		8,7	93 cf Total	Available Storage	
Elevatio	on	Surf Area	Inc.Store	Cum Store	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)	
238.9	91	20	0		
243.5	50	20	92	92	
Elevatio	on	Surf.Area	Inc.Store	Cum.Store	
(fee		(sq-ft)	(cubic-feet)		
243.5	50	38	0	0	
244.0	00	1,938	494	494	
245.0	00	14,477	8,208	8,702	
Device	Routing	Invert	Outlet Dev	ices	
#1	Primary	238.91'	24.0" Rou	Ind Culvert	
	· · · · · · · · · · · · · · · · · · ·		L= 81.0' (	CPP, projecting, no	headwall, Ke= 0.900
					238.50' S= 0.0051 '/' Cc= 0.900
			n= 0.013 (	Corrugated PE, sm	ooth interior, Flow Area= 3.14 sf
#2	Primary	244.60'			oad-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. (Eng	lish) 2.34 2.50 2.	70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67	2.66 2.68 2.70 2	.74 2.79 2.88

Primary OutFlow Max=16.63 cfs @ 12.04 hrs HW=241.85' TW=239.09' (Dynamic Tailwater) 1=Culvert (Inlet Controls 16.63 cfs @ 5.29 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)

3 App J Post-Develop 32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 10-yr Rainfall=4.69"
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#### Summary for Pond CB-8:

Inflow Area = Inflow = Outflow = Primary = Routed to P	7.85 cfs @ 1 7.83 cfs @ 1	.07% Impervious 2.04 hrs, Volun 2.04 hrs, Volun 2.04 hrs, Volun atment Forebay	ne= 0.5 ne= 0.5	n = 4.29" for 10-yr event 73 af 73 af, Atten= 0%, Lag= 0.0 min 73 af
Peak Elev= 24 Flood Elev= 24 Plug-Flow dete	n-Stor-Ind method, 1.69' @ 12.04 hrs 4.30' Surf.Area= ntion time= 0.2 min s det. time= 0.2 min	Surf.Area= 12 24 sf Storage= n calculated for	sf Storage= 26 = 57 cf 0.572 af (100%	6 cf
Volume I	nvert Avail.Sto	orage Storage	Description	
		<u> </u>		tic)Listed below (Recalc)
	4.30' 4,8			riśmatic)Listed below (Ŕecalc)
	4,8	98 cf Total Av	ailable Storage	
Elevation	Surf.Area	Inc.Store	Cum.Store	
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)	
239.53	12	0	0	
244.30	12	57	57	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
244.30	12	0	0	
245.00	8,154	2,858	2,858	
245.20	11,676	1,983	4,841	
Device Routi	ng Invert	Outlet Device	s	
#1 Prima		-		
	,	L= 144.0' CF	PP, projecting, n	no headwall, Ke= 0.900
		Inlet / Outlet In	nvert= 239.53' /	238.81' S= 0.0050 '/' Cc= 0.900
#2 Prima	ırv 245.10'			nooth interior, Flow Area= 1.77 sf road-Crested Rectangular Weir
#Z FIIIIa	iry 245.10			0.80 1.00 1.20 1.40 1.60 1.80 2.00
			50 4.00 4.50 5	
				.70 2.68 2.68 2.66 2.65 2.65 2.65
		2.65 2.67 2.6	66 2.68 2.70 2	2.74 2.79 2.88
1=Culvert (	ow Max=7.82 cfs Barrel Controls 7.8 rested Rectangula	32 cfs @ 4.42 fp	os)	=239.09' (Dynamic Tailwater)

 South Logistics
 Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 10-yr
 Rainfall=4.69"

 Prepared by Labella Associates
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 1/4/2024

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#### Summary for Pond CB-9:

Inflow Area	a =	0.759 ac, 8	35.37% Impe	ervious, Inflow De	epth = 4.11"	for 10-yr event
Inflow	=	3.66 cfs @	12.04 hrs,	Volume=	0.260 af	
Outflow	=	3.65 cfs @	12.04 hrs,	Volume=	0.260 af, Att	en= 0%, Lag= 0.1 min
Primary	=	3.65 cfs @	12.04 hrs,	Volume=	0.260 af	-
Routed	to Ponc	CB-8 :				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 242.13' @ 12.04 hrs Surf.Area= 9 sf Storage= 14 cf Flood Elev= 244.05' Surf.Area= 18 sf Storage= 32 cf

Plug-Flow detention time= 0.4 min calculated for 0.260 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 774.0 - 773.9 )

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Volume	Inv	ert Avail.Sto	rage St	prage Description	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	#1	240.	55'	32 cf ST	RUCTURE (Prismatic)Listed below (Recalc)	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	#2	244.	05' 5,8			calc)
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			5,8	92 cf To	tal Available Storage	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					5	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Elevatio	on	Surf.Area	Inc.Sto	re Cum.Store	
244.05         9         32         32           Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           244.05         9         0         0           245.00         8,154         3,877         3,877           245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55' <b>18.0" Round Culvert</b> L= 204.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65	(fee	et)	(sq-ft)	(cubic-fe	et) (cubic-feet)	
Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           244.05         9         0         0           245.00         8,154         3,877         3,877           245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55' <b>18.0" Round Culvert</b> L= 204.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53' S= 0.0050 // Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.400 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	240.5	55	9		0 0	
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           244.05         9         0         0           245.00         8,154         3,877         3,877           245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55' <b>18.0" Round Culvert</b> L = 204.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53'         S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	244.0	)5	9		32 32	
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           244.05         9         0         0           245.00         8,154         3,877         3,877           245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55' <b>18.0" Round Culvert</b> L = 204.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53'         S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65						
244.05         9         0         0           245.00         8,154         3,877         3,877           245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55' <b>18.0" Round Culvert</b> L= 204.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53'         S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 0.50 5.00 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65						
245.00         8,154         3,877         3,877           245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55'         18.0" Round Culvert L= 204.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	(fee	et)	(sq-ft)	(cubic-fe	et) (cubic-feet)	
245.20         11,676         1,983         5,860           Device         Routing         Invert         Outlet Devices           #1         Primary         240.55'         18.0" Round Culvert L= 204.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	244.0	)5	9		0 0	
Device         Routing         Invert         Outlet Devices           #1         Primary         240.55'         18.0" Round Culvert L= 204.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	245.0	00	8,154	3,8	77 3,877	
#1         Primary         240.55' <b>18.0" Round Culvert</b> L= 204.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53'         S= 0.0050 '/'         Cc= 0.900 n= 0.013         Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65	245.2	20	11,676	1,9	83 5,860	
#1         Primary         240.55' <b>18.0" Round Culvert</b> L= 204.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53'         S= 0.0050 '/'         Cc= 0.900 n= 0.013         Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65						
#2         Primary         L= 204.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.55' / 239.53'         S= 0.0050 '/'         Cc= 0.900 n= 0.013           #2         Primary         245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50           Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65         2.65	Device	Routing	Invert	Outlet D	evices	
#2         Primary         245.10'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50           Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65	#1	Primary	240.55'	18.0" F	ound Culvert	
#2         Primary         n= 0.013         Corrugated PE, smooth interior, Flow Area= 1.77 sf           10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20         0.40         0.60         0.80         1.00         1.20         1.40         1.60         1.80         2.00           245.10'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20         0.40         0.60         0.80         1.00         1.20         1.40         1.60         1.80         2.00           2.50         3.00         3.50         4.00         4.50         5.00         5.50           Coef. (English)         2.34         2.50         2.70         2.68         2.66         2.65         2.65				L= 204.	)' CPP, projecting, no headwall, Ke= 0.900	
#2         Primary         245.10'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)         0.20         0.40         0.60         0.80         1.00         1.20         1.40         1.60         1.80         2.00         2.50         3.00         3.50         4.00         4.50         5.00         5.50         Coef. (English)         2.34         2.50         2.70         2.68         2.66         2.65         2.65				Inlet / O	utlet Invert= 240.55' / 239.53' S= 0.0050 '/' Co	c= 0.900
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65				n= 0.01	3 Corrugated PE, smooth interior, Flow Area=	1.77 sf
2.50 3.00 <sup>′</sup> 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	#2	Primary	245.10'	10.0' lo	ng x 5.0' breadth Broad-Crested Rectangula	r Weir
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65				Head (fe	et) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.6	0 1.80 2.00
				2.50 3.	0 3.50 4.00 4.50 5.00 5.50	
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88				Coef. (E	nglish) 2.34 2.50 2.70 2.68 2.68 2.66 2.65	2.65 2.65
				2.65 2.	67 2.66 2.68 2.70 2.74 2.79 2.88	

Primary OutFlow Max=3.54 cfs @ 12.04 hrs HW=242.11' TW=241.69' (Dynamic Tailwater) 1=Culvert (Outlet Controls 3.54 cfs @ 2.39 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)

	abella Associa 20-3f_s/n 09581	© 2023 HydroCAD Softwar	e Solutions LLC	Printed 1/4/2024 Page 90
	Su	mmary for Pond DET	-1: Detention Basin	
[44] Hint: Outlet	device #2 is be	elow defined storage		
Inflow Area =	9.923 ac, 7	72.74% Impervious, Inflo	w Depth = 2.72" for 1	0-yr event
Inflow =	28.60 cfs @	12.10 hrs, Volume=	2.248 af	-
Outflow =	9.94 cfs @	12.60 hrs, Volume=	2.248 af, Atten= 65	%, Lag= 29.8 min
Primary =	9.94 cfs @	12.60 hrs, Volume=	2.248 af	
Routed to Po	ond DP-1 : Gidn	leytown Creek		
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	
Routed to Po	ond DP-1 : Gidn	leytown Creek		
	~	. <del>.</del>		
		d, Time Span= 0.00-72.0		
Peak Elev= 234	.84 @ 12.60 hr	s Surf.Area= 15,126 sf	Storage= 37,070 cf	

Plug-Flow detention time= 331.6 min calculated for 2.247 af (100% of inflow) Center-of-Mass det. time= 331.9 min (1,167.6 - 835.7)

#1	232.00'	73,41	18 cf Custom	Stage Data (P	rismatic)Listed below (Recalc)
Elevatio	on Su	urf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
232.0	00	11,095	0	0	
233.0	00	12,455	11,775	11,775	
234.0		13,886	13,171	24,946	
235.0		15,369	14,628	39,573	
236.0		16,908	16,139	55,712	
237.0	00	18,504	17,706	73,418	
Device	Routing	Invert	Outlet Devices	5	
#1	Primary	231.91'	12.0" Round	Culvert	
					headwall, Ke= 0.900
					231.84' S= 0.0047 '/' Cc= 0.900
					ooth interior, Flow Area= 0.79 sf
#2	Device 1	231.91'			.600 Limited to weir flow at low heads
#3	Device 1	233.65'			ad-Crested Rectangular Weir
				20 0.40 0.60	
#4	Primary	236.05'		) 2.80 2.92 3.	abilized Overflow to Wetland
#4	Filliary	230.05			0.80 1.00 1.20 1.40 1.60 1.80 2.00
				0 4.00 4.50 5	
					70 2.68 2.68 2.66 2.65 2.65 2.65
				6 2.68 2.70 2	
#5	Secondary	236.50'	10.0' long x 5	5.0' breadth En	nergency Overflow
			Head (feet) 0.	20 0.40 0.60	0.80 1.00 1.20 1.40 1.60 1.80 2.00
				0 4.00 4.50 5	
					70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67 2.6	6 2.68 2.70 2	.74 2.79 2.88

Newburgh South Logistics Center Newburgh South Logistics Center NY-32142-00 24-hr S1 10-yr Rainfall=4.69" NY-32142-00 24-hr S1 10-yr Rainfall=4.69" 3\_App J\_Post-Develop\_32142-00 3\_App J\_Post-Develop\_32142-00 Printed 1/4/2024 Printed 1/4/2024 Prepared by Labella Associates Prepared by Labella Associates HvdroCAD® 10.20-3f s/n 09581 © 2023 HvdroCAD Software Solutions LLC Page 91 HvdroCAD® 10.20-3f s/n 09581 © 2023 HvdroCAD Software Solutions LLC #6 Primary 233.65' 12.0" Round Culvert X 2.00 #3 Secondary 236.06' 24.0" Round Outlet Pipe to Detention L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 L= 45.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/' Cc= 0.900 Inlet / Outlet Invert= 236.06' / 235.83' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior. Flow Area= 0.79 sf n= 0.012 Corrugated PE, smooth interior. Flow Area= 3.14 sf Primary OutFlow Max=9.94 cfs @ 12.60 hrs HW=234.84' TW=0.00' (Dynamic Tailwater) Primary OutFlow Max=23.80 cfs @ 12.05 hrs HW=241.03' TW=236.27' (Dvnamic Tailwater) -1=Culvert (Inlet Controls 4.65 cfs @ 5.92 fps) 1=Outlet Pipe to Bioretention (Inlet Controls 23.80 cfs @ 7.58 fps) -2=CPv Orifice (Passes < 0.40 cfs potential flow) -3=Broad-Crested Rectangular Weir (Passes < 17.15 cfs potential flow) Secondary OutFlow Max=5.87 cfs @ 12.05 hrs HW=241.03' TW=233.10' (Dynamic Tailwater) -3=Outlet Pipe to Detention (Passes 5.87 cfs of 23.80 cfs potential flow) -4=Stabilized Overflow to Wetland (Controls 0.00 cfs) -6=Culvert (Barrel Controls 5.29 cfs @ 3.58 fps) 2=Broad-Crested Rectangular Weir (Weir Controls 5.87 cfs @ 2.21 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) 5=Emergency Overflow ( Controls 0.00 cfs) Summary for Pond DP-1: Gidneytown Creek [40] Hint: Not Described (Outflow=Inflow) Summary for Pond DIV-2: Diversion 2 Inflow Area = 50.078 ac, 42.15% Impervious, Inflow Depth > 2.48" for 10-yr event [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1) Inflow = 45.31 cfs @ 12.34 hrs. Volume= 10.363 af 45.31 cfs @ 12.34 hrs, Volume= Primarv = 10.363 af, Atten= 0%, Lag= 0.0 min Inflow Area = 7.583 ac, 92.78% Impervious, Inflow Depth = 4.31" for 10-yr event 29.89 cfs @ 12.08 hrs, Volume= Inflow = 2.726 af Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs 2.726 af, Atten= 1%, Lag= 0.0 min Outflow = 29.68 cfs @ 12.05 hrs, Volume= 23.80 cfs @ 12.05 hrs, Volume= Primary = 2.659 af Summary for Pond P-1: Wet Pond Routed to Pond PF-2 : Pretreatment Forebay Secondary = 5.88 cfs @ 12.05 hrs, Volume= 0.067 af Inflow Area = 16.392 ac, 75.11% Impervious, Inflow Depth = 3.89" for 10-yr event Routed to Pond DET-1 : Detention Basin Inflow = 67.61 cfs @ 12.05 hrs, Volume= 5.308 af Outflow = 10.75 cfs @ 12.61 hrs. Volume= 4.532 af. Atten= 84%. Lag= 33.8 min Routing by Dyn-Stor-Ind method. Time Span= 0.00-72.00 hrs. dt= 0.01 hrs Primary = 10.75 cfs @ 12.61 hrs, Volume= 4.532 af Peak Elev= 241.03' @ 12.05 hrs Surf.Area= 24 sf Storage= 119 cf Routed to Pond DP-1 : Gidnevtown Creek Flood Elev= 244.67' Surf.Area= 24 sf Storage= 207 cf 0.00 cfs @ 0.00 hrs, Volume= Secondary = 0.000 af Routed to Pond DP-1 : Gidneytown Creek Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 0.1 min (759.8 - 759.7) Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 238.63' @ 12.61 hrs Surf.Area= 81,250 sf Storage= 125,529 cf Avail.Storage Storage Description Volume Invert Flood Elev= 239.50' Surf.Area= 84,891 sf Storage= 177,145 cf #1 236 06' 207 cf Ponding before Weir (Prismatic)Listed below (Recalc) Plug-Flow detention time= (not calculated: outflow precedes inflow) Elevation Surf.Area Inc.Store Cum.Store Center-of-Mass det. time= 735.8 min (1.511.5 - 775.8) (feet) (sq-ft) (cubic-feet) (cubic-feet) 236.06 24 0 0 Volume Invert Avail.Storage Storage Description 244.67 24 207 207 #1 232.00' 0 cf Permanent Pool (Prismatic)Listed below (Recalc) 62.038 cf Overall x 0.0% Voids Device Routing Invert Outlet Devices #2 236.00' 208,229 cf Extended Detention (Prismatic)Listed below (Recalc) #1 Primary 236.06' 24.0" Round Outlet Pipe to Bioretention 208,229 cf Total Available Storage L= 44.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 236.06' / 235.50' S= 0.0127 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf 5.0' long x 0.5' breadth Broad-Crested Rectangular Weir #2 Device 3 240.50' Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

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		Develop_32		111-	32142-00 24-hr S1 10-yr Rainfall=4.6 Printed 1/4/202
		ella Associates		Software Solution	
yurocr	10.20-	51 S/11 09 50 1 @ 2	2023 HJUIOCAD	Soltware Solution	Tage :
Elevati	on	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
232.	00	12,694	0	0	
233.		13,630	13,162	13,162	
234.		14,592	14,111	27,273	
235.		15,579	15,086	42,359	
236.	00	23,780	19,680	62,038	
Elevati	on	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
236.		23,780	0	0	
237.		50,853	37,317	37,317	
238.		54,875	52,864	90,181	
239.		58,999	56,937	147,118	
240.	00	63,223	61,111	208,229	
evice	Routing	Invert			
#1	Primary	235.10'		I Culvert From	
					headwall, Ke= 0.900
					235.00' S= 0.0050 '/' Cc= 0.900
	Device	005 401			ooth interior, Flow Area= 0.79 sf
#2 #3	Device 1 Device 1				.600 Limited to weir flow at low heads
#3	Device 1	238.00'		.20 0.40 0.60	ad-Crested Rectangular Weir
				n) 2.80 2.92 3.	
#4	Primary	238.00'			oodplain X 2.00
#4	i maiy	250.00			onforming to fill, Ke= 0.500
					235.00' S= 0.0909 '/' Cc= 0.900
					ooth interior, Flow Area= 0.79 sf
#5	Primary	238.40'			Broad-Crested Rectangular Weir
	······	200.10			0.80 1.00 1.20 1.40 1.60
					70 2.69 2.68 2.69 2.67 2.64
	Seconda	ry 239.50'			mergency Overflow Weir
#6		•			0.80 1.00 1.20 1.40 1.60
#6					

The second second

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -6=Emergency Overflow Weir ( Controls 0.00 cfs)

	10.20-31 5	00001	9 ZUZ 3 F	IYUIOCAD	Software Solu					Page
		Sumn	nary fo	r Pond	PF-1: Pret	reatmen	t For	ebay		
Inflow Area					s, Inflow Dep		6" for	10-yr	event	
		74 cfs @				.889 af	• · ·			
ounon		39 cfs @ 39 cfs @					Atten=	1%, La	g= 0.4 mi	n
		-1 : Wet Po		rs, volur	ne= 4	.889 af				
					00-72.00 hrs,					
					69 sf Storag	e= 2,388	cf			
Flood Elev:	= 239.50'	Surf.Area	= 8,510	sf Stora	ge= 4,249 cf					
					4 000 - 6 (400	0/ - 6: 61-				
					4.889 af (100	% of inflo	w)			
Center-of-N	lass det. t	ime= 1.6 n	11n ( 772	.2 - 770.0	0)					
Volume	Invert	Avail.S			Description					
#1	235.00'		0 cf		tment Foreba		atic)Lis	sted bel	ow (Recal	c)
		-			Overall x 0.0					
#2	238.50'				w (Prismatic		elow (R	ecalc)		
		9,	918 cf	Total Av	ailable Stora	ge				
Elevation	Sur	rf.Area	Inc	.Store	Cum.Stor	е				
(feet)		(sq-ft)	(cubio	c-feet)	(cubic-fee	<u>t)</u>				
235.00		496		0		0				
236.00		1,348		922	92					
237.00		2,257		1,803	2,72					
238.00		3,223		2,740	5,46					
238.50		3,726		1,737	7,20	2				
Elevation	Sur	rf.Area	Inc	.Store	Cum.Stor	е				
(feet)		(sq-ft)	(cubio	c-feet)	(cubic-fee	<u>t)</u>				
238.50		3,726		0		0				
239.00		4,244		1,993	1,99					
240.00		5,323		4,784	6,77	6				
240.50		7,246		3,142	9,91	8				
Device R	outing	Inve	t Outle	et Device	S					
#1 P	rimary	238.50			10.0' breadth					eir
					0.20 0.40 0.6					
			Coe	f. (Englisł	n) 2.49 2.56	2.70 2.6	9 2.68	2.69 2	2.67 2.64	
					1/1/-220 001 -	T\A/-227 (	ר ידג	vnomio	Tailwatar)	
Primary O					ontrols 61.20			ynanic	Taliwater	

	by Labella Associa 0 10.20-3f s/n 09581		Software Solutions I	LC	Printed 1/4/2024 Page 95
	Sumr	nary for Pond	PF-2: Pretreatr	nent Forebay	
nflow Area nflow Dutflow Primary Routed	= 26.02 cfs @ = 24.32 cfs @	12.03 hrs, Volu 12.06 hrs, Volu 12.06 hrs, Volu	me= 2.810 me= 2.810	af af, Atten= 7%, La	
Peak Elev=	Dyn-Stor-Ind metho = 236.32' @ 12.18 hr = 236.50' Surf.Area	s Surf.Area= 15 = 15,398 sf Sto	,121 sf Storage= 6 age= 7,696 cf	6,198 cf	
	detention time= 54.8 Mass det. time= 54.6			f inflow)	
Volume	Invert Avail.S	Storage Storage			
#1	232.00'	0 cf Pretrea	tment Forebay (Pr	ismatic)Listed belo	ow (Recalc)
#2	235.50' 12		cf Overall x 0.0% \ GE ABOVE (Prisn		Recalc)
#2			GE ABOVE (Prism		Recalc)
	12	,118 cf <b>STORA</b> ,118 cf Total A	GE ABOVE (Prisn /ailable Storage		Recalc)
Elevation	12 Surf.Area	, <u>118 cf <b>STORA</b></u> ,118 cf Total A Inc.Store	<u>GE ABOVE (Prisn</u> vailable Storage Cum.Store		Recalc)
Elevation (feet)	12 Surf.Area (sq-ft)	, <u>118 cf</u> STORA ,118 cf Total A Inc.Store (cubic-feet)	GE ABOVE (Prism vailable Storage Cum.Store (cubic-feet)		Recalc)
Elevation (feet) 232.00	12 Surf.Area (sq-ft) 2,149	,118 cf STORA ,118 cf Total A Inc.Store (cubic-feet) 0	GE ABOVE (Prism vailable Storage Cum.Store (cubic-feet) 0		Recalc)
Elevation (feet) 232.00 233.00	12 Surf.Area (sq-ft) 2,149 3,434	<u>,118 cf</u> STORA ,118 cf Total A Inc.Store (cubic-feet) 0 2,792	GE ABOVE (Prisn vailable Storage Cum.Store (cubic-feet) 0 2,792		Recalc)
Elevation (feet) 232.00 233.00 234.00	12 Surf.Area (sq-ft) 2,149 3,434 4,791	,118 cf STORA ,118 cf Total A (cubic-feet) 0 2,792 4,113	GE ABOVE (Prisn vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904		Recalc)
Elevation (feet) 232.00 233.00	12 Surf.Area (sq-ft) 2,149 3,434	<u>,118 cf</u> STORA ,118 cf Total A Inc.Store (cubic-feet) 0 2,792	GE ABOVE (Prisn vailable Storage Cum.Store (cubic-feet) 0 2,792		Recalc)
Elevation (feet) 232.00 233.00 234.00 235.00	12 Surf.Area (sq-ft) 2,149 3,434 4,791 6,213	<u>,118 cf</u> <b>STORA</b> ,118 cf Total A Inc.Store (cubic-feet) 0 2,792 4,113 5,502	GE ABOVE (Prism /ailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406		Recalc)
Elevation (feet) 232.00 233.00 234.00 235.00 235.50	12 Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937	118 cf STORA 118 cf Total A Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288	GE ABOVE (Prisn vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694		Recalc)
Elevation (feet) 232.00 233.00 234.00 235.00 235.50 Elevation	12 Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area	118 cf STORA ,118 cf Total A Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288 Inc.Store	GE ABOVE (Prisn vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694 Cum.Store		Recalc)
Elevation (feet) 232.00 233.00 234.00 235.00 235.50 Elevation (feet)	12 Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area (sq-ft)	118 cf STORA ,118 cf Total A Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288 Inc.Store (cubic-feet)	GE ABOVE (Prisn /ailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694 Cum.Store (cubic-feet)		Recalc)
Elevation (feet) 232.00 233.00 234.00 235.00 235.50 Elevation (feet) 235.50	12 Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area (sq-ft) 6,937	<u>118 cf</u> <b>STORA</b> ,118 cf Total A Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288 Inc.Store (cubic-feet) 0	GE ABOVE (Prisn vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 12,406 15,694 Cum.Store (cubic-feet) 0		Recalc)
Elevation (feet) 232.00 233.00 234.00 235.00 235.50 Elevation (feet) 235.50 236.00	12 Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area (sq-ft) 6,937 7,693 9,228	<u>118 cf</u> <b>STORA</b> ,118 cf Total A Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288 Inc.Store (cubic-feet) 0 3,658	GE ABOVE (Prisn           /ailable Storage           Cum.Store           (cubic-feet)           0           2,792           6,904           12,406           15,694           Cum.Store           (cubic-feet)           0           3,658           12,118		Recalc)

3_App J_Post-Develop_32142-00 Prepared by Labella Associates	Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfal/=5.89" Printed 1/4/2024
	droCAD Software Solutions LLC Page 96
Runoff by SCS	.00-72.00 hrs, dt=0.01 hrs, 7201 points TR-20 method, UH=SCS, Weighted-CN -Ind method - Pond routing by Dyn-Stor-Ind method
SubcatchmentPS-1:	Runoff Area=59,320 sf 46.38% Impervious Runoff Depth=3.78" Flow Length=321' Tc=14.2 min CN=81 Runoff=4.44 cfs 0.429 af
SubcatchmentPS-10:	Runoff Area=11,265 sf 67.79% Impervious Runoff Depth=3.58" Tc=6.0 min CN=79 Runoff=1.11 cfs 0.077 af
SubcatchmentPS-11:	Runoff Area=124,140 sf 99.06% Impervious Runoff Depth=5.53" Tc=6.0 min CN=97 Runoff=16.98 cfs 1.314 af
SubcatchmentPS-12:	Runoff Area=172,728 sf 100.00% Impervious Runoff Depth=5.65" Tc=6.0 min CN=98 Runoff=23.75 cfs 1.868 af
SubcatchmentPS-13:	Runoff Area=34,560 sf 100.00% Impervious Runoff Depth=5.65" Tc=6.0 min CN=98 Runoff=4.75 cfs 0.374 af
SubcatchmentPS-14:	Runoff Area=35,140 sf 97.85% Impervious Runoff Depth=5.65" Tc=6.0 min CN=98 Runoff=4.83 cfs 0.380 af
SubcatchmentPS-15:	Runoff Area=12,293 sf 0.00% Impervious Runoff Depth=4.20" Tc=6.0 min CN=85 Runoff=1.41 cfs 0.099 af
SubcatchmentPS-16:	Runoff Area=68,931 sf 0.00% Impervious Runoff Depth=4.30" Tc=6.0 min CN=86 Runoff=8.06 cfs 0.568 af
SubcatchmentPS-17:	Runoff Area=26,060 sf 83.73% Impervious Runoff Depth=5.30" Tc=6.0 min CN=95 Runoff=3.51 cfs 0.264 af
SubcatchmentPS-18:	Runoff Area=31,224 sf 79.46% Impervious Runoff Depth=5.19" Tc=6.0 min CN=94 Runoff=4.16 cfs 0.310 af
SubcatchmentPS-19:	Runoff Area=13,991 sf 95.15% Impervious Runoff Depth=5.53" Tc=6.0 min CN=97 Runoff=1.91 cfs 0.148 af
SubcatchmentPS-2:	Runoff Area=52,401 sf 62.82% Impervious Runoff Depth=4.85" Flow Length=139' Tc=7.8 min CN=91 Runoff=6.14 cfs 0.486 af
SubcatchmentPS-20:	Runoff Area=777 sf 100.00% Impervious Runoff Depth=5.65" Tc=6.0 min CN=98 Runoff=0.11 cfs 0.008 af
SubcatchmentPS-21:	Runoff Area=6,993 sf 69.58% Impervious Runoff Depth=5.07" Tc=6.0 min CN=93 Runoff=0.92 cfs 0.068 af
SubcatchmentPS-22:	Runoff Area=10,506 sf 66.97% Impervious Runoff Depth=4.96" Tc=6.0 min CN=92 Runoff=1.36 cfs 0.100 af
SubcatchmentPS-23:	Runoff Area=92,825 sf 95.28% Impervious Runoff Depth=5.53" Tc=6.0 min CN=97 Runoff=12.69 cfs 0.983 af

t-Develop_32142-00 bella Associates	NY-32142-00 24-hr S1 25-yr Rainfall=5.8 Printed 1/4/202
	CAD Software Solutions LLC Page 9
<b>_</b>	· · · · · · · · · · · · · · · · · · ·
S-24:	Runoff Area=112,817 sf 98.41% Impervious Runoff Depth=5.65 Tc=6.0 min CN=98 Runoff=15.51 cfs 1.220 a
S-25:	Runoff Area=23,503 sf 23.00% Impervious Runoff Depth=4.52 Tc=6.0 min CN=88 Runoff=2.86 cfs 0.203 a
S-26:	Runoff Area=23,847 sf 0.00% Impervious Runoff Depth=3.68 Tc=6.0 min CN=80 Runoff=2.42 cfs 0.168 a
S-27:	Runoff Area=54,566 sf 4.64% Impervious Runoff Depth=3.78 Tc=6.0 min CN=81 Runoff=5.68 cfs 0.395 a
	Runoff Area=1,035,126 sf
S-29:	Runoff Area=36,671 sf 100.00% Impervious Runoff Depth=5.65 Tc=6.0 min CN=98 Runoff=5.04 cfs 0.397 a
S-3:	Runoff Area=32,215 sf 78.33% Impervious Runoff Depth=5.07 Tc=6.0 min CN=93 Runoff=4.24 cfs 0.313 a
S-30:	Runoff Area=33,056 sf 85.37% Impervious Runoff Depth=5.30 Tc=6.0 min CN=95 Runoff=4.45 cfs 0.335 a
<b>S-4:</b>	Runoff Area=22,641 sf 0.00% Impervious Runoff Depth=2.54 low Length=284' Tc=12.3 min CN=68 Runoff=1.18 cfs 0.110 a
S-5:	Runoff Area=3,406 sf 94.86% Impervious Runoff Depth=5.53 Tc=6.0 min CN=97 Runoff=0.47 cfs 0.036 a
S-6:	Runoff Area=35,574 sf 96.53% Impervious Runoff Depth=5.53 Tc=6.0 min CN=97 Runoff=4.86 cfs 0.377 a
S-7:	Runoff Area=4,143 sf 59.04% Impervious Runoff Depth=3.68 Tc=6.0 min CN=80 Runoff=0.42 cfs 0.029 a
S-8:	Runoff Area=8,693 sf 67.40% Impervious Runoff Depth=3.58 Tc=6.0 min CN=79 Runoff=0.86 cfs 0.060 a
S-9:	Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.65 Tc=6.0 min CN=98 Runoff=0.28 cfs 0.022 a
	Peak Elev=236.32' Storage=34,809 cf Inflow=30.94 cfs 3.967 a 921 af Secondary=0.00 cfs 0.000 af Outflow=27.35 cfs 3.967 a
Primary=7.34 cfs 0	Peak Elev=263.96' Storage=2,231 cf Inflow=4.44 cfs 0.429 a 0.429 af Secondary=0.00 cfs 0.000 af Outflow=7.34 cfs 0.429 a
Primary=5.94 cfs 0	Peak Elev=243.98' Storage=455 cf Inflow=6.81 cfs 0.384 a 0.384 af Secondary=0.00 cfs 0.000 af Outflow=5.94 cfs 0.384 a

Prepared by La	Newburgh South Logistics Center           t-Develop_32142-00         NY-32142-00 24-hr S1 25-yr         Rainfall=5.89           bella Associates         Printed 1/4/2024         1/4/2024           0-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 98
Pond CB-11:	Peak Elev=260.35' Storage=12 cf Inflow=3.51 cfs 0.264 af 18.0" Round Culvert n=0.013 L=216.0' S=0.0100 '/' Outflow=3.48 cfs 0.264 af
Pond CB-12:	Peak Elev=259.76' Storage=34 cf Inflow=7.63 cfs 0.574 af 18.0" Round Culvert n=0.013 L=192.0' S=0.0100 '/' Outflow=7.59 cfs 0.574 af
Pond CB-13:	Peak Elev=258.30' Storage=40 cf Inflow=9.50 cfs 0.722 af 18.0" Round Culvert n=0.013 L=137.0' S=0.0100 '/' Outflow=9.43 cfs 0.722 af
Pond CB-14:	Peak Elev=256.36' Storage=33 cf Inflow=9.54 cfs 0.731 af Outflow=9.53 cfs 0.731 af
Pond CB-15:	Peak Elev=253.07' Storage=38 cf Inflow=10.44 cfs 0.799 af Outflow=10.43 cfs 0.799 af
Pond CB-16:	Peak Elev=247.69' Storage=69 cf Inflow=11.79 cfs 0.898 af Outflow=11.97 cfs 0.898 af
Pond CB-17: Primary=18.02 cfs	Peak Elev=245.14' Storage=4,038 cf Inflow=24.64 cfs 1.881 af .881 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=18.02 cfs 1.881 af
Pond CB-18:	Peak Elev=243.86' Storage=535 cf Inflow=34.44 cfs 3.490 af Outflow=31.06 cfs 3.490 af
Pond CB-19:	Peak Elev=246.20' Storage=134 cf Inflow=28.67 cfs 2.233 af Primary=26.62 cfs 2.232 af Secondary=0.63 cfs 0.001 af Outflow=27.25 cfs 2.233 af
Pond CB-2:	Peak Elev=263.80' Storage=714 cf Inflow=9.25 cfs 0.916 af Outflow=9.13 cfs 0.916 af
Pond CB-20: Primary=4.96 cfs	Peak Elev=246.08' Storage=40 cf Inflow=4.75 cfs 0.374 af 0.365 af Secondary=2.09 cfs 0.004 af Tertiary=2.09 cfs 0.004 af Outflow=5.09 cfs 0.374 af
Pond CB-22:	Peak Elev=263.42' Storage=154 cf Inflow=10.62 cfs 1.228 af Outflow=10.03 cfs 1.228 af
Pond CB-23:	Peak Elev=246.96' Storage=55 cf Inflow=15.48 cfs 1.861 af Outflow=15.51 cfs 1.861 af
Pond CB-24:	Peak Elev=261.11' Storage=400 cf Inflow=1.18 cfs 0.110 af 12.0" Round Culvert n=0.013 L=26.0' S=0.0100 '/ Outflow=3.30 cfs 0.110 af
Pond CB-25:	Peak Elev=244.99' Storage=52 cf Inflow=16.56 cfs 1.938 af Primary=12.65 cfs 1.897 af Secondary=3.85 cfs 0.041 af Outflow=16.49 cfs 1.938 af
Pond CB-3:	Peak Elev=262.56' Storage=170 cf Inflow=12.34 cfs 1.374 af Outflow=11.54 cfs 1.374 af
Pond CB-4:	Peak Elev=260.76' Storage=105 cf Inflow=14.41 cfs 1.751 af 18.0" Round Culvert n=0.013 L=241.0' S=0.0100 '/' Outflow=14.04 cfs 1.751 af

3_App J_Post-Develop_32142-00 Prepared by Labella Associates	Newburgh NY-32142-00 24-hr S	Nouth Logistics Center 1 25-yr Rainfall=5.89" Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 Hyd	roCAD Software Solutions LLC	Page 99
Pond CB-5:	Peak Elev=254.95' Storage=64 cf II Ou	nflow=14.43 cfs  1.780 af utflow=14.41 cfs  1.780 af
Pond CB-6:	Peak Elev=249.16' Storage=35 cf   I Ou	nflow=15.22 cfs  1.840 af utflow=15.22 cfs  1.840 af
Pond CB-7:	Peak Elev=242.81' Storage=78 cf li Ou	nflow=20.33 cfs  1.355 af utflow=20.34 cfs  1.355 af
Pond CB-8:	Peak Elev=242.53' Storage=36 cf II C	nflow=10.13 cfs  0.732 af Dutflow=9.93 cfs  0.732 af
Pond CB-9:	Peak Elev=243.03' Storage=22 cf C	Inflow=4.45 cfs 0.335 af Dutflow=4.48 cfs 0.335 af
Pond DET-1: Detention Basin Primary=14.45 cfs	Peak Elev=235.74' Storage=51,423 cf li 3.210 af Secondary=0.00 cfs 0.000 af Ou	
Pond DIV-2: Diversion 2 Primary=24.01 cfs	Peak Elev=241.10' Storage=121 cf Ii 3.369 af Secondary=7.20 cfs 0.121 af Ou	
Pond DP-1: Gidneytown Creek		flow=77.86 cfs  14.691 af nary=77.86 cfs  14.691 af
Pond P-1: Wet Pond Primary=22.67 cfs	Peak Elev=238.98' Storage=146,011 cf II 6.098 af Secondary=0.00 cfs 0.000 af Ou	
Pond PF-1: Pretreatment Forebay	Peak Elev=239.14' Storage=2,609 cf II Ou	nflow=70.06 cfs  6.316 af utflow=69.51 cfs  6.316 af
Pond PF-2: Pretreatment Forebay	Peak Elev=236.34' Storage=6,379 cf II Ou	nflow=26.82 cfs  3.572 af utflow=25.40 cfs  3.572 af
	ac Runoff Volume = 16.522 af Avera 57.85% Pervious = 28.971 ac 42.15%	

			op_32142	2-00	NY		nr S1 25-yr Rainfall=5.89"
			sociates 9581 © 202	3 HydroCAI	Software Soluti	ons LLC	Printed 1/4/2024 Page 100
			Sun	nmary fo	r Subcatchm	ent PS-1:	-
Runoff Route	= ed to Pon		fs @ 12.1	5 hrs, Volu	me= 0.	429 af, Depth=	3.78"
			thod, UH=S j-yr_Rainfal		ted-CN, Time S	Span= 0.00-72.00	0 hrs, dt= 0.01 hrs
А	rea (sf)	CN	Description				
	21,713				od, HSG D		
	20,423 10,094		Paved park		od, HSG A		
	7,090		Paved park				
	59,320		Weighted A				
	31,807 27,513		53.62% Pei 46.38% Imp				
	27,313		40.30% 111	Jei vious Ai	a		
	Length	Slope		Capacity	Description		
(min)	(feet)	(ft/ft)	/	(cfs)	<u></u>		
6.8	100	0.0500	0.24		Sheet Flow, Grass: Short	n= 0.150 P2=	3 15"
7.4	221	0.0050	0.49		Shallow Con	centrated Flow,	
					Short Grass P	asture Kv= 7.0	fps
14.2	321	Total					
			Sum	mary for	Subcatchm	ent PS-10 <sup>.</sup>	
			oun	inter y ror	Cuboutonin		
Runoff	=		fs @ 12.0	4 hrs, Volu	me= 0.	077 af, Depth=	3.58"
Route	ed to Pon	d CB-25	5:				
Runoff b	V SCS T	R-20 me	thod, UH=8	SCS, Weigh	ted-CN, Time S	Span= 0.00-72.00	0 hrs, dt= 0.01 hrs
NY-3214	2-00 24-	hr S1 25	-yr Rainfal	l=5.89"			
Δ	rea (sf)	CN	Description				
	3,629				od, HSG A		
	7,636		Paved park				
	11,265		Weighted A				
	3,629 7,636		32.21% Pei 67.79% Imp				
	1,000		oo./o.iiiii	Joi vious Al	24		
Tc	Length		Velocity		Description		
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	Dire of Entry		
6.0					Direct Entry,		

Newburgh South Logistics Center

Prepared by Lat	-Develop_32142-00 bella Associates -3f s/n 09581 © 2023 HydroCAD Sof	NY-32142-00 24-hr S1 25-	h Logistics Center yr Rainfall=5.89 Printed 1/4/2024 Page 101
<b>,</b>	•	bcatchment PS-11:	
Runoff = Routed to Pon	16.98 cfs @ 12.04 hrs, Volume= d CB-7 :	= 1.314 af, Depth= 5.53"	
	R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89"	-CN, Time Span= 0.00-72.00 hrs, dt=	0.01 hrs
Area (sf)	CN Description		
1,165	39 >75% Grass cover, Good,	HSG A	
436 3,849	98 Paved parking, HSG D 98 Roofs, HSG D		
83,098	98 Roofs, HSG A		
<u>35,592</u> 124,140	98 Paved parking, HSG A 97 Weighted Average		
1,165	0.94% Pervious Area		
122,975	99.06% Impervious Area		
Tc Length (min) (feet)	Slope Velocity Capacity De	scription	
(mm) (leet)	(ft/ft) (ft/sec) (cfs)		
6.0		rect Entry,	
	Dir	rect Entry,	
6.0	Dir Summary for Su	rect Entry, bcatchment PS-12:	
	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume=	rect Entry, bcatchment PS-12:	
6.0 Runoff = Routed to Pon Runoff by SCS TI	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 :	rect Entry, bcatchment PS-12:	: 0.01 hrs
6.0 Runoff = Routed to Pon Runoff by SCS TI IY-32142-00 24- Area (sf)	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" CN Description	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65"	: 0.01 hrs
6.0 Runoff = Routed to Pon Runoff by SCS TI IY-32142-00 24- <u>Area (sf)</u> 155,036	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description</u> 98 Roofs, HSG D	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65"	: 0.01 hrs
6.0 Runoff = Routed to Pon Runoff by SCS TI IY-32142-00 24- Area (sf)	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" CN Description	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65"	0.01 hrs
6.0 Runoff = Routed to Pon Runoff by SCS TI IY-32142-00 24- <u>Area (sf)</u> 155,036 17,692	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description</u> 98 Roofs, HSG D 98 Roofs, HSG A	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65"	: 0.01 hrs
6.0 Runoff = Routed to Pon Runoff by SCS TI IY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description</u> 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65" -CN, Time Span= 0.00-72.00 hrs, dt=	: 0.01 hrs
6.0           6.0           Runoff           Routed to Pon           Runoff by SCS TI           IY-32142-00 24-           Area (sf)           155,036           17,692           172,728           172,728           TC Length	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description</u> 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity De (ft/ft) (ft/sec) (cfs)	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65" -CN, Time Span= 0.00-72.00 hrs, dt=	: 0.01 hrs
6.0 Runoff = Routed to Pon Runoff by SCS TI IY-32142-00 24- <u>Area (sf)</u> 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity De (ft/ft) (ft/sec) (cfs)</u>	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65" CN, Time Span= 0.00-72.00 hrs, dt= scription rect Entry,	: 0.01 hrs
6.0           6.0           Runoff           Routed to Pon           Runoff by SCS TI           IY-32142-00 24-           Area (sf)           155,036           17,692           172,728           Tc           Length           (min)           6.0	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description</u> 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity De (ft/ft) (ft/sec) (cfs) Dir Summary for Su	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65" •CN, Time Span= 0.00-72.00 hrs, dt= •scription rect Entry, bcatchment PS-13:	: 0.01 hrs
6.0 8unoff = Routed to Pon 8unoff by SCS TI IY-32142-00 24- Area (sf) 155,036 17,692 172,728 172,728 172,728 Tc Length (min) (feet)	Dir Summary for Su 23.75 cfs @ 12.04 hrs, Volume= d CB-19 : R-20 method, UH=SCS, Weighted- hr S1 25-yr Rainfall=5.89" <u>CN Description</u> 98 Roofs, HSG D 98 Roofs, HSG A 98 Weighted Average 100.00% Impervious Area Slope Velocity Capacity De (ft/ft) (ft/sec) (cfs) Dir Summary for Su 4.75 cfs @ 12.04 hrs, Volume=	rect Entry, bcatchment PS-12: = 1.868 af, Depth= 5.65" •CN, Time Span= 0.00-72.00 hrs, dt= •scription rect Entry, bcatchment PS-13:	: 0.01 hrs

3_App J_Post-Develop_32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Prepared by Labella Associates	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 Hydro	CAD Software Solutions LLC Page 102
Area (sf) CN Description	
34,560 98 Roofs, HSG D	
34,560 100.00% Imperviou	us Area
Tc Length Slope Velocity Capac (min) (feet) (ft/ft) (ft/sec) (c	ity Description fs)
6.0	Direct Entry,
Summon	for Subastaburant DS 11
Summary	for Subcatchment PS-14:
Runoff = 4.83 cfs @ 12.04 hrs, \ Routed to Pond CB-10 :	/olume= 0.380 af, Depth= 5.65"
Runoff by SCS TR-20 method, UH=SCS, W NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	eighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
755 80 >75% Grass cover	
34,385 98 Paved parking, HS	G D
35,140 98 Weighted Average 755 2.15% Pervious Ar	ea
34,385 97.85% Impervious	
Tc Length Slope Velocity Capac (min) (feet) (ft/ft) (ft/sec) (c	sity Description fs)
6.0	Direct Entry,
	,,,
Summary	for Subcatchment PS-15:
Runoff = 1.41 cfs @ 12.04 hrs, N Routed to Pond PF-1 : Pretreatment Fore	
	,
Runoff by SCS TR-20 method, UH=SCS, We NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	eighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NY-32142-00 24-ni ST 25-yi Rainiaii=5.69	
Area (sf) CN Description	
8,567 80 >75% Grass cover	
3,726 98 Water Surface, 0% 12,293 85 Weighted Average	Imp, HSG D
12,293 85 Weighted Average 12,293 100.00% Pervious	Area
Tc Length Slope Velocity Capac (min) (feet) (ft/ft) (ft/sec) (c	sity Description fs)
6.0	Direct Entry,

<b>3_App J_Pos</b> Prepared by La HydroCAD® 10.20	bella Assoc	ates					1 25-yr Rainfa Printed 1 Pa	
		Summa	ary for	Subcatch	ment PS	-16:		
Runoff = Routed to Por		) 12.04 hi Pond	rs, Volur	me=	0.568 af,	Depth= 4.30	0"	
Runoff by SCS T NY-32142-00 24				ted-CN, Tim	ie Span= 0	.00-72.00 hrs	s, dt= 0.01 hrs	
Area (sf)	CN Des	cription						
45,151		% Grass co er Surface		od, HSG D				
23,780 68,931		ahted Aver		, 1130 D				
68,931		00% Pervi		a				
Tc Length	Slope V	elocity Ca	apacitv	Descriptior	1			
(min) (feet)		ft/sec)	(cfs)					
<u>(min) (feet)</u> 6.0				Direct Ent Subcatch	•	-17:		
	(ft/ft) ( 3.51 cfs @ nd CB-11 :	<b>Summa</b> ) 12.04 hi	<b>ary for</b> rs, Volur	Subcatch me=	0.264 af,	Depth= 5.30		
6.0 Runoff = Routed to Pol	(ft/ft) ( 3.51 cfs @ nd CB-11 : 'R-20 method	<b>Summa</b> 2 12.04 hi 1, UH=SCS	ary for rs, Volur S, Weight	Subcatch me=	0.264 af,	Depth= 5.30		
6.0 Runoff = Routed to Poi Runoff by SCS T NY-32142-00 24 Area (sf)	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 methoo -hr S1 25-yr <u>CN Des</u>	Summa 2 12.04 hi I, UH=SCS Rainfall=5 cription	ary for rs, Volur S, Weight .89"	Subcatch me= ted-CN, Tim	0.264 af,	Depth= 5.30		
6.0 Runoff = Routed to Poi Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 method -hr S1 25-yr <u>CN Des</u> 80 >75	Summa 2 12.04 hi I, UH=SCS Rainfall=5 cription % Grass co	ary for rs, Volur S, Weight .89"	Subcatch me= ted-CN, Tim od, HSG D	0.264 af,	Depth= 5.30		
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 method -hr S1 25-yr <u>CN Des</u> 80 >75 98 Pav 95 Wei	Summa 2 12.04 hr 1, UH=SCS Rainfall=5 cription % Grass co ed parking ghted Aver	ary for rs, Volur 8, Weight 89" over, Go <u>, HSG D</u> rage	Subcatch me= ted-CN, Tim od, HSG D	0.264 af,	Depth= 5.30		
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 method -hr S1 25-yr <u>CN Des</u> 80 >75 <u>98 Pav</u> 95 Wei 16.2	Summa 2 12.04 hi I, UH=SCS Rainfall=5 cription % Grass co ed parking	ary for rs, Volur 8, Weight 89" over, Goo , <u>HSG D</u> age us Area	Subcatch me= ted-CN, Tim od, HSG D	0.264 af,	Depth= 5.30		
6.0 Runoff = Routed to Poi Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 method -hr S1 25-yr <u>CN Des</u> 80 >75 98 Pav 95 Wei 16.2 83.7 Slope V	Summa ) 12.04 hi I, UH=SCS Rainfall=5 cription % Grass ca ed parking phted Aver 7% Pervio 3% Impervio	ary for rs, Volur 8, Weight 89" over, Goo , <u>HSG D</u> age us Area	Subcatch me= ted-CN, Tim od, HSG D	o.264 af, ne Span= 0	Depth= 5.30		
6.0 Runoff = Routed to Por Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 method -hr S1 25-yr <u>CN Des</u> 80 >75 98 Pav 95 Wei 16.2 83.7 Slope V	Summa 2 12.04 hi 1, UH=SCS Rainfall=5 cription % Grass cr ad parking phted Aver 7% Pervio 3% Impervio a% Impervi	ary for rs, Volur 8, Weight 89" over, Goo , HSG D age us Area vious Area apacity	Subcatch me= ted-CN, Tim od, HSG D	0.264 af, e Span= 0	Depth= 5.30		
6.0 Runoff = Routed to Poi Runoff by SCS T NY-32142-00 24 <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length (min) (feet)	(ft/ft) ( 3.51 cfs @ nd CB-11 : R-20 method -hr S1 25-yr <u>CN Des</u> 80 >75 98 Pav 95 Wei 16.2 83.7 Slope V	Summa 2 12.04 hi 1, UH=SCS Rainfall=5 cription % Grass cc ad parking ghted Aver 7% Pervio 3% Impervio 3% Impervio all contents ft/sec)	ary for rs, Volur S, Weight .89" over, Goo , <u>HSG D</u> rage us Area vious Area apacity (cfs)	Subcatch me= ted-CN, Tim od, HSG D ea Description	0.264 af, e Span= 0	Depth= 5.30		

Prepare	ed by Lab	ella A	ssociates				S1 25-yr Rainfall=5.89 Printed 1/4/2024
HydroCA	D® 10.20-	-3fs/n	09581 © 202	3 HydroCAL	D Software S	olutions LLC	Page 104
A	rea (sf)	CN	Description				
	6,412	80	>75% Gras				
	24,812 31,224	98 94	Paved park Weighted A		)		
	6,412	94	20.54% Per		1		
	24,812		79.46% Imp				
Tc (min)	Length (feet)	Slop (ft/f		Capacity (cfs)	Descriptio	n	
6.0					Direct En	try,	
			Sum	mary for	Subcate	hment PS-19:	
Runoff Route	= ed to Pon		cfs @ 12.04 3 :	1 hrs, Volu	ıme=	0.148 af, Depth= 5	i.53"
NY-3214			25-yr Rainfal Description >75% Grass Paved park	=5.89"	ood, HSG D	ne Span= 0.00-72.00	
	13,991	97	Weighted A		,		
	678		4.85% Perv				
	13,313		95.15% Imp	ervious Ar	ea		
Tc (min)	Length (feet)	Slop (ft/f	e Velocity t) (ft/sec)	Capacity (cfs)	Descriptio	n	
6.0					Direct En	try,	
			Sun	nmary fo	r Subcato	hment PS-2:	
Runoff Route	= ed to Pon		cfs @ 12.00 2 :	3 hrs, Volu	ime=	0.486 af, Depth= 4	.85"
			ethod, UH=S 25-yr Rainfal		nted-CN, Tir	ne Span= 0.00-72.00	hrs, dt= 0.01 hrs
A	rea (sf)	CN	Description				
	19,091	80	>75% Gras				
	32,920 390	98 39	Paved park >75% Gras				
	52,401	<u> </u>	Weighted A		500, 1100 A		
	19,481		37.18% Per 62.82% Imp				

			p_32142	2-00	Newburgh South Logistics Cente NY-32142-00 24-hr S1 25-yr Rainfall=5.83
		oella Ass		3 HydroCAE	D Software Solutions LLC Printed 1/4/202 Page 10
IIJUIUUA	00 10.20	-01 3/11 00	501 @ 202	STINGOAL	
	Length	Slope	Velocity		Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
7.5	100	0.0400	0.22		Sheet Flow, Grass: Short n= 0.150 P2= 3.15"
0.3	39	0.0967	2.18		Shallow Concentrated Flow.
			-		Short Grass Pasture Kv= 7.0 fps
7.8	139	Total			
			Sum	mary for	r Subcatchment PS-20:
Runoff	=	0 11 cfs	s@ 120	4 hrs, Volu	ume= 0.008 af, Depth= 5.65"
	ed to Pon	d CB-14		11110, 1010	
A	rea (sf) 777 777	98 P	escription aved park 00.00% In	ing, HSG D	
ŢĊ	Length	Slope	Velocity	Capacity	
(min)	Length (feet)		Velocity (ft/sec)	•	Description
		Slope	(ft/sec)	Capacity (cfs)	Description Direct Entry,
(min)		Slope	(ft/sec)	Capacity (cfs)	Description
<u>(min)</u> 6.0 Runoff	(feet)	Slope (ft/ft) 0.92 cfs	(ft/sec) Sum s @ 12.04	Capacity (cfs)	Description Direct Entry, r Subcatchment PS-21:
<u>(min)</u> 6.0 Runoff	(feet)	Slope (ft/ft)	(ft/sec) Sum s @ 12.04	Capacity (cfs)	Description Direct Entry, r Subcatchment PS-21:
(min) 6.0 Runoff Route	(feet) = ed to Pon	Slope (ft/ft) 0.92 cfs d CB-15	(ft/sec) Sum s @ 12.04	Capacity (cfs))(cfs) (cfs) (cfs))(cfs) (cfs))(cfs)(cfs))(cfs))(cfs))(cfs)(cfs)	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07"
(min) 6.0 Runoff Route Runoff b	(feet) = ed to Pon y SCS TI	Slope (ft/ft) 0.92 cfs d CB-15 R-20 metl	(ft/sec) Sum s @ 12.04	Capacity (cfs) (cf	Description Direct Entry, r Subcatchment PS-21:
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI i2-00 24-	Slope (ft/ft) 0.92 cfs d CB-15 R-20 mett hr S1 25-	(ft/sec) Sum s @ 12.0 : hod, UH=S yr Rainfal	Capacity (cfs) (cf	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07"
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI i2-00 24- rea (sf)	Slope (ft/ft) 0.92 cfr d CB-15 R-20 metl hr S1 25- <u>CN E</u>	(ft/sec) Sum s @ 12.0 : hod, UH=S yr Rainfal escription	Capacity (cfs) (cf	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07" hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI i2-00 24-	Slope (ft/ft) 0.92 cfr d CB-15 R-20 mett hr S1 25- <u>CN E</u> 80 >	(ft/sec) Sum s @ 12.0 : hod, UH=S yr Rainfal Description 75% Gras	Capacity (cfs) (cf	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07" hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs bood, HSG D
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI l2-00 24- rea (sf) 2,127 4,866 6,993	Slope (ft/ft) 0.92 cfr d CB-15 R-20 mett hr S1 25- <u>CN E</u> 80 > 98 P 93 V	(ft/sec) Sum s @ 12.0 : hod, UH=S yr Rainfal <u>Description</u> 75% Gras <u>aved park</u> Veighted A	Capacity (cfs) (cf	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07" hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs ood, HSG D
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI 2-00 24- rea (sf) 2,127 4,866 6,993 2,127	Slope (ft/ft) 0.92 cft d CB-15 R-20 met hr S1 25- <u>CN E</u> 80 > <u>98 P</u> 93 V 3 3	(ft/sec) Sum s @ 12.0 : nod, UH=S yr Rainfal <u>vescription</u> 75% Gras <u>aved park</u> Veighted A 0.42% Pei	Capacity (cfs) (cfs) (mary for 4 hrs, Volu CCS, Weigh I=5.89" s cover, Gc ing, HSG D verage vious Area	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07" hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs ood, HSG D
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI l2-00 24- rea (sf) 2,127 4,866 6,993	Slope (ft/ft) 0.92 cft d CB-15 R-20 met hr S1 25- <u>CN E</u> 80 > <u>98 P</u> 93 V 3 3	(ft/sec) Sum s @ 12.0 : nod, UH=S yr Rainfal <u>vescription</u> 75% Gras <u>aved park</u> Veighted A 0.42% Pei	Capacity (cfs) (cf	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07" hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs ood, HSG D
(min) 6.0 Runoff Route Runoff b NY-3214	(feet) = ed to Pon y SCS TI 2-00 24- rea (sf) 2,127 4,866 6,993 2,127	Slope (ft/ft) 0.92 cfr d CB-15 R-20 mett hr S1 25- <u>CN E</u> 80 > <u>98 P</u> 93 V 3 6	(ft/sec) Sum s @ 12.0- : hod, UH=5 yr Rainfal escription 75% Gras aved park Veighted A 0.42% Pei 9.58% Imp	Capacity (cfs) (cfs) (mary for 4 hrs, Volu CCS, Weigh I=5.89" s cover, Gc ing, HSG D verage vious Area	Description Direct Entry, r Subcatchment PS-21: ume= 0.068 af, Depth= 5.07" hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs ood, HSG D D area

3_App J_Post-Develop_32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Softwar	e Solutions LLC Printed 1/4/2024 Page 106
Summary for Subca	itchment PS-22:
Runoff = 1.36 cfs @ 12.04 hrs, Volume= Routed to Pond CB-16 :	0.100 af, Depth= 4.96"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
3,470 80 >75% Grass cover, Good, HSC 7,036 98 Paved parking, HSG D	G D
10,506 92 Weighted Average 3,470 33.03% Pervious Area	
7,036 66.97% Impervious Area	
Tc Length Slope Velocity Capacity Descrip	otion
<u>(min) (feet) (ft/ft) (ft/sec) (cfs)</u> 6.0 Direct	Entry
0.0 Direct	Enu y,
Summary for Subca	itchment PS-23:
Runoff = 12.69 cfs @ 12.04 hrs, Volume= Routed to Pond CB-17 :	0.983 af, Depth= 5.53"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
4,379 80 >75% Grass cover, Good, HSC 36,053 98 Paved parking, HSG D	3 D
52,393 98 Roofs, HSG D 92.825 97 Weighted Average	
4,379 4.72% Pervious Area 88,446 95.28% Impervious Area	
Tc Length Slope Velocity Capacity Descrip (min) (feet) (ft/ft) (ft/sec) (cfs)	otion
6.0 Direct	Entry,
Summary for Subca	tchment PS-24:
Runoff = 15.51 cfs @ 12.04 hrs, Volume= Routed to Pond CB-18 :	1.220 af, Depth= 5.65"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Newburgh South Logistics Center         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 25-yr Rainfall=5.89"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 107	Newburgh South Logistics Cer         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 25-yr       Rainfall=5.         Prepared by Labella Associates       Printed 1/4/20         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 1
Area (sf) CN Description	Summary for Subcatchment PS-27:
1,790         80         >75% Grass cover, Good, HSG D           41,907         98         Paved parking, HSG D           69,120         98         Roofs, HSG D	Runoff = 5.68 cfs @ 12.04 hrs, Volume= 0.395 af, Depth= 3.78" Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)
112,817         98         Weighted Average           1,790         1.59% Pervious Area           111,027         98.41% Impervious Area	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Tc Length Slope Velocity Capacity Description	Area (sf) CN Description
(min)         (ft/ft)         (ft/sec)         (cfs)           6.0         Direct Entry,	52,036 80 >75% Grass cover, Good, HSG D 2,530 98 Paved parking, HSG D
Summary for Subcatchment PS-25:	54,566         81         Weighted Average           52,036         95.36% Pervious Area           2,530         4.64% Impervious Area
Runoff = 2.86 cfs @ 12.04 hrs, Volume= 0.203 af, Depth= 4.52" Routed to Pond PF-2 : Pretreatment Forebay	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	6.0 Direct Entry,
Area (sf) CN Description	Summary for Subcatchment PS-28:
Alea (sr)     Oriv     Description       12,606     80     >75% Grass cover, Good, HSG D       5,405     98     Paved parking, HSG D       5,492     98     Water Surface, 0% imp, HSG D	Runoff = 44.96 cfs @ 12.27 hrs, Volume= 5.383 af, Depth= 2.72" Routed to Pond DP-1 : Gidneytown Creek
23,503         88         Weighted Average           18,098         77.00% Pervious Area           5,405         23.00% Impervious Area	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Tc Length Slope Velocity Capacity Description	Area (sf) CN Description 45,884 98 Paved parking, HSG D
(min) (feet) (ft/ft) (ft/sec) (cfs)	350 98 Paved parking, HSG A
6.0 Direct Entry,	377,918 77 Woods, Good, HSG D 18,580 30 Woods, Good, HSG A
Summary for Subcatchment PS-26:	230,060 39 >75% Grass cover, Good, HSG A
Dura # 0.40 -f. @ 40.04 km \/. km - 0.400 -f. Death - 0.00"	339,862 80 >75% Grass cover, Good, HSG D 1.122 98 Water Surface, HSG A
Runoff = 2.42 cfs @ 12.04 hrs, Volume= 0.168 af, Depth= 3.68" Routed to Pond DET-1 : Detention Basin	21,350 98 Water Surface, HSG D
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 25-yr Rainfall=5.89"	1,035,126         70         Weighted Average           966,420         93.36% Pervious Area           68,706         6.64% Impervious Area
Area (sf) CN Description	Tc Length Slope Velocity Capacity Description
23,847 80 >75% Grass cover, Good, HSG D	(min) (feet) (ft/ft) (ft/sec) (cfs)
23,847 100.00% Pervious Area	11.7 100 0.0130 0.14 <b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.15"
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	9.5 481 0.0145 0.84 Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6.0 Direct Entry,	1.2 154 0.0970 2.18 Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
	22.4 735 Total

10.20-	ella Asso 3f_s/n 095	81 © 2023 Hyd	droCAD S	Software Sc	lutions LLC			Page 109
		Summar	ry for S	ubcatch	ment PS-2	29:		
noff = Routed to Pon		@ 12.04 hrs	, Volum	e=	0.397 af, D	epth= 5.6	5"	
noff by SCS TF -32142-00 24-I				d-CN, Tim	ie Span= 0.0	10-72.00 hr:	s, dt= 0.01 h	irs
Area (sf)		escription						
28,170 8,501		ived parking, H ived parking, H						
36,671 36,671	98 We	eighted Averag 0.00% Imperv	ge	a				
Tc Length min) (feet)	Slope (ft/ft)	Velocity Cap (ft/sec)	oacity D (cfs)	Descriptior	1			
6.0			0	Direct Ent	ry,			
		Summa	ry for S	Subcatcl	hment PS-	3:		
noff = Routed to Pon		@ 12.04 hrs	, Volum	e=	0.313 af, D	epth= 5.07	7"	
Routed to Pon noff by SCS TF -32142-00 24-I	d CB-22 : R-20 metho hr S1 25-y	od, UH=SCS, r Rainfall=5.8	Weighte		,			ırs
Routed to Pon noff by SCS TF -32142-00 24-t <u>Area (sf)</u> 6,471	d CB-22 : R-20 metho hr S1 25-y <u>CN De</u> 80 >7	od, UH=SCS, r Rainfall=5.8 escription 5% Grass cov	Weighte 9" ver, Good	d-CN, Tim	,			irs
Routed to Pon noff by SCS TF -32142-00 24-t <u>Area (sf)</u> 6,471 25,183	d CB-22 : R-20 metho hr S1 25-y <u>CN De</u> 80 >7 98 Pa	od, UH=SCS, r Rainfall=5.8 escription 5% Grass cov	Weighte 9" ver, Good	d-CN, Tim	,			irs
Routed to Pon noff by SCS TF -32142-00 24-1 Area (sf) 6,471 25,183 511 50	d CB-22 : R-20 metho hr S1 25-y <u>CN De</u> 80 >7 98 Pa 39 >7 98 Pa	od, UH=SCS, r Rainfall=5.8 sscription 5% Grass cov wed parking, F 5% Grass cov wed parking, F	Weighte 9" ver, Good HSG D ver, Good HSG A	d-CN, Tim	,			irs
Routed to Pon noff by SCS TF -32142-00 24-1 <u>Area (sf)</u> 6,471 25,183 511	d CB-22 : R-20 metho hr S1 25-y <u>CN De</u> 80 >7 98 Pa 93 Wo 21	od, UH=SCS, r Rainfall=5.8 sscription 5% Grass cov ived parking, F 5% Grass cov	Weighte 9" HSG D Ver, Good HSG A HSG A ge s Area	d-CN, Tim d, HSG D d, HSG A	,			irs
Routed to Pon- noff by SCS TF -32142-00 24-1 Area (sf) 6,471 25,183 511 50 32,215 6,982	d CB-22 : R-20 metho hr S1 25-y <u>CN De</u> 80 >7 98 Pa 39 >7 98 Pa 93 We 21 78	od, UH=SCS, r Rainfall=5.8 escription 5% Grass cov ved parking, h 5% Grass cov ved parking, h eighted Averau, 67% Pervious	Weighte 9" HSG D ver, Gooo HSG A ge s Area ous Area	d-CN, Tim d, HSG D d, HSG A	ne Span= 0.0			ırs
Routed to Pon- noff by SCS TF -32142-00 24-1 <u>Area (sf)</u> 6,471 25,183 511 50 32,215 6,982 25,233 Tc Length	d CB-22 : R-20 methor hr S1 25-y <u>CN De</u> 80 >7 98 Pa 39 Pa 39 Pa 93 Wo 21 78 Slope	od, UH=SCS, r Rainfall=5.8 scription 5% Grass cov ved parking, ł 5% Grass cov ved parking, ł eighted Averas .67% Pervious .33% Impervic Velocity Cap	Weighte 99" HSG D ver, Good HSG A ge s Area bus Area bus Area bacity E (cfs)	d-CN, Tim d, HSG D d, HSG A	ne Span= 0.0			ırs
Routed to Pon- noff by SCS TF -32142-00 24-1 6,471 25,183 511 50 32,215 6,982 25,233 Tc Length min) (feet)	d CB-22 : R-20 methor hr S1 25-y <u>CN De</u> 80 >7 98 Pa 39 Pa 39 Pa 93 Wo 21 78 Slope	od, UH=SCS, r Rainfall=5.8 <u>escription</u> 5% Grass cov wed parking, I 5% Grass cov wed parking, F 5% Grass cov wed parking, P eighted Avera; .3% Impervic .3% Impervic Velocity Cap (ft/sec)	Weighte 99" ver, Good HSG D ver, Good HSG A ge s Area bus Area bus Area bus Area bus Area bus Area bus Area	d-CN, Tim d, HSG D d, HSG A Description Direct Ent	ne Span= 0.0	10-72.00 hrs		ırs
Routed to Pon- noff by SCS TF -32142-00 24-1 6,471 25,183 511 50 32,215 6,982 25,233 Tc Length min) (feet)	d CB-22 : 	od, UH=SCS, r Rainfall=5.8 <u>escription</u> 5% Grass cov wed parking, I 5% Grass cov wed parking, F 5% Grass cov wed parking, P eighted Avera; .3% Impervic .3% Impervic Velocity Cap (ft/sec)	Weighte 9" HSG D ver, Good HSG A ge s Area pus Area pus Area pacity E (cfs) C ry for S	d, HSG D d, HSG A d, HSG A Description Direct Ent Gubcatch	ne Span= 0.0	10-72.00 hrs	s, dt= 0.01 h	ırs

0-3f s/n / CN 80 98 95 1.18 50 1.18 50 1.18 50 1.18 50 1.18 51 20 1.18 51 20 1.18 51 20 1.18 51 20 51 51 51 51 51 51 51 51 51 51	Description >75% Grass Paved parkit Weighted A 14.63% Per 85.37% Imp e Velocity t) (ft/sec) Sum cfs @ 12.12 4 :	s cover, G ing, HSG I verage vious Area ervious Ar Capacity (cfs) nmary fo 2 hrs, Volu SCS, Weigl	a rea Description Direct Entry, or Subcatchment PS-4:
80 98 95 1.18 ond CB-2 TR-20 m I-hr S1 2 CN	>75% Grass <u>Paved parki</u> Weighted A 14.63% Per 85.37% Imp e Velocity (ft/sec) <b>Sum</b> cfs @ 12.12 4 : ethod, UH=S	s cover, G ing, HSG I verage vious Area pervious Area capacity (cfs) mmary fo 2 hrs, Volu SCS, Weigl	D a rea Description Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
80 98 95 1.18 ond CB-2 TR-20 m I-hr S1 2 CN	>75% Grass <u>Paved parki</u> Weighted A 14.63% Per 85.37% Imp e Velocity (ft/sec) <b>Sum</b> cfs @ 12.12 4 : ethod, UH=S	s cover, G ing, HSG I verage vious Area pervious Area capacity (cfs) mmary fo 2 hrs, Volu SCS, Weigl	D a rea Description Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
95 1.18	Weighted A 14.63% Per 85.37% Imp e Velocity t) (ft/sec) Sun cfs @ 12.12 4 : ethod, UH=S	verage vious Area ervious Ar Capacity (cfs) nmary fo 2 hrs, Volu	a rea Description Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
n Slop ) (ft/f 1.18 ond CB-2 TR-20 m I-hr S1 2 CN	14.63% Per 85.37% Imp e Velocity (ft/sec) Sun cfs @ 12.12 4 : ethod, UH=S	vious Area pervious Ar Capacity (cfs) nmary fo 2 hrs, Volu SCS, Weigl	rea Description Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
) (ft/f 1.18 ond CB-2 TR-20 m I-hr S1 2 CN	85.37% Imp e Velocity t) (ft/sec) Sun cfs @ 12.12 4 : ethod, UH=S	Capacity (cfs) mmary fo 2 hrs, Volu	rea Description Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
) (ft/f 1.18 ond CB-2 TR-20 m I-hr S1 2 CN	t) (ft/sec) <b>Sum</b> cfs @ 12.12 4 : ethod, UH=S	(cfs) nmary fo 2 hrs, Volu	Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
) (ft/f 1.18 ond CB-2 TR-20 m I-hr S1 2 CN	t) (ft/sec) <b>Sum</b> cfs @ 12.12 4 : ethod, UH=S	(cfs) nmary fo 2 hrs, Volu	Direct Entry, or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
ond CB-2 TR-20 m I-hr S1 2 <u>CN</u>	cfs @ 12.12 4 : ethod, UH=S	2 hrs, Volu SCS, Weigl	or Subcatchment PS-4: ume= 0.110 af, Depth= 2.54"
ond CB-2 TR-20 m I-hr S1 2 <u>CN</u>	cfs @ 12.12 4 : ethod, UH=S	2 hrs, Volu SCS, Weigl	ume= 0.110 af, Depth= 2.54"
ond CB-2 TR-20 m I-hr S1 2 <u>CN</u>	ethod, UH=S	CS, Weigl	
ond CB-2 TR-20 m I-hr S1 2 <u>CN</u>	ethod, UH=S	CS, Weigl	
I-hr S1 2 CN			hted-CN_Time_Span= 0.00-72.00 hrs_dt= 0.01 hrs
I-hr S1 2 CN			hted-CN_Time Span= 0.00-72.00 hrs_dt= 0.01 hrs
CN	5-yr Rainfai	1=5.89"	
	Description		
39			ood, HSG A
			000, HSG D
			ea
n Slop	e Velocity	Capacity	Description
) (ft/f	t) (ft/sec)	(cfs)	
0.020	0 0.17		Sheet Flow, Grass: Short n= 0.150 P2= 3.15"
1 0.032	6 1.26		Shallow Concentrated Flow,
			Short Grass Pasture Kv= 7.0 fps
1 Total			
	Sum	nmarv fo	or Subcatchment PS-5:
		,	
		4 hrs, Volu	ume= 0.036 af, Depth= 5.53"
			hted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
CN	Description		
80	>75% Grass	s cover, G	
98 39			
<u> </u>			
	5.14% Perv	ious Area	
	68 h Slop t) (ft/f 0 0.020 4 0.032 4 Total 4 Total 0.47 50nd CB-3 TR-20 m 4-hr S1 2 CN 80 98 39 97	68         Weighted A 100.00% Per (100.00% Per           68         Weighted A 100.00% Per           68         Veighted A 100.00% Per           68         Veighted A 100.00% Per           68         Perve           68         Perve           60         >75% Gras: 98           97         Weighted A 5.14% Perv	68       Weighted Average 100.00% Pervious Aren (fu/ft)         h       Slope       Velocity       Capacity         (fu/ft)       (ft/sec)       (cfs)         0       0.0200       0.17         4       0.0326       1.26         4       Total         Summary fc         0       0.47 cfs @         12.04 hrs, Volond CB-3 :         TR-20 method, UH=SCS, Weig         4-hr S1 25-yr Rainfall=5.89"         CN       Description         80       >75% Grass cover, G         98       Paved parking, HSC I         39       >75% Grass cover, G         97       Weighted Average         5.14% Pervious Area

Prepared by Lab	- <b>Develop_32142-00</b> ella Associates 3f s/n 09581 © 2023 HydroCAD	Newburgh South Logistics Cen NY-32142-00 24-hr S1 25-yr Rainfall=5. Printed 1/4/20 9 Software Solutions LLC Page 1
Tc Length (min) (feet)	Slope Velocity Capacity (ft/ft) (ft/sec) (cfs)	· · · · ·
6.0		Direct Entry,
	Summary for	r Subcatchment PS-6:
Runoff = Routed to Pone	4.86 cfs @ 12.04 hrs, Volu d CB-4 :	me= 0.377 af, Depth= 5.53"
	R-20 method, UH=SCS, Weigh nr S1 25-yr Rainfall=5.89"	ted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf)	CN Description	
1,235 34,319	<ul> <li>80 &gt;75% Grass cover, Go</li> <li>98 Paved parking, HSG D</li> </ul>	
20	98 Paved parking, HSG A	
35,574 1,235	97 Weighted Average 3.47% Pervious Area	
34,339	96.53% Impervious Area	ea
Tc Length	Slope Velocity Capacity	Description
(min) (feet)	(ft/ft) (ft/sec) (cfs)	Description
6.0		Direct Entry,
	Summary for	Subcatchment PS-7:
Runoff = Routed to Pone	0.42 cfs @ 12.04 hrs, Volu d CB-5 :	me= 0.029 af, Depth= 3.68"
	R-20 method, UH=SCS, Weigh nr S1 25-yr Rainfall=5.89"	ted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf)	CN Description	
614 1,329	80 >75% Grass cover, Go 98 Paved parking, HSG D	
1,329	98 Paved parking, HSG D	
1,083	39 >75% Grass cover, Go	
4,143	80 Weighted Average	
1,697 2,446	40.96% Pervious Area 59.04% Impervious Are	
Tc Length	Slope Velocity Capacity	Description
(min) (feet) 6.0	(ft/ft) (ft/sec) (cfs)	Direct Entry,
		Direct Linuy,

varoCAD® 10.2	.0-3fs/n09581©2	2023 HydroCAD	Software Sol	utions LLC	Page 1
,					i ago i
	S	ummary for	r Subcatch	ment PS-8:	
unoff = Routed to Po	0.86 cfs @ 12 ond CB-6 :	2.04 hrs, Volu	me=	0.060 af, Depth=	3.58"
	TR-20 method, U⊦ 4-hr S1 25-yr  Rair		ited-CN, Time	e Span= 0.00-72.0	00 hrs, dt= 0.01 hrs
Area (sf)					
171 2,834 5,688	39 >75% Ġi	arking, HSG D rass cover, Go arking, HSG A	od, HSG A		
8,693 2,834 5,859	32.60%	d Average Pervious Area Impervious Are			
Tc Lengti (min) (feet		ity Capacity c) (cfs)	Description		
6.0			Direct Entr	у,	
	S	ummary for	r Subcatch	ment PS-9:	
unoff = Routed to Pr	0.28 cfs @ 12	-		ment PS-9: 0.022 af, Depth=	5.65"
Routed to Po	0.28 cfs @ 12 ond CB-23 :	2.04 hrs, Volu	me=	0.022 af, Depth=	
Routed to Po	0.28 cfs @ 12 ond CB-23 :	2.04 hrs, Volu I=SCS, Weigh	me=	0.022 af, Depth=	5.65" 00 hrs, dt= 0.01 hrs
Routed to Po	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair	2.04 hrs, Volu I=SCS, Weigh nfall=5.89"	me=	0.022 af, Depth=	
Routed to Po unoff by SCS Y-32142-00 24	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> 98 Paved pa	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A	me= ited-CN, Time	0.022 af, Depth=	
Routed to Po unoff by SCS Y-32142-00 24 Area (sf)	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> 98 Paved pa	2.04 hrs, Volu I=SCS, Weigh ıfall=5.89" ion	me= ited-CN, Time	0.022 af, Depth=	
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 2,000 Tc Lengti	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> 98 Paved pa 100.00% n Slope Veloci	2.04 hrs, Volu 4=SCS, Weigh nfall=5.89" ion arking, HSG A ho Impervious A ity Capacity	me= ited-CN, Time	0.022 af, Depth=	
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 2,000	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> 98 Paved pa 100.00% n Slope Veloci	2.04 hrs, Volu 4=SCS, Weigh nfall=5.89" ion arking, HSG A ho Impervious A ity Capacity	me= ited-CN, Time	0.022 af, Depth= e Span= 0.00-72.0	
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 Z,000 Tc Lengti (min) (feet 6.0	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved p</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs)	me= ted-CN, Time rea Description Direct Entr	0.022 af, Depth= e Span= 0.00-72.0	00 hrs, dt= 0.01 hrs
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 Z,000 Tc Lengti (min) (feet 6.0	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved p</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs)	me= ted-CN, Time rea Description Direct Entr	0.022 af, Depth= e Span= 0.00-72.0	
Routed to Pc unoff by SCS Y-32142-00 24 Area (sf) 2,000 2,000 Tc Lengti (min) (feet 6.0 <b>Su</b> flow Area =	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved p</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se mmary for Por 9.376 ac, 76.5	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 .pth = 5.08" for	00 hrs, dt= 0.01 hrs
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 Tc Lengti ( <u>min) (feet</u> 6.0 <b>Su</b> flow Area = flow =	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved p</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou 2.05 hrs, Volu	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De me=	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 spth = 5.08" for 3.967 af	00 hrs, dt= 0.01 hrs
Routed to Pc unoff by SCS ' Y-32142-00 24 <u>Area (sf)</u> 2,000 Tc Lengti ( <u>min) (feet</u> 6.0 <b>Su</b> flow Area = flow = tho = iscarded =	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved pr</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se <b>summary for Por</b> 9.376 ac, 76.1 30.94 cfs @ 12 27.35 cfs @ 12 0.25 cfs @ 12	2.04 hrs, Volu H=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou 2.05 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De me= me= me=	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 yth = 5.08" for 3.967 af 3.967 af 3.967 af, Atten= 1.046 af	00 hrs, dt= 0.01 hrs 5 <b>ft filter media)</b> 25-yr event
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 Tc Lengtt (min) (feet 6.0 <b>Su</b> flow Area = flow = utflow = utflow = iscarded = rimary =	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved p</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se <b>solution</b> 9.376 ac, 76.1 30.94 cfs @ 12 27.35 cfs @ 12 0.25 cfs @ 12 27.10 cfs @ 12	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou 2.05 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De me= me= me=	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 pth = 5.08" for 3.967 af 3.967 af, Atten=	00 hrs, dt= 0.01 hrs 5 <b>ft filter media)</b> 25-yr event
Routed to Pc unoff by SCS Y-32142-00 24 <u>Area (sf)</u> 2,000 Tc Lengtl (min) (feet 6.0 <b>Su</b> flow Area = flow = utflow = utflow = iscarded = rimary = Routed to Pc econdary =	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved pp</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se <b>ummary for Por</b> 9.376 ac, 76.1 30.94 cfs @ 12 0.25 cfs @ 12 0.25 cfs @ 12 0.7.10 cfs @ 12 ond DET-1 : Deten 0.00 cfs @ 0	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou 2.05 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 1.00 hrs, Volu	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De me= me= me= me= me=	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 yth = 5.08" for 3.967 af 3.967 af 3.967 af, Atten= 1.046 af	00 hrs, dt= 0.01 hrs 5 <b>ft filter media)</b> 25-yr event
Routed to Pc unoff by SCS 3 Y-32142-00 22 Area (sf) 2,000 Tc Length (min) (feet 6.0 Su flow Area = flow = utflow = utflow = iscarded = rimary = Routed to Pc econdary =	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved p</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se <b>Immary for Por</b> 9.376 ac, 76.1 30.94 cfs @ 12 27.35 cfs @ 12 27.10 cfs @ 12 27.11 cfs @ 12 2	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou 2.05 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 1.00 hrs, Volu	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De me= me= me= me= me=	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 spth = 5.08" for 3.967 af 3.967 af, Atten= 1.046 af 2.921 af	00 hrs, dt= 0.01 hrs 5 <b>ft filter media)</b> 25-yr event
Routed to Po unoff by SCS 3 Y-32142-00 24 Area (sf) 2,000 Tc Length (min) (feet 6.0 Su flow Area = flow = utflow = iscarded = rimary = Routed to Po econdary = Routed to Po	0.28 cfs @ 12 ond CB-23 : TR-20 method, UH 4-hr S1 25-yr Rair <u>CN Descripti</u> <u>98 Paved pp</u> 100.00% n Slope Veloci ) (ft/ft) (ft/se <b>ummary for Por</b> 9.376 ac, 76.1 30.94 cfs @ 12 0.25 cfs @ 12 0.25 cfs @ 12 0.7.10 cfs @ 12 ond DET-1 : Deten 0.00 cfs @ 0	2.04 hrs, Volu I=SCS, Weigh Ifall=5.89" ion arking, HSG A Impervious A ity Capacity c) (cfs) nd BIO-1: Fi 99% Imperviou 2.05 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 2.17 hrs, Volu 1.17 hrs, Volu tion Basin 0.00 hrs, Volu town Creek	me= ited-CN, Time rea Description Direct Entr iltration Bi us, Inflow De me= me= me= me= me= me=	0.022 af, Depth= e Span= 0.00-72.0 y, oretention (2.5 pth = 5.08" for 3.967 af, Atten= 1.046 af 2.921 af 0.000 af	00 hrs, dt= 0.01 hrs 5 <b>ft filter media)</b> 25-yr event

3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 25-yr Rainfall=5.89"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 113	3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 25-yr Rainfall=5         Prepared by Labella Associates       Printed 1/4/2         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page
Peak Elev= 236.32' @ 12.17 hrs Surf.Area= 43,851 sf Storage= 34,809 cf Flood Elev= 236.50' Surf.Area= 44,411 sf Storage= 42,886 cf	Peak Elev= 263.96' @ 12.27 hrs Surf.Area= 6,779 sf Storage= 2,231 cf Flood Elev= 263.31' Surf.Area= 18 sf Storage= 32 cf
Plug-Flow detention time=236.3 min calculated for 3.966 af (100% of inflow) Center-of-Mass det. time=236.3 min(1,042.3 - 806.1)	Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 2.2 min(834.9 - 832.7)
Volume Invert Avail.Storage Storage Description	Volume Invert Avail.Storage Storage Description
#1 235.50' 65,474 cf <b>Bioretention (Prismatic)</b> Listed below (Recalc)	#1     259.81'     32 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     263.31'     11,903 cf     Custom Stage Data (Prismatic)Listed below (Recalc)
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	11,935 cf Total Available Storage
(feet) (sq-ft) (cubic-feet) (cubic-feet) 235.50 41.373 0 0	Elevation Surf.Area Inc.Store Cum.Store
236.00 42,881 21,064 21,064	(feet) (sq-ft) (cubic-feet) (cubic-feet)
237.00 45,940 44,411 65,474	259.81 9 0 0
Device Routing Invert Outlet Devices	263.31 9 32 32
#1 Discarded 235.50' 0.250 in/hr Exfiltration Through Media over Surface area	Elevation Surf.Area Inc.Store Cum.Store
#2 Primary 236.00' 60.0' long x 10.0' breadth Overflow Weir to Det	(feet) (sq-ft) (cubic-feet) (cubic-feet)
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60	263.31 9 0 0
Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64 #3 Secondary 236.50' 20.0' long x 15.0' breadth Emergency Overflow Weir	264.00 7,196 2,486 2,486
#3 Secondary 236.50' 20.0' long x 15.0' breadth Emergency Overflow Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60	265.00 11,639 9,418 11,903
Coef (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.63	Device Routing Invert Outlet Devices
	#1 Primary 259.81' 18.0" Round Culvert
Discarded OutFlow Max=0.25 cfs@ 12.17 hrs HW=236.32' (Free Discharge)	L= 227.0' CPP, projecting, no headwall, Ke= 0.900
←1=Exfiltration Through Media (Exfiltration Controls 0.25 cfs)	Inlet / Outlet Invert= 259.81' / 257.54' S= 0.0100 '/' Cc= 0.900
Primary OutFlow Max=27.09 cfs @ 12.17 hrs HW=236.32' TW=234.96' (Dynamic Tailwater)	n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf #2 Primary 264.55' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b>
<b>1</b> −2=Overflow Weir to Det (Weir Controls 27.09 cfs @ 1.42 fps)	Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
Description Out Flow New 2000 (F. 2000 here UNIV 2005 FOIL TAY 2000) (Description Technology)	2.50 3.00 3.50 4.00 4.50 5.00 5.50
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=235.50' TW=0.00' (Dynamic Tailwater)	Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
	2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #3 Secondary 264.71' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b>
Summary for Pond CB-1:	#3 Secondary 264.71' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> 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
[58] Hint: Peaked 0.65' above defined flood level	Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
[90] Warning: Qout>Qin may require smaller dt or Finer Routing	2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=13)	Primary OutFlow Max=4.25 cfs @ 12.35 hrs HW=263.91' TW=263.37' (Dynamic Tailwater)
Inflow Area = 1.362 ac, 46.38% Impervious, Inflow Depth = 3.78" for 25-yr event	$\vdash$ <b>1=Cuivert</b> (Outlet Controls 4.25 cfs @ 2.40 fps)
Inflow = 4.44 cfs @ 12.15 hrs, Volume= 0.429 af	-2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)
Outflow = 7.34 cfs @ 12.35 hrs, Volume= 0.429 af, Atten= 0%, Lag= 12.2 min	
Primary = 7.34 cfs @ 12.35 hrs, Volume= 0.429 af	Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=259.81' TW=259.05' (Dynamic Tailwater)
Routed to Pond CB-2 : Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af	-3=Broad-Crested Rectangular Weir( Controls 0.00 cfs)
Routed to Pond CB-11 :	
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	

3 App J Post-Develop 32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Prepared by Labella Associates	Printed 1/4/2024
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# Summary for Pond CB-10:

[58] Hint: Peaked 0.48' above defined flood level [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)

Inflow Area =	0.807 ac, 9	7.85% Impervious,	Inflow Depth = 5.72" for 25-yr event
Inflow =	6.81 cfs @	12.05 hrs, Volume	e= 0.384 af
Outflow =	5.94 cfs @	12.15 hrs, Volume	e 0.384 af, Atten= 13%, Lag= 5.8 min
Primary =	5.94 cfs @	12.15 hrs, Volume	e= 0.384 af
Routed to Por	nd CB-18 :		
Secondary =	0.00 cfs @	0.00 hrs, Volume	= 0.000 af
Routed to Por	nd CB-18 :		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 243.98' @ 12.09 hrs Surf.Area= 1,675 sf Storage= 455 cf Flood Elev= 243.50' Surf.Area= 32 sf Storage= 54 cf

Plug-Flow detention time= 0.4 min calculated for 0.384 af (100% of inflow) Center-of-Mass det. time= 0.4 min ( 746.0 - 745.6 )

Volume	Inve	rt Avail.S	torage	Storag	e Description	
#1	239.0	)'	54 cf	STRUC	CTURE (Prismati	<b>c)</b> Listed below (Recalc)
#2	243.5	D' 5,	338 cf	Custo	m Stage Data (Pr	rismatic)Listed below (Recalc)
		5,	392 cf	Total A	vailable Storage	
Elevatio	on s	Surf.Area	Inc	.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubi	c-feet)	(cubic-feet)	
239.0	00	12		0	0	
243.5	50	12		54	54	
Elevatio		Surf.Area		Store	Cum.Store	
(fee	/	(sq-ft)	(CUDI	c-feet)	(cubic-feet)	
243.5		20		0	0	
244.0		1,744		441	441	
244.7	70	12,247		4,897	5,338	
Device	Routing	Inve	t Outl	et Devic	es	
#1	Primary	239.00	)' <b>24.0</b>	" Roun	d Culvert	
	-		L= 2	40.0' C	PP, projecting, no	o headwall, Ke= 0.900
			Inlet	/ Outlet	Invert= 239.00' /	237.80' S= 0.0050 '/' Cc= 0.900
			n= 0	.013 Co	prrugated PE, smo	ooth interior, Flow Area= 3.14 sf
#2	Seconda	y 244.60	Hea	d (feet)		oad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 .00 5.50
					sh) 2.34 2.50 2. .66 2.68 2.70 2	70 2.68 2.68 2.66 2.65 2.65 2.65 .74 2.79 2.88

	Labella Associat .20-3f s/n 09581			Software Solut	ions LLC		Printed 1/4/20 Page 1
HydroCAD® 10	.20-31 \$/11 09361			Sollware Solut			Fagel
Primary OutF <sup>€</sup> —1=Culvert	low Max=6.26 cf (Outlet Controls 6	<sup>f</sup> s @ 12.15 6.26 cfs @	hrs HW 1.99 fps	/=243.70' TV s)	V=243.40'	(Dynamic T	ailwater)
Secondary O 2=Broad-C	utFlow Max=0.00 rested Rectang	0 cfs @ 0.0 ular Weir(	00 hrs H Controls	IW=239.00' <sup>-</sup> s 0.00 cfs)	TW=237.08	' (Dynamic	Tailwater)
		Sur	nmary	for Pond C	B-11:		
Inflow Area = Inflow = Outflow = Primary = Routed to F	0.598 ac, 8 3.51 cfs @ 3.48 cfs @ 3.48 cfs @ Pond CB-12 :	12.04 hrs 12.03 hrs	, Volum , Volum	e= 0	.264 af	for 25-yre en= 1%, La	
Peak Elev= 26	n-Stor-Ind metho 0.35' @ 12.06 hr	s Surf.Ar	ea= 9 sf	Storage= 1		5	
Plug-Flow dete	53.05' Surf.Area ention time= 0.4 n s det. time= 0.2 n	nin calcula	ited for 0	).264 af (100º	% of inflow)		
Plug-Flow dete Center-of-Mas	ention time= 0.4 n s det. time= 0.2 n	nin calcula nin ( 767.4	ted for 0 - 767.2	).264 af (100º	% of inflow)	I	
Plug-Flow dete Center-of-Mas <u>Volume</u> #1 25	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05'	nin calcula nin ( 767.4 Storage <u>S</u> 36 cf <b>S</b>	ted for 0 - 767.2 Storage [ STRUCT	0.264 af (100 <sup>4</sup> ) <u>Description</u> <b>URE (Prism</b> a	atic)Listed I	below (Reca	
Plug-Flow dete Center-of-Mas <u>Volume</u> #1 25	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 63.05' 1	nin calcula nin ( 767.4 <u>Storage S</u> 36 cf <b>S</b> ,263 cf <b>C</b>	ted for 0 - 767.2 Storage [ STRUCT Custom 3	0.264 af (100 <sup>4</sup> ) Description URE (Prisma Stage Data (	atic)Listed   Prismatic)	below (Reca	
Plug-Flow dete Center-of-Mas <u>Volume</u> #1 25	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 63.05' 1	nin calcula nin ( 767.4 <u>Storage S</u> 36 cf <b>S</b> ,263 cf <b>C</b>	ted for 0 - 767.2 Storage [ STRUCT Custom 3	0.264 af (100 <sup>4</sup> ) <u>Description</u> <b>URE (Prism</b> a	atic)Listed   Prismatic)	below (Reca	
Plug-Flow deta Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 33.05' 1 1 Surf.Area	nin calcula nin ( 767.4 Storage <u>S</u> 36 cf <u>S</u> ,263 cf <u>(</u> ,299 cf 1 Inc.S	ted for 0 - 767.2 Storage <u>[</u> STRUCT Custom S Total Ava	0.264 af (100 ) Description URE (Prisma <u>Stage Data (</u> iilable Storag Cum.Store	<b>atic)</b> Listed   <b>Prismatic)</b> e	below (Reca	
Plug-Flow det Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation (feet)	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 53.05' 1 Surf.Area (sq-ft)	nin calcula nin ( 767.4 Storage S 36 cf S ,263 cf C ,299 cf T	ted for 0 5 - 767.2 5 TRUCT 5	0.264 af (100 <sup>4</sup> ) Description URE (Prisma <u>Stage Data (</u> illable Storag Cum.Stora (cubic-feet	atic)Listed I Prismatic) e e	below (Reca	
Plug-Flow deta Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 33.05' 1 1 Surf.Area	nin calcula nin ( 767.4 Storage <u>S</u> 36 cf <u>S</u> ,263 cf <u>(</u> ,299 cf 1 Inc.S	ted for 0 - 767.2 Storage <u>[</u> STRUCT Custom S Total Ava	0.264 af (100 <sup>4</sup> ) Description URE (Prisma <u>Stage Data (</u> illable Storag Cum.Stora (cubic-feet	atic)Listed I Prismatic) e e <u>)</u> 0	below (Reca	
Plug-Flow dete Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation (feet) 259.05 263.05	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 53.05' 1 1 Surf.Area (sq-ft) 9 9	nin calcula nin ( 767.4 <u>Storage S</u> 36 cf <b>S</b> ,263 cf <b>(</b> ,299 cf 1 Inc.S (cubic-1	ted for 0 767.2 Storage [ STRUCT Custom S Total Ava tore (tore (tore 0 36	0.264 af (100 ) Description URE (Prisma Stage Data ( uilable Storag Cum.Stora (cubic-feet ( 30	atic)Listed   Prismatic) e e <u>)</u> 0 6	below (Reca	
Plug-Flow det Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation (feet) 259.05	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' <u>63.05' 1</u> 1 Surf.Area (sq-ft) 9	nin calcula nin ( 767.4 Storage <u>S</u> 36 cf <u>S</u> ,263 cf <u>(</u> ,299 cf 1 Inc.S	ted for 0 767.2 Storage <u>E</u> TRUCT Custom 1 Total Ava tore <u>tore</u> 0 36 tore	2.264 af (100 <sup>4</sup> ) <u>Description</u> URE (Prisma <u>Stage Data (</u> <u>illable Storag</u> Cum.Stora ( <u>cubic-feet</u> ( 31 Cum.Stora	atic)Listed I Prismatic) e e <u>)</u> 0 6 e	below (Reca	
Plug-Flow dete Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation (feet) 259.05 263.05 Elevation	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 33.05' 1 1 Surf.Area (sq-ft) 9 9 9 Surf.Area	nin calcula nin ( 767.4 <u>Storage S</u> 36 cf <b>S</b> ,263 cf <b>C</b> ,299 cf 1 Inc.S (cubic-f	ted for 0 767.2 Storage <u>E</u> TRUCT Custom 1 Total Ava tore <u>tore</u> 0 36 tore	2.264 af (100 <sup>4</sup> ) Description URE (Prisma Stage Data ( iilable Storag Cum.Stora (cubic-feet Cum.Stora (cubic-feet	atic)Listed I Prismatic) e e <u>)</u> 0 6 e	below (Reca	
Plug-Flow det Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation (feet) 259.05 263.05 Elevation (feet)	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 1 33.05' 1 1 Surf.Area (sq-ft) 9 9 Surf.Area (sq-ft)	nin calcula nin ( 767.4 36 cf <b>§</b> ,263 cf <b>§</b> ,299 cf <b>1</b> Inc.S (cubic-1	ted for 0 767.2 Storage <u>E</u> TRUCT Custom 1 Total Ava tore <u>eet)</u> 0 36 tore tore eet)	2.264 af (100 <sup>4</sup> ) Description URE (Prisma Stage Data ( iilable Storag Cum.Stora (cubic-feet Cum.Stora (cubic-feet	atic)Listed   Prismatic) e e <u>)</u> 0 6 e <u>)</u> 0 0 0	below (Reca	
Plug-Flow dete Center-of-Mas <u>Volume</u> #1 2: #2 2: Elevation (feet) 259.05 263.05 Elevation (feet) 263.05	ention time= 0.4 n s det. time= 0.2 n Invert Avail.S 59.05' 63.05' 1 Surf.Area (sq-ft) 9 9 9 Surf.Area (sq-ft) 9 9 4,200	nin calcula nin ( 767.4 36 cf <b>\$</b> ,263 cf <b>\$</b> ,299 cf <b>1</b> Inc.S (cubic-1 (cubic-1 1 rt Outlet	ted for 0 - 767.2 Storage I TRUCT Custom : Total Ava tore (eet) 0 36 tore (eet) 0 263	0.264 af (100 ) Description URE (Prisma Stage Data ( illable Storag Cum.Stor (cubic-feet ( 30 Cum.Stor (cubic-feet ( 1,263	atic)Listed   Prismatic) e e <u>)</u> 0 6 e <u>)</u> 0 0 0	below (Reca	

Newburgh South Logistics Center           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 25-yr Rainfall=5.89"           Prepared by Labella Associates         Printed 1/4/2024           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 117	Sewburgh South Logisti           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 25-yr Rain           Prepared by Labella Associates         Printed           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Printed
Summary for Pond CB-12:	Peak Elev= 258.30' @ 12.05 hrs Surf.Area= 12 sf Storage= 40 cf Flood Elev= 263.13' Surf.Area= 24 sf Storage= 98 cf
nflow Area =       1.315 ac, 81.40% Impervious, Inflow Depth =       5.24" for 25-yr event         nflow =       7.63 cfs @       12.04 hrs, Volume=       0.574 af         Outflow =       7.59 cfs @       12.04 hrs, Volume=       0.574 af, Atten= 1%, Lag= 0.3 min         Primary =       7.59 cfs @       12.04 hrs, Volume=       0.574 af         Routed to Pond CB-13 :       0.574 af	Plug-Flow detention time= 0.1 min calculated for 0.722 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 767.3 - 767.2 ) Volume Invert Avail.Storage Storage Description
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 259.76' @ 12.05 hrs Surf.Area= 12 sf Storage= 34 cf Flood Elev= 263.05' Surf.Area= 24 sf Storage= 74 cf	#1     254.97'     98 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     263.13'     1,289 cf     Custom Stage Data (Prismatic)Listed below (Recalc)       1,387 cf     Total Available Storage
Plug-Flow detention time= 0.3 min calculated for 0.574 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 770.6 - 770.4 )	Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           254.97         12         0         0           263.13         12         98         98
Volume         Invert         Avail.Storage         Storage Description           #1         256.89'         74 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         263.05'         1,868 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           1.942 cf         Total Available Storage	Elevation     Surf.Area     Inc.Store     Cum.Store       (feet)     (sq-ft)     (cubic-feet)     (cubic-feet)       263.13     12     0     0
ElevationSurf.AreaInc.StoreCum.Store(feet)(sq-ft)(cubic-feet)(cubic-feet)256.891200263.05127474	263.87         3,473         1,289         1,289           Device         Routing         Invert         Outlet Devices           #1         Primary         254.97' <b>18.0" Round Culvert</b> L = 137.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 254.97' / 253.60' S= 0.0100 '/ Cc= 0.900
Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           263.05         12         0         0           263.82         4,839         1,868         1,868	n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf Primary OutFlow Max=9.30 cfs @ 12.04 hrs HW=258.27' TW=256.36' (Dynamic Tailwater) 1=Culvert (Inlet Controls 9.30 cfs @ 5.26 fps)
Device Routing Invert Outlet Devices	Summary for Pond CB-14:
#1 Primary 256.89' 18.0" Round Culvert L= 192.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert = 256.89' / 254.97' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf Primary OutFlow Max=7.19 cfs @ 12.04 hrs HW=259.66' TW=258.27' (Dynamic Tailwater) 1=Culvert (Outlet Controls 7.19 cfs @ 4.07 fps)	Inflow Area = 1.654 ac, 84.27% Impervious, Inflow Depth = 5.30" for 25-yr event Inflow = 9.54 cfs @ 12.04 hrs, Volume= 0.731 af Outflow = 9.53 cfs @ 12.04 hrs, Volume= 0.731 af, Atten= 0%, Lag= 0.1 min Primary = 9.53 cfs @ 12.04 hrs, Volume= 0.731 af Routed to Pond CB-15 :
Summary for Pond CB-13:	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 256.36' @ 12.04 hrs Surf.Area= 12 sf Storage= 33 cf Flood Elev= 262.48' Surf.Area= 12 sf Storage= 107 cf
nflow Area =       1.636 ac, 84.10% Impervious, Inflow Depth =       5.30" for 25-yr event         nflow =       9.50 cfs @       12.04 hrs, Volume=       0.722 af         Dutflow =       9.43 cfs @       12.04 hrs, Volume=       0.722 af, Atten= 1%, Lag= 0.1 min         Primary =       9.43 cfs @       12.04 hrs, Volume=       0.722 af         Routed to Pond CB-14 :       12.04 hrs, Volume=       0.722 af	Plug-Flow detention time= 0.1 min calculated for 0.731 af (100% of inflow)         Center-of-Mass det. time= 0.1 min (767.2 - 767.1)         Volume       Invert       Avail.Storage       Storage Description         #1       253.60'       107 cf       STRUCTURE (Prismatic)Listed below (Recalc)
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	#1 253.00 107 ct SIRUCIURE (Prismatic)Listed below (Recaic)

Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfall=5.89" Printed 1/4/2024

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3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 25-yr Rainfall=5.89"           Prepared by Labella Associates         Printed 1/4/2024           HydroCAD® 10.20-3f s/n 09581 @ 2023 HydroCAD Software Solutions LLC         Page 119	Newburgh South Logistics Cent           3_App J_Post-Develop_32142-00         NY-32142-00         24-hr S1 25-yr         Rainfall=5.8           Prepared by Labella Associates         Printed 1/4/202         Printed 1/4/202         Printed 1/4/202           HydroCAD® 10.20-3f s/n 09581         © 2023 HydroCAD Software Solutions LLC         Page 12
Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           253.60         12         0         0           262.48         12         107         107           262.50         20         0         107	#2         Primary         253.61'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)         0.20         0.40         0.60         0.80         1.00         1.20         1.40         1.60         1.80         2.00           2.50         3.00         3.50         4.00         4.50         5.00         5.50           Coef. (English)         2.34         2.50         2.70         2.68         2.66         2.65         2.65           2.65         2.67         2.66         2.68         2.70         2.74         2.79         2.88
Device         Routing         Invert         Outlet Devices           #1         Primary         253.60' <b>18.0" Round Culvert</b> L= 180.0'         CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 253.60' / 249.91'         S= 0.0205 '/'         Cc= 0.900	Primary OutFlow Max=10.41 cfs @ 12.04 hrs HW=253.06' TW=247.68' (Dynamic Tailwater) 1=Culvert (Inlet Controls 10.41 cfs @ 5.89 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)
n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf	Summary for Pond CB-16:
#2         Primary         262.48'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)         0.20         0.40         1.20         1.40         1.60         1.80         2.00           2.50         3.00         3.50         4.00         4.50         5.00         5.50           Coef. (English)         2.34         2.50         2.70         2.68         2.66         2.65         2.65         2.65           2.65         2.67         2.66         2.68         2.70         2.74         2.79         2.88	[58] Hint: Peaked 0.11' above defined flood level [90] Warning: Qout>Qin may require smaller dt or Finer Routing [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)
rimary OutFlow Max=9.51 cfs @ 12.04 hrs HW=256.35' TW=253.06' (Dynamic Tailwater) —1=Culvert (Inlet Controls 9.51 cfs @ 5.38 fps) —2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)	Inflow Area =       2.056 ac, 81.10% Impervious, Inflow Depth =       5.24" for 25-yr event         Inflow =       11.79 cfs @       12.04 hrs, Volume=       0.898 af         Outflow =       11.97 cfs @       12.04 hrs, Volume=       0.898 af, Atten= 0%, Lag= 0.0 min         Primary =       11.97 cfs @       12.04 hrs, Volume=       0.898 af         Routed to Pond CB-17 :       0.204 hrs, Volume=       0.898 af
Summary for Pond CB-15:           nflow Area =         1.815 ac, 82.97% Impervious, Inflow Depth =         5.28" for 25-yr event           nflow =         10.44 cfs @         12.04 hrs, Volume=         0.799 af           Outflow =         10.43 cfs @         12.04 hrs, Volume=         0.799 af, Atten= 0%, Lag= 0.1 min           Primary =         10.43 cfs @         12.04 hrs, Volume=         0.799 af           Routed to Pond CB-16 :         0.799 af	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 247.69' @ 12.04 hrs Surf.Area= 15 sf Storage= 69 cf Flood Elev= 247.58' Surf.Area= 12 sf Storage= 68 cf Plug-Flow detention time= 0.2 min calculated for 0.898 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 770.1 - 769.9 )
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	Volume Invert Avail.Storage Storage Description
Peak Elev= 253.07° @ 12.04 hrs Surf.Area= 12 sf Storage= 38 cf Flood Elev= 253.16° Surf.Area= 12 sf Storage= 44 cf	#1 241.94' 72 cf STRUCTURE (Prismatic)Listed below (Recalc)
Plug-Flow detention time= 0.1 min calculated for 0.799 af (100% of inflow)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
Center-of-Mass det. time= 0.1 min ( 768.3 - 768.1 )	241.94 12 0 0
/olume Invert Avail.Storage Storage Description	247.58         12         68         68           247.85         20         4         72
#1   249.91'   47 cf   STRUCTURE (Prismatic)Listed below (Recalc)	Device Routing Invert Outlet Devices
Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           249.91         12         0         0           253.61         12         44         44	#1 Primary 241.94' <b>18.0" Round Culvert</b> L= 194.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.94' / 240.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
253.75     20     2     47       Device Routing     Invert Outlet Devices	#2         Primary         247.58'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir           Head (feet)         0.20         0.40         0.60         0.80         1.00         1.20         1.40         1.60         1.80         2.00           2.50         3.00         3.50         4.00         4.50         5.00         5.50
#1 Primary 249.91' <b>18.0" Round Culvert</b> L= 180.0' CPP, projecting, no headwall, Ke= 0.900	Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.66 2.68 2.70 2.74 2.79 2.88

 Sewburgh South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 25-yr
 Rainfall=5.89"

 Prepared by Labella Associates
 Printed 1/4/2024
 1/4/2024

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Primary OutFlow Max=11.82 cfs @ 12.04 hrs HW=247.69' TW=244.89' (Dynamic Tailwater) 1=Culvert (Outlet Controls 10.17 cfs @ 5.75 fps) 2=Broad-Crested Rectangular Weir (Weir Controls 1.65 cfs @ 0.77 fps)

## Summary for Pond CB-17:

[58] Hint: Peaked 0.84' above defined flood level[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=11)

Inflow Area =	4.187 ac, 8	8.32% Impervious, Inflow	Depth = 5.39" for 2	5-yr event
Inflow =	24.64 cfs @	12.04 hrs, Volume=	1.881 af	
Outflow =	18.02 cfs @	12.22 hrs, Volume=	1.881 af, Atten= 27	%, Lag= 10.8 min
Primary =	18.02 cfs @	12.22 hrs, Volume=	1.881 af	-
Routed to Por	nd CB-18 :			
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	
Routed to Por	nd PF-2 : Pretro	eatment Forebay		
Tertiary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	
Routed to Por	nd DP-1 : Gidn	eytown Creek		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 245.14' @ 12.13 hrs Surf.Area= 9,629 sf Storage= 4,038 cf Flood Elev= 244.30' Surf.Area= 40 sf Storage= 96 cf

Invert Avail.Storage Storage Description

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time=  $0.7\ min$  (  $762.3\ -761.6$  )

Volume

#1	239.	50'	96 cf	STRU	CTURE (Prismat	ic)Listed below (Recalc)
#2	244.	30'	18,411 cf			rismatic)Listed below (Recalc)
			18,507 cf	Total	Available Storage	
Elevatio		Surf.Area		c.Store	Cum.Store	
(fee	t)	(sq-ft)	(cub	oic-feet)	(cubic-feet)	
239.5	0	20		0	0	
244.3	0	20		96	96	
Elevatio	n	Surf.Area	In	c.Store	Cum.Store	
(fee	t)	(sq-ft)	(cub	ic-feet)	(cubic-feet)	
244.3	0	20		0	0	
245.0	0	7,740		2,716	2,716	
245.3	5	12,368		3,519	6,235	
246.0	0	25,096		12,176	18,411	
Device	Routing	Ir	nvert Ou	tlet Devi	ces	
#1	Primary	23	L= Inle	192.0' et / Outle	t Invert= 239.50' /	o headwall, Ke= 0.900 237.58' S= 0.0100 '/' Cc= 0.900 ooth interior, Flow Area= 3.14 sf
#2	Primary	24	5.26' <b>10.</b>	0' long	x 5.0' breadth Br	oad-Crested Rectangular Weir

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			HydroCAD Software Solutions LLC Page 1
#3	Secondary	2.5 Cc 2.6 245.34' <b>10</b> He 2.5	ad (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 0 3.00 3.50 4.00 4.50 5.00 5.50 ef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 5 2.67 2.66 2.68 2.70 2.74 2.79 2.88 <b>0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> ad (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 0 3.00 3.50 4.00 4.50 5.00 5.50 ef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
#4	Tertiary	245.40' <b>10</b> He 2.5 Co	5       2.67       2.68       2.70       2.74       2.79       2.88         0' long x 5.0' breadth Broad-Crested Rectangular Weir ad (feet) 0.20       0.40       0.60       0.80       1.20       1.40       1.60       1.80       2.00         0       3.00       3.50       4.00       4.50       5.00       5.50         ef. (English)       2.34       2.50       2.70       2.68       2.66       2.65       2.65       5         5       2.67       2.66       2.68       2.70       2.74       2.79       2.88
1=Cu	Ivert (Inlet Co	ntrols 17.88 cfs	2.22 hrs HW=244.94' TW=242.70' (Dynamic Tailwater) @ 5.69 fps) eir ( Controls 0.00 cfs)
Second 1—3=Br	ary OutFlow No.	/lax=0.00 cfs @ Rectangular W	0.00 hrs HW=239.50' TW=232.00' (Dynamic Tailwater) eir ( Controls 0.00 cfs)
			00 hrs HW=239.50' TW=0.00' (Dynamic Tailwater) eir( Controls 0.00 cfs)
		5	Summary for Pond CB-18:
[87] War	rning: Oscillatio		flood level smaller dt or Finer Routing (severity=1) oy 1.05' @ 11.97 hrs (11.71 cfs 0.037 af)
Inflow A Inflow Outflow Primary Route	= 34.4 = 31.0 = 31.0	4 cfs @ 12.03 6 cfs @ 12.07	Impervious, Inflow Depth = 5.52" for 25-yr event hrs, Volume= 3.490 af hrs, Volume= 3.490 af, Atten= 10%, Lag= 2.3 min hrs, Volume= 3.490 af
Peak Ele	ev= 243.86' @	12.06 hrs Sur	e Span= 0.00-72.00 hrs, dt= 0.01 hrs Area= 2,260 sf Storage= 535 cf Storage= 128 cf
		ne=0.1 min cal ne=0.1 min ( 7	culated for 3.489 af (100% of inflow) 54.8 - 754.7)
			Storage Description
Volume	237.08'	128 c	STRUCTURE (Prismatic)Listed below (Recalc) Custom Stage Data (Prismatic)Listed below (Recalc)
Volume #1 #2	243.50'	1 850 ~	

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Elevation (feet)	Surf.Area (sq-ft)		m.Store bic-feet)	Volume #1 2
237.08 243.50	20 20	0 128	0 128	#2 2
Elevation (feet)	Surf.Area		m.Store	Elevation
243.50 244.75	(sq-ft) 20 7,740	(cubic-feet) (cu 0 4,850	b <u>ic-feet)</u> 0 4,850	(feet) 
Device Routing	Invert	Outlet Devices		Elevation
#1 Primary	237.08'	L= 64.0' CPP, proj Inlet / Outlet Invert= n= 0.013 Corrugate	ecting, no headwall, Ke= 0.900 237.08' / 236.06' S= 0.0159 '/' Cc= 0.900 d PE, smooth interior, Flow Area= 4.91 sf	<u>(feet)</u> 245.95 246.60
#2 Primary	244.70'		eadth Broad-Crested Rectangular Weir 40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.0	0 Device Rou #1 Prim
		Coef. (English) 2.34	2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	
-1=Culvert (Inle	et Controls 30.9	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24	2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 8 2.70 2.74 2.79 2.88 3.85' TW=241.10' (Dynamic Tailwater)	#2 Sec
-1=Culvert (Inle	et Controls 30.9	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24 8 cfs @ 6.31 fps)	2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 8 2.70 2.74 2.79 2.88 3.85' TW=241.10' (Dynamic Tailwater) 1 cfs)	
1=Culvert (Inle 2=Broad-Crest	et Controls 30.9 ted Rectangula 0.25' above def	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24 8 cfs @ 6.31 fps) ar Weir( Controls 0.00 Summary for F	2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 8 2.70 2.74 2.79 2.88 3.85' TW=241.10' (Dynamic Tailwater) cfs)	#2 Seco Primary Outf ↓1=Culvert
1=Culvert (Inle 2=Broad-Crest 58] Hint: Peaked ( 80] Warning: Exce Inflow Area = Inflow =	et Controls 30.9 ted Rectangula 0.25' above def eeded Pond CE 4.759 ac,100 28.67 cfs @ 1 27.25 cfs @ 1	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24 8 cfs @ 6.31 fps) ar Weir ( Controls 0.00 Summary for F ined flood level i-20 by 0.58' @ 12.00 00% Impervious, Infli 2.04 hrs, Volume= 2.04 hrs, Volume=	2.250 2.70 2.68 2.68 2.66 2.65 2.65 2.65 8 2.70 2.74 2.79 2.88 3.85' TW=241.10' (Dynamic Tailwater) • cfs) Pond CB-19: hrs (7.11 cfs 0.030 af) bw Depth = 5.63" for 25-yr event 2.233 af 2.233 af, Atten= 5%, Lag= 0.1 min	Primary Out
1=Culvert (Inle 2=Broad-Crest 58] Hint: Peaked ( 80] Warning: Exce Inflow Area = Inflow =	et Controls 30.9 ted Rectangula 0.25' above def eeded Pond CE 4.759 ac,100 28.67 cfs @ 1 27.25 cfs @ 1 26.62 cfs @ 1 J PF-1 : Pretrea 0.63 cfs @ 1	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24 8 cfs @ 6.31 fps) ar Weir ( Controls 0.00 Summary for F ined flood level i-20 by 0.58' @ 12.00 00% Impervious, Infli 2.04 hrs, Volume= 2.04 hrs, Volume=	2 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 8 2.70 2.74 2.79 2.88 3.85' TW=241.10' (Dynamic Tailwater) cfs) Yond CB-19: hrs (7.11 cfs 0.030 af) bw Depth = 5.63" for 25-yr event 2.233 af	Primary Outf 1=Culvert Şecondary O
1=Culvert (Inle 2=Broad-Crest [58] Hint: Peaked ( 80] Warning: Exce Inflow Area = Inflow = Dutflow = Primary = Routed to Ponc Secondary = Routed to Ponc Routed to Ponc Rou	et Controls 30.9 ted Rectangula 0.25' above def eeded Pond CE 4.759 ac,100 28.67 cfs @ 1 27.25 cfs @ 1 26.62 cfs @ 1 d CF-1 : Pretrea 0.63 cfs @ 1 d CB-8 : or-Ind method, 0' @ 12.04 hrs 5' Surf.Area=	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24 8 cfs @ 6.31 fps) ar Weir ( Controls 0.00 Summary for F ined flood level -20 by 0.58' @ 12.00 00% Impervious, Infli 2.04 hrs, Volume= 2.04 hrs, Volume= 2.04 hrs, Volume= tment Forebay	<ul> <li>2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65</li> <li>8 2.70 2.74 2.79 2.88</li> <li>3.85' TW=241.10' (Dynamic Tailwater)</li> <li>a cfs)</li> <li>brond CB-19:</li> <li>bro</li></ul>	Primary Outf 1=Culvert Secondary O 2=Broad-O [58] Hint: Pea [87] Warning: [80] Warning: [80] Warning: Inflow Area = Inflow = Outflow = Outflow = Primary =
1=Culvert (Inle 2=Broad-Crest [58] Hint: Peaked ( 80] Warning: Exce Inflow Area = Inflow = Dutflow = Primary = Routed to Ponc Secondary = Routed to Ponc Routed to Ponc Rou	et Controls 30.9 ted Rectangula 0.25' above def eeded Pond CE 4.759 ac,100 28.67 cfs @ 1 27.25 cfs @ 1 26.62 cfs @ 1 d CB-8 : tor-Ind method, 0'@ 12.04 hrs 5' Surf.Area= on time= 0.3 min	Coef. (English) 2.34 2.65 2.67 2.66 2.6 @ 12.07 hrs HW=24 8 cfs @ 6.31 fps) ar Weir ( Controls 0.00 Summary for F ined flood level -20 by 0.58' @ 12.00 00% Impervious, Infl 2.04 hrs, Volume= 2.04 hrs, Volume= 2.04 hrs, Volume= tment Forebay 2.04 hrs, Volume= Time Span= 0.00-72. Surf.Area= 90 sf Sta 40 sf Storage= 123 of a calculated for 2.233	<ul> <li>2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65</li> <li>8 2.70 2.74 2.79 2.88</li> <li>3.85' TW=241.10' (Dynamic Tailwater)</li> <li>a cfs)</li> <li>brond CB-19:</li> <li>bro</li></ul>	Primary Outf 1=Culvert Secondary O 2=Broad-O [58] Hint: Pea [87] Warning: [80] Warning: Inflow Area = Inflow = Outflow =

	B 10.20-3f s/	<u>n 09581 ©</u>	2023 HydroCAL	) Software Solutions LLC	Page 12
Volume	Invert	Avail.St		Description	
#1 #2	239.82' 245.95'			TURE (Prismatic)Listed b n Stage Data (Prismatic)L	
#4	240.00	· · · ·		vailable Storage	
Elevation	Cum	A	In a Stars	Cum.Store	
Elevation (feet)		.Area sq-ft)	Inc.Store (cubic-feet)	(cubic-feet)	
239.82		20	0	0	
245.95		20	123	123	
Elevation	Surf	Area	Inc.Store	Cum.Store	
(feet)	(	sq-ft)	(cubic-feet)	(cubic-feet)	
245.95		20	0	0	
246.60		150	55	55	
	Routing	Inver			
#1 P	rimary	239.82			II. K 0.000
				PP, projecting, no headwal Invert= 239.82' / 238.55'	
					or, Flow Area= 3.14 sf
			11-0.013 60	rrugated PE, smooth interi	
#2 S	Secondary	245.95	2.0' long x	2.0' breadth Broad-Creste	ed Rectangular Weir
#2 S	Secondary	245.95	2.0' long x 2 Head (feet)	2.0' breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00	
#2 S	Secondary	245.95	2.0' long x 2 Head (feet) 2.50 3.00 3	2.0' breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00
#2 S	Secondary	245.95	2.0' long x 2 Head (feet) 2.50 3.00 3	<b>2.0' breadth Broad-Creste</b> 0.20 0.40 0.60 0.80 1.00 .50 h) 2.54 2.61 2.61 2.60 2	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00
Primary O Η1=Culv	outFlow Max ert (Barrel (	x=26.56 cf Controls 2	<ul> <li>' 2.0' long x Head (feet)</li> <li>2.50 3.00 3</li> <li>Coef. (Englis</li> <li>2.85 3.07 3</li> <li>fs @ 12.04 hrs</li> <li>6.56 cfs @ 8.46</li> </ul>	2.0 <sup>°</sup> breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 h) 2.54 2.61 2.61 2.60 2 .20 3.32 HW=246.17' TW=239.14' fps)	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater)
Primary O 1⊐1=Culv	outFlow Max ert (Barrel (	x=26.56 cf Controls 2	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs</li> <li>6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs</li> <li>lar Weir (Weir Comparison)</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 .h) 2.54 2.61 2.61 2.60 2 .20 3.32 HW=246.17' TW=239.14'	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater)
Primary O Î─1=Culv Şecondarı Î─2=Broa	outFlow Max ert (Barrel ( y OutFlow I d-Crested I	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b>	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs lar Weir (Weir C Summan</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) 6 HW=246.20' TW=242.53 controls 0.63 cfs @ 1.27 fp: y for Pond CB-2:	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater)
Primary O 1=Culv Secondar 2=Broa [58] Hint: F	DutFlow Ma ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46 cfs @ 12.04 hrs lar Weir (Weir ( Summan sefined flood level</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 .50 3.32 HW=246.17' TW=239.14' fps) s HW=246.20' TW=242.53 controls 0.63 cfs @ 1.27 fp: ry for Pond CB-2: I	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s)
Primary O 1=Culv Secondar 2=Broa [58] Hint: F [87] Warnin	PutFlow Ma: ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillatio	x=26.56 ct Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 12.04 hrs cfs @ 12.04 hrs</li> <li>Garage (Weir Construction)</li> <li>Summan</li> <li>Summan</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) 6 HW=246.20' TW=242.53 controls 0.63 cfs @ 1.27 fp: y for Pond CB-2:	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s)
Primary O 1=Culv Secondary 2=Broa [58] Hint: F [87] Warnin [80] Warnin	PutFlow Ma: ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillatio ng: Exceede	x=26.56 ct Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re ed Pond C	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs lar Weir (Weir C Summan</li> <li>fined flood leve equire smaller c B-1 by 1.31' @</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) 6 HW=246.20' TW=242.55 controls 0.63 cfs @ 1.27 fp: ry for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) (Dynamic Tailwater)
Primary O 1=Culv Secondary 2=Broa [58] Hint: F [87] Warnii [80] Warnii Inflow Area	PutFlow Mac ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillation ng: Exceede a = 2.5	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re del Pond C 565 ac, 54	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs lar Weir (Weir ( Summan</li> <li>fs @ 12.04 hrs lar Weir (Weir C</li> <li>Bumman</li> <li>a fined flood leve equire smaller of B-1 by 1.31' @</li> <li>4.09% Impervioi</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 .50 .50 .50 .50 .50 .50	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) (Dynamic Tailwater)
Primary O 1=Culv Secondar 2=Broa [58] Hint: F [87] Warnin [80] Warnin Inflow Area Inflow Outflow	PutFlow Ma: ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillatio ng: Exceeder a = 2.3 = 9.1	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re del Pond C 565 ac, 54 5 cfs @	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs lar Weir (Weir C Summal sequere smaller of B-1 by 1.31' @</li> <li>4.09% Impervioo 12.35 hrs, Volu</li> <li>12.38 hrs, Volu</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) s HW=246.20' TW=242.53 Controls 0.63 cfs @ 1.27 fps y for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a us, Inflow Depth = 4.28" me= 0.916 af, Atte me= 0.916 af, Atte	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) (Dynamic Tailwater)
Primary O 1=Culv Secondary 2=Broa [58] Hint: F [87] Warnin [80] Warnin Inflow Area Inflow Outflow Primary	PutFlow Max ert (Barrel ( y OutFlow I dd-Crested I Peaked 0.44 ng: Oscillatin ng: Exceede a = 2.0 = 9.2 = 9.1 = 9.1	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re d Pond C 565 ac, 54 5 cfs @ 3 cfs @	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 12.04</li></ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) s HW=246.20' TW=242.53 Controls 0.63 cfs @ 1.27 fps y for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a us, Inflow Depth = 4.28" me= 0.916 af, Atte me= 0.916 af, Atte	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) (Dynamic Tailwater) (Dynamic Tailwater) (Dynamic Tailwater)
Primary O 1=Culv Secondary 2=Broa [58] Hint: F [87] Warnin [80] Warnin Inflow Area Inflow Outflow Primary	PutFlow Ma: ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillatio ng: Exceeder a = 2.3 = 9.1	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re d Pond C 565 ac, 54 5 cfs @ 3 cfs @	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs lar Weir (Weir C Summal sequere smaller of B-1 by 1.31' @</li> <li>4.09% Impervioo 12.35 hrs, Volu</li> <li>12.38 hrs, Volu</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 .50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) s HW=246.20' TW=242.53 Controls 0.63 cfs @ 1.27 fps y for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a us, Inflow Depth = 4.28" me= 0.916 af, Atte me= 0.916 af, Atte	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) (Dynamic Tailwater) (Dynamic Tailwater) (Dynamic Tailwater)
Primary O 1=Culv Secondar 2=Broa [58] Hint: F [87] Warnin [80] Warnin Inflow Area Inflow Primary Routed Routing by	PutFlow Ma: ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillation ng: Exceede a = 2.3 = 9.1 = 9.1 to Pond CB	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re de Pond C 565 ac, 54 5 cfs @ 3 cfs @ -22 : and method	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs ar Weir (Weir C Summai</li> <li>a Weir (Weir C B-1 by 1.31' @</li> <li>4.09% Impervion 12.35 hrs, Volu</li> <li>12.38 hrs, Volu</li> <li>12.38 hrs, Volu</li> <li>12.38 hrs, Volu</li> <li>Time Span= 0</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) a HW=246.20' TW=242.53 Controls 0.63 cfs @ 1.27 fps y for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a us, Inflow Depth = 4.28" me= 0.916 af me= 0.916 af, Atte me= 0.916 af me= 0.916 af	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) 6' (Dynamic Tailwater) 4'=4) (f) for 25-yr event en= 1%, Lag= 1.8 min
Primary O 1=Culv Secondary 2=Broa [58] Hint: F [87] Warnin [80] Warnin Inflow Area Inflow Outflow Primary Routed Routing by Peak Elev	PutFlow Ma: ert (Barrel ( y OutFlow I d-Crested I Peaked 0.44 ng: Oscillatii ng: Exceede a = 2.9 = 9.1 = 9.1 to Pond CB y Dyn-Stor-Ir = 263.80° @	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may re ad Pond C 565 ac, 54 5 cfs @ 3 cfs @ -22 : nd method 12.10 hrs	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs lar Weir (Weir C Summan</li> <li>fined flood leve equire smaller c B-1 by 1.31' @</li> <li>4.09% Impervioi 12.35 hrs, Volu</li> <li>12.38 hrs, Volu</li> <li>12.38 hrs, Volu</li> <li>12.38 hrs, Volu</li> <li>Time Span= 0 Surf.Area= 2,</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) 6 HW=246.20' TW=242.55 Controls 0.63 cfs @ 1.27 fp: 7 for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a us, Inflow Depth = 4.28'' me= 0.916 af me= 0.916 af .00-72.00 hrs, dt= 0.01 hrs 963 sf Storage= 714 cf	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) 6' (Dynamic Tailwater) 4'=4) (f) for 25-yr event en= 1%, Lag= 1.8 min
Primary O 1=Culv Secondary 2=Broa [58] Hint: F [87] Warnin [80] Warnin [80] Warnin [80] Warnin Inflow Area Inflow Area Inflow Primary Routed Buy Primary Routing by Peak Elev Flood Elev	PutFlow Ma:           ert (Barrel (           y OutFlow I           id-Crested I           Peaked 0.44           ng: Oscillation           ng: Oscillation           ng: Exceeded           a = 2.4.           = 9.2           = 9.1           to Pond CB           v Dyn-Stor-Ir           = 263.80° @	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may ru del Pond C 5 cfs @ 3 cfs @ 3 cfs @ -22 : and method 12.10 hrs Surf.Area=	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 12.04 hrs ar Weir (Weir C Summan</li> <li>fined flood leve equire smaller c B-1 by 1.31' @</li> <li>4.09% Impervion 12.35 hrs, Volu 12.38 hrs, Volu 12.38 hrs, Volu</li> <li>hrs, Volu</li> <li>firme Span= 0 Surf.Area= 2, 24 sf Storage</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) a HW=246.20' TW=242.53 controls 0.63 cfs @ 1.27 fp: <b>t</b> or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a) Js, Inflow Depth = 4.28" me= 0.916 af me= 0.916 af me= 0.916 af exercise 0.916 af me= 0.916 af me= 0.916 af me= 0.916 af me= 0.916 af	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) 6' (Dynamic Tailwater) 4'=4) (f) for 25-yr event en= 1%, Lag= 1.8 min
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Primary O 1=Culv Secondar 2=Broa [58] Hint: F [87] Warnin [80] Warnin Inflow Area Inflow Area Inflow Primary Routed Routing by Peak Elev Flood Elev Plug-Flow	PutFlow Ma: ert (Barrel ( y OutFlow I dd-Crested I Peaked 0.44 ng: Oscillation ng: Exceede a = 2.9 = 9.1 = 9.1 to Pond CB v Dyn-Stor-Ir = 263.80' @ = 263.36' \$ detention tir	x=26.56 cf Controls 2 Max=0.63 <b>Rectangu</b> ' above de ons may rr ad Pond C 565 ac, 54 5 cfs @ 3 cfs @ -22 : nd method 12.10 hrs Surf.Area= me= (not c	<ul> <li>' 2.0' long x : Head (feet) 2.50 3.00 3 Coef. (Englis 2.85 3.07 3</li> <li>fs @ 12.04 hrs 6.56 cfs @ 8.46</li> <li>cfs @ 12.04 hrs 6.56 cfs @ 12.04 hrs ar Weir (Weir C Summan</li> <li>fined flood leve equire smaller c B-1 by 1.31' @</li> <li>4.09% Impervion 12.35 hrs, Volu 12.38 hrs, Volu 12.38 hrs, Volu</li> <li>hrs, Volu</li> <li>firme Span= 0 Surf.Area= 2, 24 sf Storage</li> </ul>	2.0° breadth Broad-Creste 0.20 0.40 0.60 0.80 1.00 50 h) 2.54 2.61 2.61 2.60 2 20 3.32 HW=246.17' TW=239.14' fps) a HW=246.20' TW=242.53 Controls 0.63 cfs @ 1.27 fps ry for Pond CB-2: I t or Finer Routing (severity 12.01 hrs (6.59 cfs 0.024 a us, Inflow Depth = 4.28" me= 0.916 af me= 0.916 af, Atte me= 0.916 af, Atte me= 0.916 af Me= 0.916 af me	ed Rectangular Weir 1.20 1.40 1.60 1.80 2.00 2.66 2.70 2.77 2.89 2.88 (Dynamic Tailwater) 3' (Dynamic Tailwater) 3' (Dynamic Tailwater) s) (Dynamic Tailwater) 6' (Dynamic Tailwater) 4'=4) (f) for 25-yr event en= 1%, Lag= 1.8 min

Page 125	oftware Solutions LLC	3 HydroCAD		by Labella /	
		STINGOAD	09301 @ 202	0.20-51 5/1	IJUIUCAD
	escription	e Storage	Avail.Storad	Invert	/olume
w (Recalc)	RE (Prismatic)Listed below			257.54'	#1
d below (Recalc)	tage Data (Prismatic)Listed			263.36'	#2
	able Storage	of Total Av	14,199		
	Cum.Store	Inc.Store		Surf.	Elevation
	(cubic-feet)	ubic-feet)		(:	(feet)
	0	0	12		257.54
	70	70	12		263.36
	Cum.Store	Inc.Store		Surf.	Elevation
	(cubic-feet) 0	ubic-feet) 0	<u>q-ft) (c</u> 12	(\$	(feet) 263.36
	1,391	1,391	336	/	263.36
	14,129	12,738	139		265.00
	, -	,			
		utlet Device		outing	
(a= 0.000		8.0" Round		rimary	#1 F
	, projecting, no headwall,  Ke ert= 257.54' / 255.03'   S= 0.1				
	gated PE, smooth interior, F				
	)' breadth Broad-Crested R				
Rectangular weir			264.55' <b>1</b>	rimary	#2 F
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20 1.40 1.60 1.80 2.00 2.66 2.65 2.65 2.65 amic Tailwater) 25-yr event	4.00 4.50 5.00 5.50 2.34 2.50 2.70 2.68 2.68 2.68 2.70 2.74 2.79 2.88 :263.20' TW=260.92' (Dyn: 0.00 cfs) <b>or Pond CB-20:</b> Finer Routing Finer Routing (severity=8) Inflow Depth = 5.65" for = 0.374 af = 0.374 af, Atten= 0 = 0.365 af	50 3.00 3.5 oef. (English 65 2.67 2.6 2.38 hrs HV fs @ 4.75 fp Veir ( Contro Summary d flood level smaller dt or e smaller dt or e smaller dt % Impervious 4 hrs, Volun 6 hrs, Volun 4 hrs, Volun	Above define may require s may require as ac, 100.00 cfs @ 12.0 cfs @ 12.0 (9): cfs @ 12.0 (9): cfs @ 12.0	utFlow Max ert (Outlet C d-Crested F eaked 0.13' ng: Qout>Qii ng: Oscillation n = 0.7 = 4.7! = 5.0! = 4.9! to Pond CB = 2.0!	Primary C 1=Culv 2=Broa 58] Hint: I 90] Warni 87] Warni 87] Warni 87] Warni 90] Warni 87]
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	ed by Labella \D® 10.20-3f_s			Software Solutions LLC	Printed 1/4/2024 Page 126
			Surf.Area= 63 s 18 sf Storage=	sf Storage= 40 cf 36 cf	
			n calculated for ( n ( 746.1 - 745.9	0.374 af (100% of inflow 9)	)
/olume		Avail.Sto	<u> </u>	Description	
#1 #2	241.97' 245.95'			URE (Prismatic)Listed Stage Data (Prismatic)	
		20		ailable Storage	
Elevati		f.Area	Inc.Store	Cum.Store	
(fee 241.		(sq-ft) 9	(cubic-feet) 0	(cubic-feet) 0	
241. 245.		9	36	36	
Elevati (fee		f.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
245.	95	9	Û Û	0	
246.	90	350	171	171	
Device #1	Routing Primary	Invert 241.97'	Outlet Devices 24.0" Round		
#2	Secondary	245.95'	Inlet / Outlet Ir n= 0.013 Com <b>20.0' long x</b> 4 Head (feet) 0 2.50 3.00 3.5 Coef. (English	rugated PE, smooth inte 5.0' breadth Broad-Cre .20 0.40 0.60 0.80 1.0 i0 4.00 4.50 5.00 5.50 ) 2.34 2.50 2.70 2.68	S= 0.0050 '/' Cc= 0.900 rior, Flow Area= 3.14 sf sted Rectangular Weir 10 1.20 1.40 1.60 1.80 2.00 2.68 2.66 2.65 2.65 2.65
#3	Tertiary	245.95'	<b>20.0' long x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English	.20 0.40 0.60 0.80 1.0 60 4.00 4.50 5.00 5.50	sted Rectangular Weir 0 1.20 1.40 1.60 1.80 2.00 2.68 2.66 2.65 2.65 2.65
	y OutFlow Ma ulvert(Contro			V=245.90' TW=246.16'	(Dynamic Tailwater)
				HW=246.07' TW=243.9 ontrols 2.05 cfs @ 0.82 f	90' (Dynamic Tailwater) ps)
Tertiary	/ OutFlow Mai road-Crested	x=2.05 cfs ( <b>Rectangula</b>	2) 12.05 hrs HV ar Weir (Weir Co	V=246.07' TW=243.83' ontrols 2.05 cfs @ 0.82 f	(Dynamic Tailwater) ps)

 South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 25-yr
 Rainfall=5.89"

 Prepared by Labella Associates
 Printed 1/4/2024
 1/4/2024

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### Summary for Pond CB-22:

[58] Hint: Peaked 0.16' above defined flood level [80] Warning: Exceeded Pond CB-2 by 0.25' @ 12.01 hrs (2.80 cfs 0.007 af)

Inflow Area =	3.304 ac, 59.52% Impervious, Inflow De	pth = 4.46" for 25-yr event
Inflow =	10.62 cfs @ 12.01 hrs, Volume=	1.228 af
Outflow =	10.03 cfs @ 12.38 hrs, Volume=	1.228 af, Atten= 6%, Lag= 22.2 min
Primary =	10.03 cfs @ 12.38 hrs, Volume=	1.228 af
Routed to Po	nd CB-3 :	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 263.42' @ 12.03 hrs Surf.Area= 693 sf Storage= 154 cf Flood Elev= 263.26' Surf.Area= 24 sf Storage= 99 cf

Plug-Flow detention time= 0.2 min calculated for 1.228 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 803.0 - 802.8 )

Volume	Inv	ert Avai	I.Storage	Storag	e Description	
#1	255.		99 cf			ic)Listed below (Recalc)
#2	263.	26'	9,471 cf	Custo	m Stage Data (Pi	rismatic)Listed below (Recalc)
			9,570 cf	Total A	vailable Storage	
Elevatio		Surf Area	اسا	Store	Cum Store	
		eann aea			ounnotoro	
(fee	/	(sq-ft)	(CUDI	c-feet)	(cubic-feet)	
255.0	)3	12		0	0	
263.2	26	12		99	99	
_		~		<b>.</b>	<b>a a</b>	
Elevatio		Surf.Area		.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubi	c-feet)	(cubic-feet)	
263.2	26	12		0	0	
264.0	0	3,123		1,160	1,160	
265.0	00	13,500		8,312	9,471	
Device	Routing	In	vert Out	let Devic	es	
#1	Primary	255	.03' 18.0	" Rour	nd Culvert	
			L= 9	9.0' CF	PP, projecting, no	headwall, Ke= 0.900
			Inle	i / Outlet	Invert= 255.03' /	254.04' S= 0.0100 '/' Cc= 0.900
			n= (	0.013 C	orrugated PE, sm	ooth interior, Flow Area= 1.77 sf
#2	Primary	264	.57' 10.0	lona 🗴	x 5.0' breadth Br	oad-Crested Rectangular Weir
	,					0.80 1.00 1.20 1.40 1.60 1.80 2.00
					3.50 4.00 4.50 5	
			Coe	f. (Engli	sh) 2.34 2.50 2.	70 2.68 2.68 2.66 2.65 2.65 2.65
					2.66 2.68 2.70 2	

Primary OutFlow Max=8.32 cfs @ 12.38 hrs HW=260.93' TW=259.40' (Dynamic Tailwater) 1=Culvert (Inlet Controls 8.32 cfs @ 4.71 fps) 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

3 App J Post-Develop 32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Prepared by Labella Associates	Printed 1/4/2024
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### Summary for Pond CB-23:

[58] Hint: Peaked 0.23' above defined flood level [90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area =	5.060 ac, 60.59% Impervious, Inflow Depth = 4.41" for 25	5-yr event
Inflow =	15.48 cfs @ 12.02 hrs, Volume= 1.861 af	
Outflow =	15.51 cfs @ 12.02 hrs, Volume= 1.861 af, Atten= 0%	, Lag= 0.0 min
Primary =	15.51 cfs @ 12.02 hrs, Volume= 1.861 af	
Routed to Po	ond CB-25 :	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 246.96' @ 12.02 hrs Surf.Area= 19 sf Storage= 55 cf Flood Elev= 246.73' Surf.Area= 12 sf Storage= 52 cf

Plug-Flow detention time= 0.1 min calculated for 1.861 af (100% of inflow) Center-of-Mass det. time= 0.1 min (797.2 - 797.1)

Volume	Inver	t Avail.Stor	age Storage I	Description	
#1	242.40	)' 5i	6 cf STRUCT	URE (Prismat	<b>ic)</b> Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee			(cubic-feet)	(cubic-feet)	
242.4		12	0	0	
246.		12	52	52	
247.0	00	20	4	56	
Device	Routing	Invert	Outlet Devices	;	
#1	Primary	242.40'	18.0" Round	Culvert	
#2	Primary	246.73'	Inlet / Outlet In n= 0.013 Corr 24.0' long x 5	vert= 242.40' / ugated PE, sm <b>5.0' breadth Br</b>	o headwall, Ke= 0.900 240.70' S= 0.0126 '/' Cc= 0.900 ooth interior, Flow Area= 1.77 sf <b>oad-Crested Rectangular Weir</b>
			2.50 3.00 3.5 Coef. (English	0 4.00 4.50 5 ) 2.34 2.50 2.	0.80 1.00 1.20 1.40 1.60 1.80 2.00 .00 5.50 70 2.68 2.68 2.66 2.65 2.65 2.65 .74 2.79 2.88
1=Ci	ulvert (Inlet	Max=15.30 cfs ( Controls 9.41 c ed Rectangular	ofs @ 5.33 fps)		/=244.99' (Dynamic Tailwater) @ 1.11 fps)
			•		0.4

### Summary for Pond CB-24:

[58] Hint: Peaked 0.61' above defined flood level[90] Warning: Qout>Qin may require smaller dt or Finer Routing[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=17)

Peak Elev= 261.11' @ 12.15 hrs Surf.Area= 1,389 sf Storage= 400 cf Flood Elev= 260.50' Surf.Area= 8 sf Storage= 16 cf Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 1.0 min ( 869.8 - 868.8 ) <u>Volume Invert Avail.Storage Storage Description</u> #1 256.50' 16 cf STRUCTURE (Prismatic)Listed below (Recalc) #2 260.50' 16,857 cf Custom Stage Data (Prismatic)Listed below (Recalc) 16,873 cf Total Available Storage Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet) 256.50 4 0 0 260.50 4 16 16 Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet) 260.50 4 0 0 261.00 1,000 251 251 262.00 4,450 2,725 2,976 263.00 6,787 5,619 8,595 264.00 9,737 8,262 16,857 Device Routing Invert Outlet Devices #1 Primary 256.50' 12.0" Round Culvert L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.50' / 256.24' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=2.28 cfs @ 12.24 hrs HW=261.01' TW=260.43' (Dynamic Tailwater)	App J_Post-Develop_3214 Prepared by Labella Associates lydroCAD® 10.20-3f s/n 09581 © 20			2-00 24-hr S1 2	outh Logistics Center 25-yr Rainfall=5.89" Printed 1/4/2024 Page 129	
#1       256.50'       16 of 6,857 of 06,857 of 06,857 of 06,857 of 016,873 of       STRUCTURE (Prismatic)Listed below (Recalc)         #2       260.50'       16,873 of 16,873 of       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store (cubic-feet)         256.50       4       0       0         260.50       4       16       16         260.50       4       0       0         260.50       4       0       0         260.50       4       0       0         260.50       4       0       0         260.50       4       0       0         260.50       4       0       0         261.00       1,000       251       251         262.00       4,450       2,725       2,976         263.00       6,787       5,619       8,595         264.00       9,737       8,262       16,857         Device       Routing       Invert       Outlet Devices         #1       Primary       256.50'       12.0"       Round Culvert         L= 26.0'       CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.50' / 256.24'       S= 0.0100 '/       Cc= 0.900 I	flow         =         1.18 cfs @         12.           Dutflow         =         3.30 cfs @         12.           Primary         =         3.30 cfs @         12.	12 hrs, Volume 24 hrs, Volume	= 0.110 af = 0.110 af	, Atten= 0%, La		
Center-of-Mass det. time= 1.0 min (869.8 - 868.8)           Volume         Invert         Avail.Storage         Storage Description           #1         256.50'         16 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         260.50'         16,857 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           #2         260.50'         16,857 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           16,873 cf         Total Available Storage           Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           256.50         4         0         0           260.50         4         0         0           260.50         4         0         0           260.50         4         0         0           260.50         4         0         0           261.00         1,000         251         251           262.00         4,450         2,725         2,976           263.00         6,787         5,619         8,595           264.00         9,737         8,262         16,857           Device         Routing         I	Peak Elev= 261.11' @ 12.15 hrs S	urf.Area= 1,389	sf Storage= 400			
#1       256.50'       16 cf       STRUCTURE (Prismatic)Listed below (Recalc)         #2       260.50'       16.857 cf       Custom Stage Data (Prismatic)Listed below (Recalc)         16.873 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         256.50       4       0       0         260.50       4       16       16         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         260.50       4       0       0         260.50       4       0       0         260.50       4       0       0         261.00       1,000       251       251         262.00       4,450       2,725       2,976         263.00       6,787       5,619       8,595         264.00       9,737       8,262       16,857         Device       Routing       Invert       Outlet Devices         #1       Primary       256.50'       12.0"       Round Culvert         L= 26.0'       CPP, projecting						
16,873 cf Total Available Storage         Intervalue intervalu	#1 256.50' 16	cf STRUCTU	RE (Prismatic)Lis			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					<u> </u>	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	(feet) (sq-ft) (c	ubic-feet)	(cubic-feet)			
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           260.50         4         0         0           261.00         1,000         251         251           262.00         4,450         2,725         2,976           263.00         6,787         5,619         8,595           264.00         9,737         8,262         16,857           Device         Routing         Invert         Outlet Devices           #1         Primary         256.50' <b>12.0" Round Culvert</b> L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.50' / 256.24' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf           Primary OutFlow Max=2.28 cfs @ 12.24 hrs HW=261.01' TW=260.43' (Dynamic Tailwater)           1=Culvert (Inlet Controls 2.28 cfs @ 2.90 fps)         2.90 fps)		-	-			
261.00       1,000       251       251         262.00       4,450       2,725       2,976         263.00       6,787       5,619       8,595         264.00       9,737       8,262       16,857         Device       Routing       Invert       Outlet Devices         #1       Primary       256.50'       12.0'' Round Culvert         L= 26.0'       CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.50' / 256.24'' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary OutFlow Max=2.28 cfs @ 12.24 hrs HW=261.01' TW=260.43' (Dynamic Tailwater)         1=Culvert (Inlet Controls 2.28 cfs @ 2.90 fps)						
#1       Primary       256.50' <b>12.0"</b> Round Culvert L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.50' / 256.24' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary OutFlow Max=2.28 cfs @ 12.24 hrs HW=261.01' TW=260.43' (Dynamic Tailwater) <b>1=Culvert</b> (Inlet Controls 2.28 cfs @ 2.90 fps)	261.00         1,000           262.00         4,450           263.00         6,787	251 2,725 5,619	251 2,976 8,595			
L= 26.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.50' / 256.24' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=2.28 cfs @ 12.24 hrs HW=261.01' TW=260.43' (Dynamic Tailwater) -1=Culvert (Inlet Controls 2.28 cfs @ 2.90 fps)	Device Routing Invert	Outlet Devices				
<b>1=Culvert</b> (Inlet Controls 2.28 cfs @ 2.90 fps)	,, I	= 26.0' CPP, nlet / Outlet Inv	projecting, no head ert= 256.50' / 256.2	24' S= 0.0100 '/	' Cc= 0.900	
Summary for Pond CB-25:			261.01' TW=260.	43' (Dynamic T	ailwater)	
		Summary fo	or Pond CB-25	:		
[58] Hint: Peaked 0.29' above defined flood level	581 Hint: Peaked 0.20' above define	ed flood level				

		-Develop_32 ella Associate	S	NY-3214 Software Solutions LL	C Printed 1/4/2024 C Page 130
Iyuloc <i>r</i>	10.20-	51 3/1109501		Solutions LL	C Fage 130
nflow A	rea =			, Inflow Depth = 4	
nflow	=		2.02 hrs, Volum		
Dutflow Primary			2.02 hrs, Volum 2.02 hrs, Volum		, Atten= 0%, Lag= 0.0 min
		d PF-1 : Pretrea		e- 1.097 al	
Second			2.02 hrs, Volum	e= 0.041 af	
Rout	ed to Pone				
<b>.</b>	h D O		<b>T</b> ime <b>O</b>	0.70.00 has site 0.0	4 h
				0-72.00 hrs, dt= 0.0 f Storage= 52 cf	1 nrs
			24 sf Storage=		
IOOU L	211.7	o ouni, tou	2101 Otorago		
Jug-Flo	ow detention	on time= 0.1 mii	n calculated for 1	.938 af (100% of in	flow)
Center-o	of-Mass de	et. time= 0.1 mi	n ( 798.6 - 798.5	)	
			o		
/olume				Description	
#1 #2	240.7 244.7	-		(Prismatic)Listed	below (Recalc) atic)Listed below (Recalc)
#2	244.7	-		ilable Storage	
				liable Storage	
Elevatio	on	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
240.	70	12	0	0	
244.	70	12	48	48	
2		12		10	
Elevatio	on	Surf.Area	Inc.Store	Cum.Store	
Elevatio (fee	on et)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
Elevatio	on et) 70	Surf.Area	Inc.Store	Cum.Store	
Elevatio (fee 244.7 245.7	on et) 70 10	Surf.Area (sq-ft) 12 20	Inc.Store (cubic-feet) 0 6	Cum.Store (cubic-feet) 0 6	
Elevatio (fee 244.7 245.7 Device	on et) 70 10 Routing	Surf.Area (sq-ft) 12 20 Invert	Inc.Store (cubic-feet) 0 6 Outlet Devices	Cum.Store (cubic-feet) 0 6	
Elevatio (fee 244.7 245.7	on et) 70 10	Surf.Area (sq-ft) 12 20	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round	Cum.Store (cubic-feet) 0 6 Culvert	dwall. Ke= 0.900
Elevatio (fee 244.7 245.7 Device	on et) 70 10 Routing	Surf.Area (sq-ft) 12 20 Invert	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP	Cum.Store (cubic-feet) 0 6 Culvert , projecting, no hear	dwall, Ke= 0.900 00' S= 0.0207 '/' Cc= 0.900
Elevatio (fee 244.: 245.: Device #1	on et) 70 10 <u>Routing</u> Primary	Surf.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP Inlet / Outlet In n= 0.013 Corr	Cum.Store (cubic-feet) 0 6 Culvert , projecting, no hear vert= 240.70' / 239. ugated PE, smooth	00' S= 0.0207 '/' Cc= 0.900 interior, Flow Area= 1.77 sf
Elevatio (fee 244.7 245.7 Device	on et) 70 10 Routing	Surf.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP Inlet / Outlet In n= 0.013 Corr 10.0' long x 5	Cum.Store (cubic-feet) 0 6 Culvert , projecting, no hear vert= 240.70' / 239. ugated PE, smooth 0' breadth Broad-	00' S= 0.0207 '/' Cc= 0.900 interior, Flow Area= 1.77 sf <b>Crested Rectangular Weir</b>
Elevatio (fee 244.: 245.: Device #1	on et) 70 10 <u>Routing</u> Primary	Surf.Area (sq-ft) 12 20 Invert 240.70'	Inc. Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP Inlet / Outlet In n= 0.013 Corr 10.0' Iong x 5 Head (feet) 0	Cum.Store (cubic-feet) 0 6 Culvert , projecting, no heav vert= 240.70' / 239. ugated PE, smooth .0' breadth Broad- 20 0.40 0.60 0.80	00' S= 0.0207 '/' Cc= 0.900 interior, Flow Area= 1.77 sf <b>Crested Rectangular Weir</b> 1.00 1.20 1.40 1.60 1.80 2.00
Elevatio (fee 244.: 245.: Device #1	on et) 70 10 <u>Routing</u> Primary	Surf.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP Inlet / Outlet In n= 0.013 Corrr 10.0' long x2 Head (feet) 0.1 2.50 3.00 3.51	Cum.Store (cubic-feet) 0 6 Culvert , projecting, no heavert= 240.70' / 239. ugated PE, smooth 0' breadth Broad- 20 0.40 0.60 0.80 0 4.00 4.50 5.00	00' S= 0.0207 '/' Cc= 0.900 interior, Flow Area= 1.77 sf <b>Crested Rectangular Weir</b> 1.00 1.20 1.40 1.60 1.80 2.00 5.50
Elevatio (fee 244.: 245.: Device #1	on et) 70 10 <u>Routing</u> Primary	Surf.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP Inlet / Outlet In n= 0.013 Corr 10.0' Iong x 5 Head (feet) 0 2.50 3.00 3.5 Coef. (English)	Cum.Store (cubic-feet) 0 6 <b>Culvert</b> , projecting, no hear vert= 240.70' / 239 ugated PE, smooth <b>.0' breadth Broad</b> - 20 0.40 0.60 0.80 0 4.00 4.50 5.00 2 4.00 4.50 5.00 2	00' S= 0.0207 '/' Cc= 0.900 interior, Flow Area= 1.77 sf Crested Rectangular Weir 1.00 1.20 1.40 1.60 1.80 2.00 5.50 .68 2.68 2.66 2.65 2.65 2.65
Elevatio (fee 244.: 245.: Device #1	on et) 70 10 <u>Routing</u> Primary	Surf.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPP Inlet / Outlet In n= 0.013 Corr 10.0' Iong x 5 Head (feet) 0 2.50 3.00 3.5 Coef. (English)	Cum.Store (cubic-feet) 0 6 Culvert , projecting, no heavert= 240.70' / 239. ugated PE, smooth 0' breadth Broad- 20 0.40 0.60 0.80 0 4.00 4.50 5.00	00' S= 0.0207 '/' Cc= 0.900 interior, Flow Area= 1.77 sf Crested Rectangular Weir 1.00 1.20 1.40 1.60 1.80 2.00 5.50 .68 2.68 2.66 2.65 2.65 2.65

Secondary OutFlow Max=3.74 cfs @ 12.02 hrs HW=244.99' TW=242.69' (Dynamic Tailwater) -2=Broad-Crested Rectangular Weir (Weir Controls 3.74 cfs @ 1.29 fps) 
 Sewburgh South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 25-yr
 Rainfall=5.89"

 Prepared by Labella Associates
 Printed 1/4/2024
 1/4/2024

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### Summary for Pond CB-3:

[80] Warning: Exceeded Pond CB-24 by 2.39' @ 12.34 hrs (4.11 cfs 0.047 af)

Inflow Area =	3.902 ac, 5	2.30% Impervious, Inflo	w Depth = 4.23" for 25-yr event
Inflow =	12.34 cfs @	12.21 hrs, Volume=	1.374 af
Outflow =	11.54 cfs @	12.29 hrs, Volume=	1.374 af, Atten= 6%, Lag= 5.0 min
Primary =	11.54 cfs @	12.29 hrs, Volume=	1.374 af
Routed to Po	nd CB-4 :		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 262.56' @ 12.02 hrs Surf.Area= 20 sf Storage= 170 cf Flood Elev= 264.59' Surf.Area= 40 sf Storage= 211 cf

Plug-Flow detention time= 0.3 min calculated for 1.374 af (100% of inflow) Center-of-Mass det. time= 0.2 min ( 807.2 - 807.0 )

Volume	Inv	ert Avail.Sto	rage Stora	age Description	
#1	254.0			UCTURE (Prismatic)Listed below (Recalc)	
#2	264.	59' 2		tom Stage Data (Prismatic)Listed below (Recalc)	
		40	69 cf Total	I Available Storage	
_		o ()			
Elevatio		Surf.Area	Inc.Store		
(fee	/	(sq-ft)	(cubic-feet)		
254.0		20	0	-	
264.5	59	20	211	211	
Elevatio	n	Surf.Area	Inc Store	e Cum.Store	
(fee		(sq-ft)	(cubic-feet)		
	/				
264.5		20	0		
265.0		500	107		
265.2	20	1,010	151	258	
Device	Routing	Invert	Outlet Dev	vices	
#1	Primary	254.04'	18.0" Rou	und Culvert	
	,		L= 203.0'	CPP, projecting, no headwall, Ke= 0.900	
				let Invert= 254.04' / 252.01' S= 0.0100 '/' Cc= 0.900	
				Corrugated PE, smooth interior, Flow Area= 1.77 sf	
#2	Primary	265.15'		x 5.0' breadth Broad-Crested Rectangular Weir	
<i>"</i> 2	1 minury	200.10		t) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2	00
				3.50 4.00 4.50 5.00 5.50	00
				glish) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65	5
				911511) 2.34 2.30 2.70 2.08 2.08 2.08 2.08 2.03 2.03 2.03	ر ر
			2.05 2.07	2.00 2.00 2.10 2.14 2.19 2.00	

Primary OutFlow Max=9.35 cfs @ 12.29 hrs HW=260.40' TW=257.96' (Dynamic Tailwater) 1=Culvert (Outlet Controls 9.35 cfs @ 5.29 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)

	Newburgh South Logistics Center
3_App J_Post-Develop_32142-00	NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
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### Summary for Pond CB-4:

Inflow Area =	4.719 ac, 5	59.95% Impervious, Inflow	Depth = 4.45" for 25-yr event	
Inflow =	14.41 cfs @	12.01 hrs, Volume=	1.751 af	
Outflow =	14.04 cfs @	12.01 hrs, Volume=	1.751 af, Atten= 3%, Lag= 0.2 min	
Primary =	14.04 cfs @	12.01 hrs, Volume=	1.751 af	
Routed to Po	nd CB-5 :			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 260.76' @ 12.02 hrs Surf.Area= 12 sf Storage= 105 cf Flood Elev= 263.70' Surf.Area= 24 sf Storage= 140 cf

Plug-Flow detention time= 0.1 min calculated for 1.751 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 795.9 - 795.8 )

Volume	Invert	Avail.St	orage S	torage	Description	
#1	252.01'		140 cf <b>S</b>	TRUCT	TURE (Prismati	c)Listed below (Recalc)
#2	263.70'	8,3	379 cf C	ustom	Stage Data (Pr	ismatic)Listed below (Recalc)
		8,5	519 cf T	otal Av	ailable Storage	
Elevation	Su	f.Area	Inc.St	tore	Cum.Store	
(feet)	Oui	(sq-ft)	(cubic-fe		(cubic-feet)	
252.01		12		0	0	
263.70		12		140	140	
203.70		12		140	140	
Elevation	Sur	f.Area	Inc.St	tore	Cum.Store	
(feet)		(sq-ft)	(cubic-fe	eet)	(cubic-feet)	
263.70		12		0	0	
264.00		970		147	147	
265.00		15,493	8,	232	8,379	
Device Ro	outing	Inver	Outlet	Device	s	
#1 Pr	rimary	252.01	18.0"	Round	Culvert	
			L= 241	.0' CF	PP, projecting, no	o headwall, Ke= 0.900
			Inlet / C	Jutlet In	nvert= 252.01' / :	249.60' S= 0.0100 '/' Cc= 0.900
			$n = 0.0^{\circ}$	12 Cor	rugated PF smo	ooth interior, Flow Area= 1.77 sf

# Summary for Pond CB-5:

Inflow Area =	4.814 ac, 🗄	59.93% Impervious, Inflow	Depth = 4.44" for 25-yr event
Inflow =	14.43 cfs @	12.01 hrs, Volume=	1.780 af
Outflow =	14.41 cfs @	12.02 hrs, Volume=	1.780 af, Atten= 0%, Lag= 0.2 min
Primary =	14.41 cfs @	12.02 hrs, Volume=	1.780 af
Routed to P	ond CB-6 :		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 25-yr Rainfall=5.89"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581       © 2023 HydroCAD Software Solutions LLC       Page 133	3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 25-yr Rainfall=5.         Prepared by Labella Associates       Printed 1/4/20         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 20
Peak Elev= 254.95' @ 12.02 hrs Surf.Area= 12 sf Storage= 64 cf Flood Elev= 258.09' Surf.Area= 12 sf Storage= 102 cf	Volume         Invert         Avail.Storage         Storage Description           #1         245.40'         36 cf         STRUCTURE (Prismatic)Listed below (Recalc)
Plug-Flow detention time= 0.1 min calculated for 1.780 af (100% of inflow) Center-of-Mass det. time= 0.1 min(796.5-796.4)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
Volume Invert Avail.Storage Storage Description	245.40 9 0 0
#1 249.60' 105 cf STRUCTURE (Prismatic)Listed below (Recalc)	248.93         9         32         32           249.25         20         5         36
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	Device Routing Invert Outlet Devices
Clearly         Clearly <t< td=""><td>#1       Primary       245.40'       <b>18.0'' Round Culvert</b> L= 85.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 245.40' / 242.40' S= 0.0353 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         #2       Primary       248.93'       <b>20.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88</td></t<>	#1       Primary       245.40' <b>18.0'' Round Culvert</b> L= 85.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 245.40' / 242.40' S= 0.0353 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf         #2       Primary       248.93' <b>20.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2       Primary       258.09'       20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet)       0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.00         Core (English)       2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88	Primary OutFlow Max=15.04 cfs @ 12.02 hrs HW=249.16' TW=246.95' (Dynamic Tailwater) 1=Culvert (Inlet Controls 9.97 cfs @ 5.64 fps) 2=Broad-Crested Rectangular Weir(Weir Controls 5.06 cfs @ 1.12 fps) Summary for Pond CB-7:
Primary OutFlow Max=14.25 cfs @ 12.02 hrs HW=254.85' TW=249.16' (Dynamic Tailwater) 1=Culvert (Inlet Controls 14.25 cfs @ 8.07 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)	[90] Warning: Qout>Qin may require smaller dt or Finer Routing
Summary for Pond CB-6: [58] Hint: Peaked 0.23' above defined flood level	Inflow Area =       2.850 ac, 99.06% Impervious, Inflow Depth = 5.71" for 25-yr event         Inflow =       20.33 cfs @       12.02 hrs, Volume=       1.355 af         Outflow =       20.34 cfs @       12.02 hrs, Volume=       1.355 af, Atten= 0%, Lag= 0.1 min         Primary =       20.34 cfs @       12.02 hrs, Volume=       1.355 af
[90] Warning: Qout>Qin may require smaller dt or Finer Routing         Inflow Area =       5.014 ac, 60.23% Impervious, Inflow Depth = 4.40" for 25-yr event         Inflow =       15.22 cfs @ 12.02 hrs, Volume=       1.840 af         Outflow =       15.22 cfs @ 12.02 hrs, Volume=       1.840 af, Atten= 0%, Lag= 0.0 min         Primary =       15.22 cfs @ 12.02 hrs, Volume=       1.840 af         Routed to Pond CB-23 :       Routed to Pond CB-23 :       Routed to Pond CB-23 :	Routed to Pond PF-1 : Pretreatment Forebay Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 242.81'@ 12.02 hrs Surf.Area= 20 sf Storage= 78 cf Flood Elev= 243.50' Surf.Area= 58 sf Storage= 92 cf Plug-Flow detention time= 0.2 min calculated for 1.355 af (100% of inflow) Center-of-Mass det. time= 0.2 min (753.2 - 753.0 )
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 249.16' @ 12.02 hrs Surf.Area= 17 sf Storage= 35 cf Flood Elev= 248.93' Surf.Area= 9 sf Storage= 32 cf	Volume         Invert         Avail.Storage         Storage Description           #1         238.91'         92 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         243.50'         8,702 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           8,793 cf         Total Available Storage
Plug-Flow detention time= 0.1 min calculated for 1.840 af (100% of inflow) Center-of-Mass det. time= 0.1 min(797.7 - 797.6)	Elevation     Surf.Area     Inc.Store     Cum.Store       (feet)     (sq-ft)     (cubic-feet)     (cubic-feet)       238.91     20     0     0       243.50     20     92     92

lydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solution	ns LLC Page 135			ella Associate 3f_s/n 09581 ©		Software Solutions LI	C Printed 1/4/20
Elevation Surf.Area Inc.Store Cum.Store		Elevatio		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store	
(feet) (sq-ft) (cubic-feet) (cubic-feet)		(fee 244.3	/	<u>(sq-it)</u> 12	(Cubic-leet) 0	(cubic-feet) 0	
243.50 38 0 0		245.0		8,154	2,858	2,858	
244.001,938494494245.0014,4778,2088,702		245.2	20	11,676	1,983	4,841	
Device Routing Invert Outlet Devices		Device	Routing Primary	Invert 239.53'	Outlet Device 18.0" Round		
n= 0.013 Corrugated PE, smo #2 Primary 244.60' <b>10.0' long x 5.0' breadth Bro</b> Head (feet) 0.20 0.40 0.60 0	238.50' S= 0.0051 '/' Cc= 0.900 ooth interior, Flow Area= 3.14 sf oad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00	#2	Primary		L= 144.0' CF Inlet / Outlet I n= 0.013 Cor <b>10.0' long x</b> Head (feet) C 2.50 3.00 3.1	PP, projecting, no he Invert= 239.53' / 238 rrugated PE, smooth 5.0' breadth Broad 0.20 0.40 0.60 0.80 50 4.00 4.50 5.00	.81' S= 0.0050 '/' Cc= 0.900 interior, Flow Area= 1.77 sf -Crested Rectangular Weir 0 1.00 1.20 1.40 1.60 1.80 2.00 5.50
2.50 3.00 3.50 4.00 4.50 5. Coef. (English) 2.34 2.50 2. 2.65 2.67 2.66 2.68 2.70 2.	70 2.68 2.68 2.66 2.65 2.65 2.65					66 2.68 2.70 2.74	2.68 2.68 2.66 2.65 2.65 2.65 2.79 2.88
Primary OutFlow Max=20.17 cfs @ 12.02 hrs HW=242.76' TW —1=Culvert (Inlet Controls 20.17 cfs @ 6.42 fps) —2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)		1=Ci	Ilvert (Bar	rrel Controls 9.9	@ 12.04 hrs H 92 cfs @ 5.61 fp <b>ar Weir</b> ( Contro	ps)	9.14' (Dynamic Tailwater)
Summary for Pond CE	3-8:				Summar	y for Pond CB-9	:
		[90] Wai	ning: Qou	ut>Qin may requ	uire smaller dt o	or Finer Routing	
Outflow = 9.93 cfs @ 12.04 hrs, Volume= 0.73	32 af 32 af, Atten= 2%, Lag= 0.1 min 32 af	Inflow A Inflow Outflow Primary Rout	=	4.45 cfs @ 1 4.48 cfs @ 1 4.48 cfs @ 1	.37% Imperviou 2.04 hrs, Volur 2.04 hrs, Volur 2.04 hrs, Volur	me= 0.335 a me= 0.335 a	f, Atten= 0%, Lag= 0.1 min
Peak Elev= 242.53' @ 12.04 hrs Surf.Area= 12 sf Storage= 36 Tood Elev= 244.30' Surf.Area= 24 sf Storage= 57 cf	cf	Peak Ele	ev= 243.03	3' @ 12.05 hrs		00-72.00 hrs, dt= 0.0 of Storage= 22 cf = 32 cf	01 hrs
Plug-Flow detention time= 0.3 min calculated for 0.732 af (100%) Center-of-Mass det. time= 0.1 min ( 755.9 - 755.7 )	of inflow)				n calculated for n ( 767.4 - 767.:	0.335 af (100% of ir 2)	nflow)
/olume Invert Avail.Storage Storage Description						,	
#1 239.53' 57 cf STRUCTURE (Prismati		Volume #1	Inve 240.5		orage Storage		atad balaw (Pagala)
#2         244.30'         4,841 cf         Custom Stage Data (Pr 4,898 cf           Total Available Storage		#1 #2	240.5	)5' 5,8	60 cf Custom		sted below (Recalc) natic)Listed below (Recalc)
Elevation Surf.Area Inc.Store Cum.Store				5,8	9∠ ct I otal Av	ailable Storage	
		Elevatio (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           239.53         12         0         0				(99 19)	(50010 1002)	10000	

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Elevati		Surf.Area		um.Store	
(fee	,	(sq-ft)	1 / 1	<u>ibic-feet)</u>	
244. 245.		9 8,154	0 3,877	0 3,877	
245.20		11,676	1,983	5,860	
Daviaa	Deutine	Incom	Outlet Devices		
Device #1	Routing Primary		Outlet Devices 18.0" Round Culv	o.rt	
#1	Primary	240.55	L= 204.0' CPP, pro Inlet / Outlet Invert=	ojecting, no headwa 240.55' / 239.53'	ll, Ke= 0.900 S= 0.0050 '/'   Cc= 0.900 ior,  Flow Area= 1.77 sf
#2	Primary	245.10'	Head (feet) 0.20 0 2.50 3.00 3.50 4.0	.40 0.60 0.80 1.00 00 4.50 5.00 5.50	ted Rectangular Weir 1.20 1.40 1.60 1.80 2.00
			Coef. (English) 2.34	4 2.50 2.70 2.68 2	2.68 2.66 2.65 2.65 2.65
Ê—1=Ci	ulvert (O	utlet Controls 3.	2.65 2.67 2.66 2.6 @ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir( Controls 0.00	8 2.70 2.74 2.79 2.85' TW=242.50'	2.88
Ê—1=Ci	ulvert (O	utlet Controls 3.8 sted Rectangula	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps)	8 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs)	2.88 (Dynamic Tailwater)
1=Ci 2=Bi	ulvert (O oad-Cres	utlet Controls 3.5 sted Rectangula Sum	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) <b>ar Weir</b> ( Controls 0.00	8 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs)	2.88 (Dynamic Tailwater)
1=Ci 2=Bi	ulvert (Ou road-Cres t: Outlet c rea =	utlet Controls 3. sted Rectangula Sum levice #2 is belo 9.923 ac, 72	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir( Controls 0.00 mary for Pond DE	88 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs) ET-1: Detention	2.88 (Dynamic Tailwater) <b>Basin</b>
[44] Hin Inflow A Inflow Outflow Primary	t: Outlet c road-Cres	utlet Controls 3.5 sted Rectangul: Sum levice #2 is belo 9.923 ac, 72 34.52 cfs @ 1 14.45 cfs @ 1	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir (Controls 0.00 mary for Pond DE w defined storage .74% Impervious, Infl 2.11 hrs, Volume= 2.54 hrs, Volume= 2.54 hrs, Volume=	88 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs) ET-1: Detention ow Depth = 3.88" 3.210 af	2.88 (Dynamic Tailwater) <b>Basin</b>
[44] Hin Inflow A Inflow Outflow Primary Rout Second	t: Outlet c rea = = = et d to Por ary =	utlet Controls 3.5 sted Rectangula Sum levice #2 is belo 9.923 ac, 72 34.52 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 d DP-1 : Gidney	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir (Controls 0.00 mary for Pond DE w defined storage .74% Impervious, Infl 2.11 hrs, Volume= 2.54 hrs, Volume= 2.54 hrs, Volume= town Creek 0.00 hrs, Volume=	88 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs) ET-1: Detention 1 ow Depth = 3.88" 3.210 af 3.210 af, Attr	2.88 (Dynamic Tailwater) <b>Basin</b> for 25-yr event
[44] Hin [44] Hin Inflow A Inflow Outflow Primary Rout Second Routing Peak El	Livert (Ou road-Cress t: Outlet c rea = = = ed to Por ary = red to Por by Dyn-S ev= 235.7	Litlet Controls 3.5 sted Rectanguli Sum levice #2 is belo 9.923 ac, 72 34.52 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 0.00 cfs @ d DP-1 : Gidney 0.00 cfs @ d DP-1 : Gidney 3.5 tor-Ind method, 4' @ 12.54 hrs	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir (Controls 0.00 mary for Pond DE w defined storage .74% Impervious, Infl 2.11 hrs, Volume= 2.54 hrs, Volume= 2.54 hrs, Volume= town Creek 0.00 hrs, Volume=	88 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs) ET-1: Detention 3.210 af 3.210 af 3.210 af 0.000 af 00 hrs, dt= 0.01 hrs 5 Storage= 51,423	2.88 (Dynamic Tailwater) <b>Basin</b> for 25-yr event en= 58%, Lag= 26.0 min
[44] Hin [44] Hin Inflow A Inflow Outflow Primary Rout Second Routing Peak El Flood E Plug-Flo	Juvert (Ou oad-Cres t: Outlet c rea = = ed to Por ary = ed to Por by Dyn-S ev= 235.7 lev= 236.5	utlet Controls 3.5 sted Rectanguli Sum levice #2 is belo 9.923 ac, 72 34.52 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 0 10 DP-1 : Gidney 0.00 cfs @ d DP-1 : Gidney 50' Surf.Area= on time= 248.9	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir (Controls 0.00 mary for Pond DE w defined storage .74% Impervious, Infl 2.11 hrs, Volume= 2.54 hrs, Volume= 2.54 hrs, Volume= town Creek 0.00 hrs, Volume= town Creek Time Span= 0.00-72. Surf.Area= 16,513 sl	88 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs) <b>ET-1: Detention</b> 3.210 af 3.210 af, Atta 3.210 af 0.000 af 00 hrs, dt= 0.01 hrs 5 Storage= 51,423 34,365 cf 10 af (100% of inflo	2.88 (Dynamic Tailwater) Basin for 25-yr event en= 58%, Lag= 26.0 min
[44] Hin [44] Hin Inflow A Inflow Outflow Primary Rout Second Routing Peak El Flood E Plug-Flo	Juvert (Or oad-Cres t: Outlet of rea = = = ed to Por ary = ed to Por ary = ved to Por by Dyn-S ev= 235.7 lev= 236. bw detenti of-Mass d	utlet Controls 3.5 sted Rectangul: Sum levice #2 is belo 9.923 ac, 72 34.52 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 14.45 cfs @ 1 0.00 cfs @ 0.00 cfs @ d DP-1 : Gidney 0.00 cfs @ d DP-1 : Gidney 50' Surf.Area= on time= 248.9 i et. time= 249.2	@ 12.04 hrs HW=242 54 cfs @ 2.00 fps) ar Weir (Controls 0.00 mary for Pond DE w defined storage .74% Impervious, Infl 2.11 hrs, Volume= 2.54 hrs, Volume= town Creek 0.00 hrs, Volume= town Creek 0.00 hrs, Volume= town Creek Time Span= 0.00-72. Surf.Area= 16,513 sf 17,706 sf Storage= 6 min calculated for 3.2	88 2.70 2.74 2.79 2.85' TW=242.50' 0 cfs) <b>ET-1: Detention</b> 3.210 af 3.210 af 3.210 af 0.000 af 0.000 af 00 hrs, dt= 0.01 hrs 5 Storage= 51,423 34,365 cf 10 af (100% of inflo	2.88 (Dynamic Tailwater) Basin for 25-yr event en= 58%, Lag= 26.0 min

Prepare	ed by Labe	<b>Develop_32</b> ella Associate af s/n 09581 ©			Newburgh South Logistics Center 32142-00 24-hr S1 25-yr Rainfall=5.89" Printed 1/4/2024 ns LLC Page 138
Elevatio	on s	Surf.Area	Inc.Store	Cum.Store	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)	
232.0	00	11,095	0	0	
233.0		12,455	11,775	11,775	
	234.00 13,886 235.00 15,369		13,171 14,628	24,946 39,573	
235.00 15,369 236.00 16.908			16,139	55.712	
237.0		18,504	17,706	73,418	
Device	Routing	Invert	Outlet Devices	;	
#1	Primary	231.91'	12.0" Round	Culvert	
	-				headwall, Ke= 0.900
					231.84' S= 0.0047 '/' Cc= 0.900
#2	Device 1	231.91'			ooth interior, Flow Area= 0.79 sf .600 Limited to weir flow at low heads
#2	Device 1	233.65			ad-Crested Rectangular Weir
				20 0.40 0.60	
				) 2.80 2.92 3.	
#4	Primary	236.05'			abilized Overflow to Wetland
				20 0.40 0.60 0 4.00 4.50 5	0.80 1.00 1.20 1.40 1.60 1.80 2.00
					70 2.68 2.68 2.66 2.65 2.65 2.65
				6 2.68 2.70 2	
#5	Secondar	ry 236.50'			nergency Overflow
					0.80 1.00 1.20 1.40 1.60 1.80 2.00
				0 4.00 4.50 5	.00 5.50 70 2.68 2.68 2.66 2.65 2.65 2.65
				6 2.68 2.70 2	
#6	Primary	233.65'		Culvert X 2.00	
					onforming to fill, Ke= 0.500
					233.50' S= 0.0050 '/' Cc= 0.900
			n= 0.013 Corr	ugated PE, smo	ooth interior, Flow Area= 0.79 sf
-1=Ci -2= -3= -4=St	Ivert (Inle CPv Orific Broad-Cro abilized O	t Controls 5.45 ce (Passes < 0 ested Rectang verflow to We	© (0) 12.54 hrs H cfs (0) 6.94 fps) 0.46 cfs potential gular Weir (Pass tland ( Controls 09 cfs (0) 5.73 fps	flow) es < 40.22 cfs   0.00 cfs)	/=0.00' (Dynamic Tailwater) potential flow)
			ofs @ 0.00 hrs  H ntrols 0.00 cfs)	IW=232.00' TV	V=0.00' (Dynamic Tailwater)
		Su	Immary for P	ond DIV-2: D	Diversion 2
1901 Wa	rnina: Qout	t>Qin may requ	uire smaller dt or	Finer Routing	
		, roqu			

repare	J_Post-Development Jacob by Labella J Jacob 10.20-3f s/i	Associates	3	NY-32142-00 24-hr S1 2	25-yr Rainfall=5.89 Printed 1/4/2024 Page 139
flow A	rea = 7.5	i83 ac, 92.	78% Impervious,	Inflow Depth = 5.52" for 25-yr	event
flow	= 31.0	6 cfs @ 1	2.07 hrs, Volume	= 3.490 af	
utflow			2.05 hrs, Volume		ig= 0.0 min
rimary Rout			2.05 hrs, Volume tment Forebay	= 3.369 af	
			2.05 hrs, Volume	= 0.121 af	
Rout	ed to Pond DE	T-1 : Deter	tion Basin		
outing	by Dyn-Stor-In	d method,	Time Span= 0.00	-72.00 hrs, dt= 0.01 hrs	
				Storage= 121 cf	
lood E	lev= 244.67' S	Surf.Area= 2	24 sf Storage= 2	07 cf	
lug-Flo	w detention tin	ne=0.1 mir	calculated for 3.	489 af (100% of inflow)	
			(755.0 - 754.8)		
olume	Invert	Avail.Sto	rage Storage D	association	
#1	236.06'		<u>u</u>	pefore Weir (Prismatic)Listed belo	w (Recalc)
<i></i>	200.00	2	i onung.		(Receive)
Elevatio		Area	Inc.Store	Cum.Store	
(fee	· · · ·	<u>sq-ft)</u> 24	(cubic-feet)	(cubic-feet)	
236.0 244.0		24 24	0 207	0 207	
211.		2.	207	201	
	Routing		Outlet Devices		
#1	Primary	236.06'		utlet Pipe to Bioretention	
				projecting, no headwall,  Ke= 0.900 ert= 236.06' / 235.50'    S= 0.0127 '	
				gated PE, smooth interior, Flow A	
#2	Device 3	240.50'		breadth Broad-Crested Rectang	
				0 0.40 0.60 0.80 1.00	
#3	Secondary	236.06'		2.80 2.92 3.08 3.30 3.32 Putlet Pipe to Detention	
#3	Secondary	230.00		projecting, no headwall, Ke= 0.900	)
			Inlet / Outlet Inv	ert= 236.06' / 235.83' S= 0.0051 '	, Cc= 0.900
			n= 0.012 Corru	gated PE, smooth interior, Flow A	ea= 3.14 sf
				/=241.10' TW=236.31' (Dynamic 4.01 cfs @ 7.64 fps)	Tailwater)
Socond	ary OutFlow N	lax=7.20 c	fe @ 12.05 hre ⊨	W=241.10' TW=234.20' (Dynam	ic Tailwater)
-3=0	itlet Pipe to D	etention (F	asses 7.20 cfs of	24.01 cfs potential flow)	ic railwater)
				controls 7.20 cfs @ 2.39 fps)	
		Summ	om, for Dond	DB 1: Cidnovtown Crook	
		Summ	lary for Pond	DP-1: Gidneytown Creek	
	t: Not Describe	d (Outflow	Inflow)		
40] Hin	rea = 50 0	78 ac, 42.	15% Impervious,	Inflow Depth > 3.52" for 25-yr	event
40] Hin nflow A					
	= 77.8		2.31 hrs, Volume 2.31 hrs, Volume		

3_App J_Post-Develop_32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
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	-

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

# Summary for Pond P-1: Wet Pond

Inflow Area =	16.392 ac, 7	5.11% Impervious, Inf	low Depth = 5.04" for 25-yr event
Inflow =	77.49 cfs @	12.05 hrs, Volume=	6.884 af
Outflow =	22.67 cfs @	12.50 hrs, Volume=	6.098 af, Atten= 71%, Lag= 27.6 min
Primary =	22.67 cfs @	12.50 hrs, Volume=	6.098 af
Routed to Por	nd DP-1 : Gidn	eytown Creek	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Routed to Por	nd DP-1 : Gidn	eytown Creek	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 238.98' @ 12.50 hrs Surf.Area= 82,702 sf Storage= 146,011 cf Flood Elev= 239.50' Surf.Area= 84,891 sf Storage= 177,145 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 572.7 min ( 1,343.8 - 771.0 )

Volume	Inver	t Avail.Stor	age Storage	Description	
#1	232.00	)'			natic)Listed below (Recalc)
			- ,	of Overall x 0.0%	
#2	236.00	0 208,22	9 cf Extende	ed Detention (P	rismatic)Listed below (Recalc)
		208,22	9 cf Total Av	ailable Storage	
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
232.0	00	12,694	0	0	
233.0	00	13,630	13,162	13,162	
234.0	00	14,592	14,111	27,273	
235.0	00	15,579	15,086	42,359	
236.0	00	23,780	19,680	62,038	
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
236.0	00	23,780	0	0	
237.0	00	50,853	37,317	37,317	
238.0	00	54,875	52,864	90,181	
239.0	00	58,999	56,937	147,118	
240.0	00	63,223	61,111	208,229	
Device	Routing	Invert	Outlet Device	s	
#1	Primary	235.10'	L= 20.0' CPI Inlet / Outlet I	nvert= 235.10' /	<b>DCS</b> headwall, Ke= 0.900 235.00' S= 0.0050 '/' Cc= 0.900 poth interior, Flow Area= 0.79 sf
#2 #3	Device 1 Device 1	235.10' 238.00'	3.0" Vert. CP 4.0' long x 0	v Örifice C= 0	.600 Limited to weir flow at low head ad-Crested Rectangular Weir

	ed by Labella	evelop_321	42-00 NY-32142-00 24-hr S1 25-yr Rainfall Printed 1/-	
				ge 141
#4	Primary	238.00'	Coef. (English) 2.80 2.92 3.08 3.30 3.32 <b>12.0" Round Culverts to Floodplain X 2.00</b> L= 33.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 238.00' / 235.00' S= 0.0909 '/ Cc= 0.900	
#5	Primary	238.40'	n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf <b>10.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60	
#6	#6         Secondary         239.50'         Coef. (English)         2.49         2.56         2.70         2.69         2.68         2.69         2.67         2.64           #6         Secondary         239.50'         20.0' long x 10.0' breadth Emergency Overflow Weir Head (feet)         0.20         0.40         0.60         0.80         1.00         1.40         1.60           Coef.         Cenf. (English)         2.49         2.56         2.70         2.69         2.68         2.69         2.67         2.64			
—4=C	=Broad-Cres ulverts to Flo	ted Rectangi odplain (Inle	46 cfs potential flow) I <b>lar Weir</b> (Passes < 12.90 cfs potential flow) i Controls 5.27 cfs @ 3.37 fps) • <b>Weir</b> (Weir Controls 11.90 cfs @ 2.05 fps)	
—4=C —5=B Second	=Broad-Cres ulverts to Flo road-Crested dary OutFlow	ted Rectange odplain (Inle Rectangular Max=0.00 cf rerflow Weir	ular Weir (Passes < 12.90 cfs potential flow) Controls 5.27 cfs @ 3.37 fps) • Weir (Weir Controls 11.90 cfs @ 2.05 fps) s @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) Controls 0.00 cfs)	
4=C 5=B	=Broad-Cres ulverts to Flo road-Crested dary OutFlow	ted Rectange odplain (Inle Rectangular Max=0.00 cf rerflow Weir	Jlar Weir(Passes < 12.90 cfs potential flow) t Controls 5.27 cfs @ 3.37 fps) • Weir(Weir Controls 11.90 cfs @ 2.05 fps) s @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater)	
4=C 5=B Second 6=E Inflow A Inflow Outflow Primary	=Broad-Cres ulverts to Flo road-Crested dary OutFlow mergency Ov Area = 14 = 70 v = 69	ted Rectang oodplain (Inle Rectangular Max=0.00 cf rerflow Weir Summa .810 ac, 83.1 06 cfs @ 12 51 cfs @ 12	ular Weir (Passes < 12.90 cfs potential flow)	
4=C 5=B Second 6=E Inflow Outflow Primary Rou Routing Peak E	=Broad-Cres ulverts to Flo road-Crested dary OutFlow mergency Ov Area = 14 = 70 y = 69 ted to Pond P g by Dyn-Stor- lev= 239.14' (	ted Rectangi           oodplain (Inle           Rectangular           Max=0.00 cf           rerflow Weir (           Summa           .810 ac, 83.1           .06 cfs @ 12           .51 cfs @ 12           .51 cfs @ 12           .51 cfs @ 12           .1 : Wet Ponce           Ind method, 7           .9 12.05 hrs	ular Weir (Passes < 12.90 cfs potential flow)	
4=C 5=B 6=E nflow / nflow Outflow Primary Rou Routing Peak E Flood E Plug-Fl	=Broad-Cres ulverts to Flo road-Crested dary OutFlow mergency Ov Area = 14 = 70 ( = 69 ( = 69 ted to Pond P g by Dyn-Stor- lev= 239.14' ( elev= 239.50' ow detention 1	ted Rectangi           oodplain (Inle           Rectangular           Max=0.00 cf           rerflow Weir           Summa           .810 ac, 83.1           .06 cfs @ 12           .51 cfs @ 12           .51 cfs @ 12           .1 : Wet Ponce           Ind method, 1           2 12.05 hrs 3           Surf.Area= 8           ime= 1.7 min	Jlar Weir (Passes < 12.90 cfs potential flow)	
4=C 5=B 6=E nflow / nflow Dutflow Dutflow Primary Rou Routing Peak E Flood E Plug-FI Center-	=Broad-Cres ulverts to Flo road-Crested dary OutFlow mergency Ov Area = 14 = 70 ( = 69 ted to Pond P g by Dyn-Stor- lev= 239.14' ( Elev= 239.50' ow detention 1 of-Mass det. 1	ted Rectang odplain (Inle Rectangular Max=0.00 cf rerflow Weir ( Summa .810 ac, 83.1 06 cfs @ 12 51 cfs @ 12 51 cfs @ 12 -1 : Wet Ponc Ind method, 1 9 12.05 hrs Surf.Area= 8 ime= 1.7 min ime= 1.6 min	Jlar Weir (Passes < 12.90 cfs potential flow)	
4=C 5=B Second 6=E Inflow Anflow Outflow Primary Rou Routing Peak E Flood E Plug-Fl	=Broad-Cres ulverts to Flo road-Crested dary OutFlow mergency Ov Area = 14 = 70 ( = 69 ted to Pond P g by Dyn-Stor- lev= 239.14' ( Elev= 239.50' ow detention 1 of-Mass det. 1	ted Rectangu odplain (Inle Rectangular Max=0.00 cf rerflow Weir ( Summa .810 ac, 83.1 06 cfs @ 12 51	Jlar Weir (Passes < 12.90 cfs potential flow)	

Cum.Store (cubic-feet)

0

922 2,725 5,465 7,202

Inc.Store

0

922 1,803 2,740 1,737

(cubic-feet)

Elevation

(feet)

235.00

236.00 237.00 238.00

238.50

Surf.Area

(sq-ft)

1,348 2,257 3,223

3,726

496

3_App					Printed 1/4/20
		ella Associate			
HydroCA	D® 10.20-	<u>-3f_s/n 09581 @</u>	2023 HydroCAD	Software Solutions LLC	Page 1
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	,	(sq-ft)	(cubic-feet)	(cubic-feet)	
238.5		3,726	0	0	
239.0 240.0		4,244 5,323	1,993 4,784	1,993 6,776	
240.5		7,246	3,142	9,918	
		,		,	
Device	0				
#1	Primary	238.50	Head (feet) (	0.20 0.40 0.60 0.80 1	
			Coel. (Englis	1) 2.49 2.56 2.70 2.6	69 2.68 2.69 2.67 2.64
				HW=239.14' TW=238.3 ontrols 69.33 cfs @ 2.7	39' (Dynamic Tailwater) 16 fps)
		Summ	nary for Pond	PF-2: Pretreatmer	nt Forebay
Inflow A	rea =	8.123 ac, 88	8.14% Imperviou	is, Inflow Depth = 5.2	8" for 25-yr event
Inflow	=	26.82 ofc @			
		20.02 US @	12.03 hrs, Volu	me= 3.572 af	
Outflow		25.40 cfs @	12.03 hrs, Volu 12.07 hrs, Volu	me= 3.572 af,	Atten= 5%, Lag= 2.2 min
Primary	= =	25.40 cfs @ 25.40 cfs @	12.07 hrs, Volu 12.07 hrs, Volu	me= 3.572 af, me= 3.572 af	Atten= 5%, Lag= 2.2 min
Primary	= =	25.40 cfs @ 25.40 cfs @	12.07 hrs, Volu 12.07 hrs, Volu	me= 3.572 af,	Atten= 5%, Lag= 2.2 min
Primary Route	= = ed to Pon	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra	12.07 hrs, Volu 12.07 hrs, Volu tion Bioretentior	me= 3.572 af, me= 3.572 af (2.5ft filter media)	
Primary Route Routing	= = ed to Pon by Dyn-S	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method	12.07 hrs, Volu 12.07 hrs, Volu tion Bioretentior I, Time Span= 0.	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01	hrs
Primary Route Routing Peak Ele	= ed to Pon by Dyn-S ev= 236.3	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs	12.07 hrs, Volu 12.07 hrs, Volu tion Bioretention I, Time Span= 0. Surf.Area= 15	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37	hrs
Primary Route Routing Peak Ele	= ed to Pon by Dyn-S ev= 236.3	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs	12.07 hrs, Volu 12.07 hrs, Volu tion Bioretentior I, Time Span= 0.	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37	hrs
Primary Routing Peak Ele Flood El	= = ed to Pon by Dyn-S ev= 236.3 lev= 236.5	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area=	12.07 hrs, Volu 12.07 hrs, Volu tion Bioretentior I, Time Span= 0. Surf.Area= 15 15,398 sf Stor	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 ,155 sf Storage= 6,37 rage= 7,696 cf	hrs 9 cf
Primary Routing Peak Ele Flood El Plug-Flo	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r	12.07 hrs, Volu 12.07 hrs, Volu tion Bioretentior I, Time Span= 0. Surf.Area= 15 15,398 sf Stor min calculated for	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 ,155 sf Storage= 6,37 rage= 7,696 cf or 3.571 af (100% of inf	hrs 9 cf
Primary Routing Peak Ele Flood El Plug-Flo Center-c	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 ow detenti of-Mass d	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r	12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior I, Time Span= 0. Surf.Area= 15 = 15,398 sf Stor min calculated fc min ( 804.0 - 758	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 ,155 sf Storage= 6.37 age= 7,696 cf or 3.571 af (100% of inf 8.6)	hrs 9 cf
Primary Routing Peak Ele Flood El Plug-Flo Center-o Volume	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 by detenti of-Mass d	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St	12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior I, Time Span= 0. Surf.Area= 15 : 15,398 sf Stor min calculated fc min (804.0 - 756 torage Storage	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 ,155 af Storage= 6,37 rage= 7,696 cf or 3.571 af (100% of inf 8.6) Description	hrs 9 cf Iow)
Primary Routing Peak Ele Flood El Plug-Flo Center-c	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 ow detenti of-Mass d	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St	12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior I, Time Span= 0. Surf.Area= 15 = 15,398 sf Stor min calculated fc min (804.0 - 756 torage Storage 0 cf <b>Pretrea</b>	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37 rage= 7,696 cf r 3.571 af (100% of inf 3.6) <u>Description</u> tment Forebay (Prism	hrs 9 cf low) <b>naticj</b> isted below (Recalc)
Primary Routing Peak Ele Flood El Plug-Flo Center-o Volume	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 by detenti of-Mass d	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 00'	12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior I, Time Span= 0. Surf.Area= 15 = 15,398 sf Stor min calculated fc min (804.0 - 758 torage Storage 0 cf <b>Pretrea</b> 15,694	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37 age= 7,696 cf or 3.571 af (100% of inf 8.6) Description tment Forebay (Prism cf Overall x 0.0% Void	hrs 9 cf low) <b>naticj</b> isted below (Recalc)
Primary Routing Peak Ele Flood El Plug-Flo Center-c <u>Volume</u> #1	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 bw detenti of-Mass d <u>Inv.</u> 232.0	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert <u>Avail.St</u> 00' <u>12,</u>	12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior I, Time Span= 0. Surf.Area= 15 = 15,398 sf Stor min calculated fc min (804.0 - 758 torage Storage 0 cf <b>Pretrea</b> 15,694	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37 age= 7,696 cf or 3.571 af (100% of inf 8.6) Description tment Forebay (Prism cf Overall x 0.0% Void GE ABOVE (Prismatic	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-o <u>Volume</u> #1 #2	= = ed to Pon by Dyn-S ev= 236.3 lev= 236.5 ow detenti of-Mass d Invi 232.0 235.5	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 00' 50' 12, 12,	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior , Time Span= 0. Suff.Area= 15 = 15,398 sf Stor min calculated fc min (804.0 - 756 torage Storage 0 cf Pretrea 15,694 118 cf STORA	me=         3.572 af,           me=         3.572 af           (2.5ft filter media)           00-72.00 hrs, dt= 0.01,           155 sf Storage= 6,37           rage= 7,696 cf           or 3.571 af (100% of inf           8.6 )           Description           tment Forebay (Prism           cf Overall x 0.0% Void           GE ABOVE (Prismatic	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-o <u>Volume</u> #1 #2 Elevatio	= = ed to Pon by Dyn-S ev= 236.3 lev= 236.5 ww detenti of-Mass d Inv. 232.0 235.5	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 00' 50' 12, 12, Surf.Area	12.07 hrs, Volui 12.07 hrs, Volui tion Bioretentior I, Time Span= 0. Surf.Area= 15 = 15,398 sf Stor min calculated fc min (804.0 - 758 torage Storage 0 cf Pretrea 15,694 118 cf STORA 118 cf Total Av Inc.Store	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 ,155 sf Storage= 6,37 rage= 7,696 cf or 3.571 af (100% of inf 3.6 ) <u>Description</u> tment Forebay (Prism cf Overall x 0.0% Void <u>GE ABOVE (Prismati</u> vailable Storage Cum.Store	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-o Volume #1 #2 Elevatio (fee	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 www.detentiof-Mass.d 	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 00' 50' 12, 50' 12, Surf.Area (sq-ft)	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 13.07 hrs, Volui 15.398 sf Stor 15.398 sf Stor 10.07 hrstrea 15.398 sf Stor 10.07 hrstrea 10.07 hrstrea	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37 rage= 7,696 cf or 3.571 af (100% of inf 3.6 ) Description tment Forebay (Prism cf Overall x 0.0% Void <u>GE ABOVE (Prismati</u> vailable Storage Cum.Store (cubic-feet)	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-c Volume #1 #2 Elevatio (fee 232.0	= ed to Pon by Dyn-S ev= 236.3 lev= 236.4 w detenti of-Mass d 	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r ett Avail.St 00' 50' 12, 50' 12, Surf.Area (sq-ft) 2,149	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 10.07 hrs, Volui 10.07 hrs, Volui 11.07 hrs, V	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 ,155 sf Storage= 6,37 age= 7,696 cf or 3.571 af (100% of inf 8.6 ) Description tment Forebay (Prism cf Overall x 0.0% Void GE ABOVE (Prismatii vailable Storage Cum.Store (cubic-feet) 0	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-c <u>Volume</u> #1 #2 Elevatic (fee 232.( 233.(	= ed to Pon by Dyn-S ev= 236.3 lev= 236.3 lev= 236.5 ow detenti of-Mass d Inv. 232.1 235.5 on on on on 00	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 50' 12, 50' 12, 50' 12, Surf.Area (sq-ft) 2,149 3,434	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 5.014 15.398 sf 15.398 sf 16.398 sf 17.598 sf 17.5988 sf 17.598 sf 17.598 sf 17.598 sf 17.598 sf 17.598 sf 17.59	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 af Storage= 6.37 rage= 7,696 cf or 3.571 af (100% of inf 3.6) Description tment Forebay (Prism cf Overall x 0.0% Void <u>GE ABOVE (Prismatic</u> vailable Storage Cum.Store (cubic-feet) 0 2,792	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-o #1 #2 Elevatio (fee 232.0 233.0 234.0	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 bw detenti of-Mass d Inv. 232.0 235.5 bn cn ct) 00 00	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 00' 50' 12, 12, Surf.Area (sq-ft) 2,149 3,434 4,791	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 13.07 hrs, Volui 15.098 sf Stor 15.098 sf Stor 15.094 118 cf STORA 118 cf Total Av Inc.Store (cubic-feet) 0 2,792 4,113	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6,37 rage= 7,696 cf r 3.571 af (100% of inf 3.6 ) Description tment Forebay (Prism cf Overall x 0.0% Void GE ABOVE (Prismatii vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-c <u>Volume</u> #1 #2 Elevatic (fee 232.( 233.(	= ed to Pon by Dyn-S ev= 236.3 ev= 236.5 w detenti of-Mass d <u>Inve</u> 232.0 235.5 cn et) 00 00 00 00	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 50' 12, 50' 12, 50' 12, Surf.Area (sq-ft) 2,149 3,434	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 5.014 15.398 sf 15.398 sf 16.398 sf 17.598 sf 17.5988 sf 17.598 sf 17.598 sf 17.598 sf 17.598 sf 17.598 sf 17.59	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 af Storage= 6.37 rage= 7,696 cf or 3.571 af (100% of inf 3.6) Description tment Forebay (Prism cf Overall x 0.0% Void <u>GE ABOVE (Prismatic</u> vailable Storage Cum.Store (cubic-feet) 0 2,792	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-co #1 #2 Elevatio (fee 233.0 233.4 235.5	= = ed to Pon by Dyn-S ev= 236.3 lev= 236.5 ow detenti of-Mass d Inv. 232.1 235.5 on on on on on on on on on on on on on	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r et. time= 45.4 r ert Avail.St 50' 12, 50' 12, 50' 12, 50' 12, 50' 12, 50' 12, 50' 12, 50' 12, 50' 12, 50' 50' 12, 50' 12, 50' 50' 50' 50' 50' 50' 50' 50' 50' 50'	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 15.094 15.398 sf Stor min calculated fc min (804.0 - 756 torage Storage 0 cf Pretrea 15.694 118 cf Total Av Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 af Storage= 6.37 rage= 7,696 cf or 3.571 af (100% of inf as 6) Description tment Forebay (Prism cf Overall x 0.0% Void <u>GE ABOVE (Prismatii</u> vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-oc #1 #2 Elevatio (fee 233.0 234.0 235.5 Elevatio	= ed to Pon by Dyn-S ev= 236.3 lev= 236.5 bw detenti of-Mass d Inv. 232.0 235.5 bn 235.5 bn 200 00 00 00 00 00 00 00 00	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.4 r ert Avail.St 00' 50' 12, 12, Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 13.07 hrs, Volui 15.398 sf Stor 15.398 sf Stor 15.694 hrst 118 cf STORA 118 cf STORA 118 cf Total Av Inc.Store (cubic-feet) 0 2.792 4.113 5.502 3.288 Inc.Store	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6.37 rage= 7,696 cf r 3.571 af (100% of inf 3.6 ) Description tment Forebay (Prism of Overall x 0.0% Void GE ABOVE (Prismatii vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694 Cum.Store	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-o #1 #2 Elevatio (fee 232.0 235.0 235.0 Elevatio (fee (fee	= ed to Pon by Dyn-S ev= 236.3 ev= 236.5 www.detenti of-Mass d <u>Inve</u> 232.0 235.5 00 00 00 00 00 00 00 00 00 00 00 00 00	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.3 r ert Avail.St 00' 50' 12, Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area (sq-ft)	12.07 hrs, Volu 12.07 hrs, Volu 12.07 hrs, Volu 12.07 hrs, Volu 12.07 hrs, Volu 12.07 hrs, Volu 13.07 hrs, Volu 15.398 sf Stor 15.398 sf Stor 10.04 hrst for a storage 15.694 118 cf Storage 118 cf Total Av Inc.Store (cubic-feet) 0 2,792 4,113 5,502 3,288 Inc.Store (cubic-feet)	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01, 155 sf Storage= 6,37 age= 7,696 cf or 3.571 af (100% of inf 8.6 ) Description tment Forebay (Prism f Overall x 0.0% Void GE ABOVE (Prismati vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694 Cum.Store (cubic-feet)	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s
Primary Routing Peak Ele Flood El Plug-Flo Center-oc #1 #2 Elevatio (fee 233.0 234.0 235.5 Elevatio	= = ed to Pon by Dyn-S ev= 236.3 lev= 236.3 w detentio of-Mass d Invo 232.0 235.3 on ett) 00 00 00 00 00 00 00 00 00 0	25.40 cfs @ 25.40 cfs @ d BIO-1 : Filtra tor-Ind method 4' @ 12.18 hrs 50' Surf.Area= on time= 45.4 r ert Avail.St 00' 50' 12, 12, Surf.Area (sq-ft) 2,149 3,434 4,791 6,213 6,937 Surf.Area	12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 12.07 hrs, Volui 13.07 hrs, Volui 15.398 sf Stor 15.398 sf Stor 15.694 hrst 118 cf STORA 118 cf STORA 118 cf Total Av Inc.Store (cubic-feet) 0 2.792 4.113 5.502 3.288 Inc.Store	me= 3.572 af, me= 3.572 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 (155 sf Storage= 6.37 rage= 7,696 cf r 3.571 af (100% of inf 3.6 ) Description tment Forebay (Prism of Overall x 0.0% Void GE ABOVE (Prismatii vailable Storage Cum.Store (cubic-feet) 0 2,792 6,904 12,406 15,694 Cum.Store	hrs 9 cf low) <b>naticL</b> isted below (Recalc) s

	Newburgh South Logistics Center
3_App J_Post-Develop_32142-00	NY-32142-00 24-hr S1 25-yr Rainfall=5.89"
Prepared by Labella Associates	Printed 1/4/2024
HvdroCAD® 10.20-3f s/n 09581 © 2023 HvdroCAD Software	Solutions LLC Page 143

Device Routing Invert Outlet Devices

 
 #1
 Primary
 235.50'
 40.0' long x 22.0' 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)
 2.68
 2.70
 2.70
 2.64
 2.63
 2.64
 2.63

Primary OutFlow Max=23.57 cfs @ 12.07 hrs HW=236.32' TW=236.30' (Dynamic Tailwater) 1=Broad-Crested Rectangular Weir (Weir Controls 23.57 cfs @ 0.72 fps)

3_App J_Post-Develo Prepared by Labella Asso HydroCAD® 10.20-3f s/n 095	
R	Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points unoff by SCS TR-20 method, UH=SCS, Weighted-CN g by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method
SubcatchmentPS-1:	Runoff Area=59,320 sf 46.38% Impervious Runoff Depth=6.05" Flow Length=321' Tc=14.2 min CN=81 Runoff=6.77 cfs 0.687 af
SubcatchmentPS-10:	Runoff Area=11,265 sf 67.79% Impervious Runoff Depth=5.82" Tc=6.0 min CN=79 Runoff=1.71 cfs 0.125 af
SubcatchmentPS-11:	Runoff Area=124,140 sf 99.06% Impervious Runoff Depth=7.97" Tc=6.0 min CN=97 Runoff=22.99 cfs 1.893 af
SubcatchmentPS-12:	Runoff Area=172,728 sf 100.00% Impervious Runoff Depth=8.09" Tc=6.0 min CN=98 Runoff=32.08 cfs 2.673 af
SubcatchmentPS-13:	Runoff Area=34,560 sf 100.00% Impervious Runoff Depth=8.09" Tc=6.0 min CN=98 Runoff=6.42 cfs 0.535 af
SubcatchmentPS-14:	Runoff Area=35,140 sf 97.85% Impervious Runoff Depth=8.09" Tc=6.0 min CN=98 Runoff=6.53 cfs 0.544 af
SubcatchmentPS-15:	Runoff Area=12,293 sf 0.00% Impervious Runoff Depth=6.53" Tc=6.0 min CN=85 Runoff=2.05 cfs 0.154 af
SubcatchmentPS-16:	Runoff Area=68,931 sf 0.00% Impervious Runoff Depth=6.65" Tc=6.0 min CN=86 Runoff=11.63 cfs 0.877 af
SubcatchmentPS-17:	Runoff Area=26,060 sf 83.73% Impervious Runoff Depth=7.73" Tc=6.0 min CN=95 Runoff=4.78 cfs 0.385 af
SubcatchmentPS-18:	Runoff Area=31,224 sf 79.46% Impervious Runoff Depth=7.61" Tc=6.0 min CN=94 Runoff=5.70 cfs 0.455 af
SubcatchmentPS-19:	Runoff Area=13,991 sf 95.15% Impervious Runoff Depth=7.97" Tc=6.0 min CN=97 Runoff=2.59 cfs 0.213 af
SubcatchmentPS-2:	Runoff Area=52,401 sf 62.82% Impervious Runoff Depth=7.25" Flow Length=139' Tc=7.8 min CN=91 Runoff=8.59 cfs 0.727 af
SubcatchmentPS-20:	Runoff Area=777 sf 100.00% Impervious Runoff Depth=8.09" Tc=6.0 min CN=98 Runoff=0.14 cfs 0.012 af
SubcatchmentPS-21:	Runoff Area=6,993 sf 69.58% Impervious Runoff Depth=7.49" Tc=6.0 min CN=93 Runoff=1.27 cfs 0.100 af
SubcatchmentPS-22:	Runoff Area=10,506 sf 66.97% Impervious Runoff Depth=7.37" Tc=6.0 min CN=92 Runoff=1.89 cfs 0.148 af
SubcatchmentPS-23:	Runoff Area=92,825 sf 95.28% Impervious Runoff Depth=7.97" Tc=6.0 min CN=97 Runoff=17.19 cfs 1.415 af

App J_Post-Develop_32142-0	NY-32142-00 24-hr	
Prepared by Labella Associates lydroCAD® 10.20-3f s/n 09581 © 2023 F	hydroCAD Software Solutions LLC	Printed 1/4/2024 Page 145
,	· · · · · · · · · · · · · · · · · · ·	1 490 1 10
ubcatchmentPS-24:	Runoff Area=112,817 sf 98.41% Impe Tc=6.0 min CN=98	ervious Runoff Depth=8.09" Runoff=20.95 cfs 1.746 af
ubcatchmentPS-25:	Runoff Area=23,503 sf 23.00% Impe Tc=6.0 min CN=8	ervious Runoff Depth=6.89" 8 Runoff=4.06 cfs 0.310 af
ubcatchmentPS-26:	Runoff Area=23,847 sf 0.00% Impe Tc=6.0 min CN=8	ervious Runoff Depth=5.94" 0 Runoff=3.68 cfs 0.271 af
ubcatchmentPS-27:	Runoff Area=54,566 sf 4.64% Impe Tc=6.0 min CN=8	ervious Runoff Depth=6.05" 1 Runoff=8.55 cfs 0.632 af
ubcatchmentPS-28:	Runoff Area=1,035,126 sf 6.64% Impe Flow Length=735' Tc=22.4 min CN=70	
ubcatchmentPS-29:	Runoff Area=36,671 sf 100.00% Impe Tc=6.0 min CN=9	ervious Runoff Depth=8.09" 8 Runoff=6.81 cfs 0.568 af
ubcatchmentPS-3:	Runoff Area=32,215 sf 78.33% Impe Tc=6.0 min CN=9	ervious Runoff Depth=7.49" 3 Runoff=5.84 cfs 0.462 af
SubcatchmentPS-30:	Runoff Area=33,056 sf 85.37% Impe Tc=6.0 min CN=9	ervious Runoff Depth=7.73" 5 Runoff=6.07 cfs 0.489 af
ubcatchmentPS-4:	Runoff Area=22,641 sf 0.00% Impe Flow Length=284' Tc=12.3 min CN=6	
ubcatchmentPS-5:	Runoff Area=3,406 sf 94.86% Impe Tc=6.0 min CN=9	ervious Runoff Depth=7.97" 7 Runoff=0.63 cfs 0.052 af
ubcatchmentPS-6:	Runoff Area=35,574 sf 96.53% Impe Tc=6.0 min CN=9	ervious Runoff Depth=7.97" 7 Runoff=6.59 cfs 0.542 af
SubcatchmentPS-7:	Runoff Area=4,143 sf 59.04% Impe Tc=6.0 min CN=8	ervious Runoff Depth=5.94" 0 Runoff=0.64 cfs 0.047 af
SubcatchmentPS-8:	Runoff Area=8,693 sf 67.40% Impe Tc=6.0 min CN=7	ervious Runoff Depth=5.82" 9 Runoff=1.32 cfs 0.097 af
ubcatchmentPS-9:	Runoff Area=2,000 sf 100.00% Impe Tc=6.0 min CN=9	ervious Runoff Depth=8.09" 8 Runoff=0.37 cfs 0.031 af
	<b>5ft</b> Peak Elev=236.50' Storage=42,945 c is 4.660 af Secondary=0.00 cfs 0.000 af	
Pond CB-1: Primary=8.26	Peak Elev=264.43' Storage=6,020 cfs 0.688 af Secondary=0.00 cfs 0.000 af	
Pond CB-10: Primary=8.70	Peak Elev=244.42' Storage=2,539 cfs 0.571 af Secondary=0.00 cfs 0.000 af	

Prepared by L	Newburgh South Logistics Center           st-Develop_32142-00         NY-32142-00 24-hr S1 100-yr         Rainfall=8.33'           abella Associates         Printed 1/4/2024         Printed 1/4/2024           20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 146
Pond CB-11:	Peak Elev=263.26' Storage=188 cf Inflow=4.78 cfs 0.385 af 18.0" Round Culvert n=0.013 L=216.0' S=0.0100 '/' Outflow=6.18 cfs 0.385 af
Pond CB-12:	Peak Elev=263.10' Storage=81 cf Inflow=10.51 cfs 0.840 af 18.0" Round Culvert n=0.013 L=192.0' S=0.0100 '/' Outflow=9.96 cfs 0.840 af
Pond CB-13:	Peak Elev=260.91' Storage=71 cf Inflow=12.63 cfs 1.053 af 18.0" Round Culvert n=0.013 L=137.0' S=0.0100 '/' Outflow=12.40 cfs 1.053 af
Pond CB-14:	Peak Elev=257.78' Storage=50 cf Inflow=12.54 cfs 1.065 af Outflow=12.44 cfs 1.065 af
Pond CB-15:	Peak Elev=253.73' Storage=46 cf Inflow=13.70 cfs 1.166 af Outflow=13.77 cfs 1.166 af
Pond CB-16:	Peak Elev=247.82' Storage=71 cf Inflow=15.65 cfs 1.314 af Outflow=15.76 cfs 1.314 af
Pond CB-17: Primary=20.19 cfs	Peak Elev=245.51' Storage=8,540 cf Inflow=32.89 cfs 2.729 af 2.703 af Secondary=1.62 cfs 0.019 af Tertiary=0.84 cfs 0.008 af Outflow=20.19 cfs 2.729 af
Pond CB-18:	Peak Elev=244.34' Storage=2,344 cf Inflow=40.03 cfs 5.047 af Outflow=33.18 cfs 5.047 af
Pond CB-19:	Peak Elev=246.83' Storage=178 cf Inflow=32.08 cfs 3.154 af Primary=28.07 cfs 3.134 af Secondary=4.33 cfs 0.019 af Outflow=32.41 cfs 3.154 af
Pond CB-2:	Peak Elev=264.21' Storage=2,773 cf Inflow=9.22 cfs 1.414 af Outflow=9.09 cfs 1.414 af
Pond CB-20: Primary=5.43 cf	Peak Elev=246.12' Storage=43 cf Inflow=6.42 cfs 0.535 af s 0.481 af Secondary=3.32 cfs 0.027 af Tertiary=3.32 cfs 0.027 af Outflow=6.64 cfs 0.535 af
Pond CB-22:	Peak Elev=263.76' Storage=630 cf Inflow=10.61 cfs 1.876 af Outflow=10.18 cfs 1.876 af
Pond CB-23:	Peak Elev=246.98' Storage=56 cf Inflow=16.47 cfs 2.841 af Outflow=16.47 cfs 2.841 af
Pond CB-24:	Peak Elev=261.60' Storage=1,473 cf Inflow=2.07 cfs 0.196 af 12.0" Round Culvert n=0.013 L=26.0' S=0.0100 '/' Outflow=2.79 cfs 0.196 af
Pond CB-25:	Peak Elev=245.06' Storage=54 cf Inflow=18.11 cfs 2.966 af Primary=12.77 cfs 2.865 af Secondary=5.43 cfs 0.101 af Outflow=18.20 cfs 2.966 af
Pond CB-3:	Peak Elev=262.83' Storage=176 cf Inflow=11.80 cfs 2.124 af Outflow=11.45 cfs 2.124 af
Pond CB-4:	Peak Elev=261.46' Storage=113 cf Inflow=14.57 cfs 2.666 af 18.0" Round Culvert n=0.013 L=241.0' S=0.0100 '/' Outflow=14.35 cfs 2.666 af

3_App J_Post-Develop_32142-0 Prepared by Labella Associates	0 NY-32142-00 24-hr Š	h South Logistics Center 1 100-yr Rainfall=8.33" Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 H	ydroCAD Software Solutions LLC	Page 147
Pond CB-5:	Peak Elev=255.27' Storage=68 cf O	Inflow=14.95 cfs 2.713 af outflow=14.89 cfs 2.713 af
Pond CB-6:	Peak Elev=249.18' Storage=35 cf O	Inflow=16.15 cfs 2.810 af outflow=16.12 cfs 2.810 af
Pond CB-7:	Peak Elev=244.11' Storage=870 cf O	Inflow=27.95 cfs 1.993 af outflow=24.47 cfs 1.993 af
Pond CB-8:	Peak Elev=244.52' Storage=350 cf O	Inflow=17.66 cfs 1.076 af outflow=13.69 cfs 1.076 af
Pond CB-9:	Peak Elev=244.46' Storage=753 cf O	Inflow=6.07 cfs 0.489 af outflow=10.27 cfs 0.489 af
Pond DET-1: Detention Basin Primary=24.18 cf	Peak Elev=236.47' Storage=63,826 cf s 5.218 af Secondary=0.00 cfs 0.000 af O	
Pond DIV-2: Diversion 2 Primary=24.25 cf	Peak Elev=241.18' Storage=123 cf s 4.760 af Secondary=8.95 cfs 0.287 af O	
Pond DP-1: Gidneytown Creek		flow=141.73 cfs 23.931 af nary=141.73 cfs 23.931 af
Pond P-1: Wet Pond Primary=42.77 cf	Peak Elev=239.46' Storage=174,984 cf Ir s 9.301 af Secondary=0.00 cfs 0.000 af O	
Pond PF-1: Pretreatment Forebay	Peak Elev=239.49' Storage=4,218 cf O	Inflow=80.49 cfs 9.223 af outflow=77.86 cfs 9.223 af
Pond PF-2: Pretreatment Forebay	Peak Elev=236.51' Storage=7,800 cf O	Inflow=28.23 cfs 5.088 af outflow=27.97 cfs 5.088 af
Total Runoff Area = 50.0	78 ac Runoff Volume = 25.790 af Avei	age Runoff Depth = 6.18

Total Runoff Area = 50.078 acRunoff Volume = 25.790 afAverage Runoff Depth = 6.18"57.85% Pervious = 28.971 ac42.15% Impervious = 21.108 ac

<b>3_App</b> Prepare					2-00		Ν	Y-32142			uth Logistics Cente 0- <i>yr Rainfall</i> =8.3 Printed 1/4/202
HydroCA	D® 10.20-	-3f s/n	09581	© 202	3 Hydro	CAD	Software So	lutions LL	С		Page 14
				Sur	nmary	/ foi	Subcatch	nment P	<b>'S-1</b> :		
Runoff Route	= ed to Pon			12.1	4 hrs,	Volu	me=	0.687 af	, Depth=	6.05"	
Runoff by NY-3214							ted-CN, Tim	e Span=	0.00-72.00	) hrs, d	t= 0.01 hrs
Ar	ea (sf)	CN	Desci	ription	I						
	21,713	80					od, HSG D				
	20,423 10,094	98 39			ting, HS		od, HSG A				
	7,090	39 98			ing, H						
	59,320	81			verage						
:	31,807				rvious						
	27,513		46.38	% Im	perviou	s Are	ea				
Тс	Length	Slop	e Ve	locity	Capa	city	Description				
(min)	(feet)		/ /	/sec)	(	cfs)					
6.8	100	0.050	0	0.24			Sheet Flow Grass: Sho		E0 D2-	0 15"	
7.4	221	0.005	0	0.49			Shallow Co				
			-				Short Grass				
14.2	321	Total									
				S	mon	for	Subaatab	mont D	C 10.		
				Sun	inary	101	Subcatch	ment P	5-10.		
Runoff	=	1.71	cfs @	12.0	4 hrs,	Volu	me=	0.125 af	Depth=	5.82"	
Route	ed to Pon	d CB-2	:5 :						•		
Runoff by		₹_20 m	ethod	UH=9	SCS W	/eiah	ted-CN, Tim	e Snan=	0 00-72 00	hrs d	t= 0.01 brs
NY-3214								oopun	0.00 72.00	5 mo, a	0.01110
۸.	con (of)	CN	Deee	rintion							
A	rea (sf) 3.629	<u>CN</u> 39	Desci >75%			r Go	od, HSG A				
	7,636	98	Pave	d park	ting, H	<u>3G A</u>					
	11,265	79			verage						
	3,629 7,636				rvious . perviou						
		Class		locity	Capa	city	Description				
Tc (min)	Length (feet)	Siop (ft/f		/sec)		cfs)					

_ <b>App J_Post-Develop_32142-00</b> repared by Labella Associates <sub>ydroCAD®</sub> 10.20-3f s/n 09581 © 2023 HydroCAD So	Newburgh South Logistics Center NY-32142-00 24-hr S1 100-yr Rainfall=8.33 Printed 1/4/2024 oftware Solutions LLC Page 149
Summary for Sum	ubcatchment PS-11:
unoff = 22.99 cfs @ 12.04 hrs, Volume Routed to Pond CB-7 :	e= 1.893 af, Depth= 7.97"
unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33"	d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
1,165 39 >75% Grass cover, Good 436 98 Paved parking, HSG D	I, HSG A
436 98 Paved parking, HSG D 3,849 98 Roofs, HSG D	
83,098 98 Roofs, HSG A	
35,592 98 Paved parking, HSG A 124,140 97 Weighted Average	
1,165 0.94% Pervious Area	
122,975 99.06% Impervious Area	
Tc Length Slope Velocity Capacity D (min) (feet) (ft/ft) (ft/sec) (cfs)	escription
6.0 D	lirect Entry,
Summarv for Su	ubcatchment PS-12:
-	ubcatchment PS-12:
Summary for Su unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 :	
unoff = 32.08 cfs @ 12.04 hrs, Volume	e= 2.673 af, Depth= 8.09"
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u>	e= 2.673 af, Depth= 8.09"
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D	e= 2.673 af, Depth= 8.09"
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A	e= 2.673 af, Depth= 8.09"
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A	e= 2.673 af, Depth= 8.09" d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A 172,728 98 Weighted Average	e= 2.673 af, Depth= 8.09" d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A 172,728 98 Weighted Average 172,728 100.00% Impervious Area Tc Length Slope Velocity Capacity D (min) (feet) (ft/ft) (ft/sec) (cfs)	e= 2.673 af, Depth= 8.09" d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A 172,728 98 Weighted Average 172,728 100.00% Impervious Area TC Length Slope Velocity Capacity D (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 D	2.673 af, Depth= 8.09" d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs a escription
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A 172,728 98 Weighted Average 172,728 100.00% Impervious Area TC Length Slope Velocity Capacity D (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 D	e= 2.673 af, Depth= 8.09" d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
unoff = 32.08 cfs @ 12.04 hrs, Volume Routed to Pond CB-19 : unoff by SCS TR-20 method, UH=SCS, Weighted Y-32142-00 24-hr S1 100-yr Rainfall=8.33" <u>Area (sf) CN Description</u> 155,036 98 Roofs, HSG D 17,692 98 Roofs, HSG A 172,728 98 Weighted Average 172,728 100.00% Impervious Area TC Length Slope Velocity Capacity D (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 D	2.673 af, Depth= 8.09" d-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs a rescription

3 App J Post-Develop 32142-00	Newburgh South Logistics Cente NY-32142-00 24-hr S1 100-yr Rainfall=8.33
Prepared by Labella Associates	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD	Software Solutions LLC Page 15
Area (sf) CN Description	
34,560 98 Roofs, HSG D	
34,560 100.00% Impervious Ar	ea
Tc Length Slope Velocity Capacity (min) (feet) (ft/ft) (ft/sec) (cfs)	Description
6.0	Direct Entry,
Summary for	Subcatchment PS-14:
Runoff = 6.53 cfs @ 12.04 hrs, Volur Routed to Pond CB-10 :	ne= 0.544 af, Depth= 8.09"
Runoff by SCS TR-20 method, UH=SCS, Weight NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	ted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
755 80 >75% Grass cover, Goo 34,385 98 Paved parking, HSG D	
35,140 98 Weighted Average	
755 2.15% Pervious Area	
34,385 97.85% Impervious Are	a
Tc Length Slope Velocity Capacity (min) (feet) (ft/ft) (ft/sec) (cfs)	Description
6.0	Direct Entry,
Summary for	Subcatchment PS-15:
Runoff = 2.05 cfs @ 12.04 hrs, Volur Routed to Pond PF-1 : Pretreatment Forebay	
Runoff by SCS TR-20 method, UH=SCS, Weight NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	ted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
8,567 80 >75% Grass cover, Go 3,726 98 Water Surface, 0% imp	
12,293 85 Weighted Average 12,293 100.00% Pervious Area	
Tc Length Slope Velocity Capacity (min) (feet) (ft/ft) (ft/sec) (cfs)	Description
6.0	Direct Entry,

Prepared by Lal	- <b>Develop_32142-00</b> bella Associates -3f_s/n 09581 © 2023 Hy		NY-32142-00		th Logistics Cente yr Rainfall=8.3 Printed 1/4/202 Page 15
	Summa	ry for Subcat	chment PS-1	6:	
Runoff = Routed to Por	11.63 cfs @ 12.04 hrs d P-1 : Wet Pond	s, Volume=	0.877 af, De	epth= 6.65"	
	R-20 method, UH=SCS hr S1 100-yr  Rainfall=8		Time Span= 0.00	0-72.00 hrs, dt=	: 0.01 hrs
Area (sf)	CN Description				
45,151		ver, Good, HSG			
23,780		0% imp, HSG D			
68,931 68,931	86 Weighted Avera 100.00% Pervice				
Tc Length (min) (feet)	Slope Velocity Ca (ft/ft) (ft/sec)	pacity Descript (cfs)	lion		
() (					
6.0		Direct E	Entry,		
6.0 Runoff = Routed to Por	Summa 4.78 cfs @ 12.04 hrs	Direct E	•		
Runoff = Routed to Por Runoff by SCS T	Summa 4.78 cfs @ 12.04 hrs	Direct E ry for Subcat s, Volume= , Weighted-CN, 1	0.385 af, De	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por Runoff by SCS T	Summa 4.78 cfs @ 12.04 hrs id CB-11 : R-20 method, UH=SCS.	Direct E ry for Subcat s, Volume= , Weighted-CN, 1	0.385 af, De	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 4,241	Summa           4.78 cfs @         12.04 hrs           id CB-11 :         R-20 method, UH=SCS           hr S1 100-yr         Rainfall=8           CN         Description           80         >75% Grass co	Direct E ry for Subcat s, Volume= Weighted-CN, 7 3.33" ver, Good, HSG	0.385 af, De Time Span= 0.00	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- Area (sf)	Summa           4.78 cfs @         12.04 hrs           id CB-11 :         R-20 method, UH=SCS           hr S1 100-yr Rainfall=6         CN           CN         Description           80         >75% Grass co           98         Paved parking,	Direct E ry for Subcat s, Volume= , Weighted-CN, 1 .33" ver, Good, HSG HSG D	0.385 af, De Time Span= 0.00	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 4,241 21,819	Summa           4.78 cfs @         12.04 hrs           id CB-11 :         R-20 method, UH=SCS.           hr S1 100-yr Rainfall=6         CN           CN         Description           80         >75% Grass co           98         Paved parking,	Direct E ry for Subcat s, Volume= , Weighted-CN, 1 .33" ver, Good, HSG HSG D age is Area	0.385 af, De Time Span= 0.00	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 4,241 21,819 26,060 4,241	Summa           4.78 cfs @         12.04 hrs           id CB-11 :         R-20 method, UH=SCS           hr S1 100-yr Rainfall=8         CN           Description         80         >75% Grass co           98         Paved parking, Weighted Avera 16.27% Perviou	Direct E ry for Subcat s, Volume= , Weighted-CN, 1 3.33" ver, Good, HSG HSG D is Area ious Area	Chment PS-1 0.385 af, De Fime Span= 0.00	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por Runoff by SCS T NY-32142-00 24- <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length	Summa 4.78 cfs @ 12.04 hrs d CB-11 : R-20 method, UH=SCS hr S1 100-yr Rainfall=8 <u>CN Description 80 &gt;75% Grass co 98 Paved parking, 95 Weighted Avera 16.27% Perviou 83.73% Impervi Slope Velocity Ca</u>	Direct E ry for Subcat s, Volume= , Weighted-CN, 1 .33" ver, Good, HSG HSG D age IS Area ious Area pacity Descript	chment PS-1 0.385 af, De Time Span= 0.00	epth= 7.73"	: 0.01 hrs
Runoff = Routed to Por NY-32142-00 24- <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length (min) (feet)	Summa 4.78 cfs @ 12.04 hrs d CB-11 : R-20 method, UH=SCS hr S1 100-yr Rainfall=8 <u>CN Description</u> 80 >75% Grass co 98 Paved parking, 95 Weighted Avera 16.27% Perviou 83.73% Impervi Slope Velocity Ca (ft/ft) (ft/sec)	Direct E ry for Subcat s, Volume= , Weighted-CN, 1 ,33" ver, Good, HSG HSG D age is Area ious Area pacity Descript (cfs)	chment PS-1 0.385 af, De Fime Span= 0.00 D	epth= 7.73" D-72.00 hrs, dt=	: 0.01 hrs
Runoff = Routed to Por NY-32142-00 24- <u>Area (sf)</u> 4,241 21,819 26,060 4,241 21,819 Tc Length (min) (feet)	Summa 4.78 cfs @ 12.04 hrs d CB-11 : R-20 method, UH=SCS hr S1 100-yr Rainfall=8 <u>CN Description</u> 80 >75% Grass co 98 Paved parking, 95 Weighted Avera 16.27% Perviou 83.73% Impervi Slope Velocity Ca (ft/ft) (ft/sec) Summa 5.70 cfs @ 12.04 hrs	Direct E ry for Subcat s, Volume= , Weighted-CN, T .33" ver, Good, HSG HSG D age us Area pacity Descript (cfs) Direct E ry for Subcat	chment PS-1 0.385 af, De Fime Span= 0.00 D	epth= 7.73" D-72.00 hrs, dt=	: 0.01 hrs

Prepared k	Post-D	evel	op_321	42-00			NY	-32142-00	24-hr S1		rinted 1/4/20
HydroCAD®					CAD	) Software	Solu	tions LLC		1	Page 1
A	(-6) (	2.1	Description								_
Area			Descripti	on ass cover	<u> </u>		<u> </u>				
	,			ass cover arking, HS			U				
		94	Weighte	d Average							
	,412 ,812			Pervious A							
Tc Le				ty Capac		Descript	ion				
(min) 6.0	(feet)	(ft/ft)	) (ft/se	c) (c	fs)	Direct E	ntru				
0.0						Direct	intr y	,			
			Su	ımmary	for	Subcat	chn	nent PS-1	9:		
i tanon	= 2 to Pond (			2.04 hrs, \	/olu	me=	C	).213 af, De	epth= 7.9	7"	
NY-32142-( Area	a (sf) C	CN	Descripti	on							
13				ass cover arking, HS			D				
	,991	97	Weighte	d Average							
12	678 ,313			ervious Ar							
15	,313		95.15701	mpervious	Alt	5a					
Tc Le (min)	ength (feet)	Slope (ft/ft)		ty Capac c) (c	city fs)	Descript	ion				
6.0	<u> </u>					Direct E	ntry	,			
			S	ummary	for	Subca	tchr	nent PS-2	2:		
. tanon	= ٤ to Pond (			2.06 hrs, N	/olui	me=	C	0.727 af, De	epth= 7.2	5"	
Runoff by S				I=SCS, W infall=8.33		ted-CN, T	Гime	Span= 0.00	)-72.00 h	rs, dt= 0	.01 hrs
111-52142-0			Descripti								
Area		80		ass cover			D				
Area 19			Paved n	arking HC							
Area 19	,920	98	Paved pa >75% Gr	arking, HS ass cover			A				
Area 19 32 52	,920 390	98 39 91	<u>&gt;75% Ġr</u> Weighteo		, Go	od, HSG	A				

			p_32142	2-00	NY-32142-00 24-hr Š1 100-yr Rainfall=8.33 Printed 1/4/2024
	ed by Lab D® 10.20-			3 HydroCAE	Software Solutions LLC Page 153
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100		0.22	(013)	Sheet Flow,
0.3	39	0.0967	2.18		Grass: Short n= 0.150 P2= 3.15" Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
7.8	139	Total			
			Sum	mary for	Subcatchment PS-20:
Runoff Route	= ed to Pon			4 hrs, Volu	me= 0.012 af, Depth= 8.09"
Runoff b NY-3214	y SCS TF 12-00 24-	R-20 met hr S1 100	hod, UH=S )-yr Rainfa	SCS, Weigh all=8.33"	tted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
A	rea (sf)	CN D	escription		
	777			ing, HSG D	
	777	1	00.00% In	pervious A	rea
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,
			Sum	mary for	Subcatchment PS-21:
	=			4 hrs, Volu	me= 0.100 af, Depth= 7.49"
Runoff Route	ed to Pon	a CB-15			
Route	y SCS TI	R-20 met	-		nted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Route Runoff b NY-3214	y SCS TI	R-20 met hr S1 100 CN E	hod, UH=S )-yr Rainfa )escription	all=8.33"	
Route Runoff b NY-3214	oy SCS TF 12-00 24- <u>rea (sf)</u> 2,127	R-20 meti hr S1 100 <u>CN E</u> 80 >	hod, UH=S )-yr Rainfa )escription 75% Gras	all=8.33" s cover, Go	pod, HSG D
Route Runoff b NY-3214	y SCS TF 12-00 24- rea (sf)	R-20 met hr S1 100 <u>CN E</u> 80 > 98 F	hod, UH=S )-yr Rainfa )escription 75% Gras	all=8.33" s cover, Go ing, HSG D	pod, HSG D
Route Runoff b NY-3214	y SCS TF 12-00 24- <u>rea (sf)</u> 2,127 4,866	R-20 met hr S1 100 <u>CN E</u> 80 > <u>98 F</u> 93 V 3	hod, UH=S )-yr Rainfa )escription 75% Gras <u>aved park</u> Veighted A 0.42% Pei	all=8.33" s cover, Go ing, HSG D	pod, HSG D
Route Runoff b NY-3214	y SCS TF 12-00 24- <u>rea (sf)</u> 2,127 <u>4,866</u> 6,993 2,127	R-20 met hr S1 100 <u>CN E</u> 80 > <u>98 F</u> 93 V 3	hod, UH=S )-yr Rainfa )escription 75% Gras <u>aved park</u> Veighted A 0.42% Pei	all=8.33" s cover, Go ing, HSG D verage vious Area pervious Area	pod, HSG D

3_App J_Post-Develop_32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 100-yr Rainfall=8.33"
Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Softwa	re Solutions LLC Printed 1/4/2024 Page 154
Summary for Subc	atchment PS-22:
Runoff = 1.89 cfs @ 12.04 hrs, Volume= Routed to Pond CB-16 :	0.148 af, Depth= 7.37"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
3,470 80 >75% Grass cover, Good, HS 7,036 98 Paved parking, HSG D	GD
10,506         92         Weighted Average           3,470         33.03% Pervious Area           7,036         66.97% Impervious Area	
Tc Length Slope Velocity Capacity Descr (min) (feet) (ft/ft) (ft/sec) (cfs)	iption
	t Entry,
Summary for Subc	atchmont BS 23:
Summary for Subc	atchinent FS-25.
Runoff = 17.19 cfs @ 12.04 hrs, Volume= Routed to Pond CB-17 :	1.415 af, Depth= 7.97"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Area (sf) CN Description	
4,379 80 >75% Grass cover, Good, HS 36,053 98 Paved parking, HSG D 52,393 98 Roofs, HSG D	G D
92,825 97 Weighted Average	
4,379 4.72% Pervious Area 88,446 95.28% Impervious Area	
Tc Length Slope Velocity Capacity Descr (min) (feet) (ft/ft) (ft/sec) (cfs)	iption
	t Entry,
Summary for Subc	
•	
Runoff = 20.95 cfs @ 12.04 hrs, Volume= Routed to Pond CB-18 :	1.746 af, Depth= 8.09"
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Samp J_Post-Develop_32142-00       Newburgh South Logistics Center         NY-32142-00 24-hr S1 100-yr Rainfall=8.33"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 155	South Logistics Center           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 100-yr Rainfall=8.3           Prepared by Labella Associates         Printed 1/4/202           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 15
Area (sf) CN Description 1,790 80 >75% Grass cover, Good, HSG D	Summary for Subcatchment PS-27:
41,907 98 Paved parking, HSG D 69,120 98 Roofs, HSG D	Runoff = 8.55 cfs @ 12.04 hrs, Volume= 0.632 af, Depth= 6.05" Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)
112,817         98         Weighted Average           1,790         1.59% Pervious Area           111,027         98.41% Impervious Area	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 100-yr Rainfall=8.33"
Tc Length Slope Velocity Capacity Description	Area (sf) CN Description
(min)         (feet)         (ft/sec)         (cfs)           6.0         Direct Entry,	52,036 80 >75% Grass cover, Good, HSG D 2,530 98 Paved parking, HSG D
Summary for Subcatchment PS-25:	54,566         81         Weighted Average           52,036         95.36% Pervious Area           2,530         4.64% Impervious Area
Runoff = 4.06 cfs @ 12.04 hrs, Volume= 0.310 af, Depth= 6.89" Routed to Pond PF-2 : Pretreatment Forebay	Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	6.0 Direct Entry,
NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	Summary for Subcatchment PS-28:
Area (sf) CN Description 12,606 80 >75% Grass cover, Good, HSG D 5,405 98 Paved parking, HSG D 5,492 98 Water Surface, 0% imp, HSG D	Runoff = 77.25 cfs @ 12.27 hrs, Volume= 9.405 af, Depth= 4.75" Routed to Pond DP-1 : Gidneytown Creek
23,503 88 Weighted Average 18,098 77.00% Pervious Area 5,405 23.00% Impervious Area	Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 100-yr Rainfall=8.33"
Tc Length Slope Velocity Capacity Description	Area (sf) CN Description 45,884 98 Paved parking, HSG D
(min) (feet) (ft/ft) (ft/sec) (cfs)	350 98 Paved parking, HSG A
6.0 Direct Entry,	377,918 77 Woods, Good, HSG D 18,580 30 Woods, Good, HSG A
Summary for Subcatchment PS-26:	230,060 39 >75% Grass cover, Good, HSG A
Runoff = 3.68 cfs @ 12.04 hrs, Volume= 0.271 af, Depth= 5.94"	1,122 98 Water Surface, HSG A
Routed to Pond DET-1 : Detention Basin	21,350 98 Water Surface, HSG D 1,035,126 70 Weighted Average
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs NY-32142-00 24-hr S1 100-yr Rainfall=8.33"	1,035,126         70         Weighed Average           966,420         93.36% Pervious Area           68,706         6.64% Impervious Area
Area (sf) CN Description	Tc Length Slope Velocity Capacity Description
23,847 80 >75% Grass cover, Good, HSG D	(min) (feet) (ft/ft) (ft/sec) (cfs) 11.7 100 0.0130 0.14 Sheet Flow.
23,847 100.00% Pervious Area	Grass: Short n= 0.150 P2= 3.15"
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	9.5 481 0.0145 0.84 Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
6.0 Direct Entry,	1.21540.09702.18Shallow Concentrated Flow, Short Grass PastureKv= 7.0 fps
	22.4 735 Total

uiucr	AD® 10.20-	-3f s/n	09581 © 2	023 HydroCA	D Software	Solutions LL	_C	Pa	ge 157
			Su	immary fo	r Subcat	tchment F	PS-29:		
inoff Rout	= ted to Pon			2.04 hrs, Vol	ume=	0.568 a	f, Depth= 8.09	)"	
				=SCS, Weig nfall=8.33"	hted-CN,	Time Span=	: 0.00-72.00 hrs	s, dt= 0.01 hrs	
A	Area (sf)	CN	Descripti						
	28,170 8,501	98 98		arking, HSG I arking, HSG /					
	36,671 36,671	98	Weighted	Average Impervious					
Tc (min)	Length (feet)	Slop (ft/1		ty Capacity c) (cfs)	Descript	tion			
6.0					Direct E	Entry,			
	= ted to Pon		cfs @ 12	ummary fo			<b>PS-3:</b> f, Depth= 7.49	)"	
inoff k	ted to Pon	d CB-2 R-20 m	cfs @ 12 22 : nethod, UH	.04 hrs, Vol	ume=	0.462 a			
Rout Inoff b (-3214	ted to Pon by SCS TF 42-00 24-I Area (sf)	d CB-2 R-20 m hr S1 1 <u>CN</u>	cfs @ 12 22 : nethod, UH 100-yr Rai Descripti	2.04 hrs, Volu =SCS, Weig nfall=8.33"	ume= hted-CN, <sup>-</sup>	0.462 a Time Span=	f, Depth= 7.49		
Rout Inoff b (-3214	ted to Pon by SCS TF 42-00 24-I	d CB-2 R-20 m hr S1 1	cfs @ 12 22 : nethod, UH 100-yr Rai <u>Descripti</u> >75% Gr	2.04 hrs, Vol =SCS, Weig nfall=8.33"	ume= hted-CN, <sup>-</sup> ood, HSG	0.462 a Time Span=	f, Depth= 7.49		
Rout Inoff b (-3214	ted to Pon by SCS TF 42-00 24-I Area (sf) 6,471 25,183 511	d CB-2 R-20 m hr S1 7 <u>CN</u> 80 98 39	cfs @ 12 22 : nethod, UH 100-yr Rai <u>Descripti</u> >75% Gr Paved pa >75% Gr	.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G arking, HSG I ass cover, G	ume= hted-CN, <sup>-</sup> ood, HSG O ood, HSG	0.462 a Time Span=	f, Depth= 7.49		
Rout Inoff b (-3214	ted to Pon by SCS TF 42-00 24-I Area (sf) 6,471 25,183	d CB-2 R-20 m hr S1 - <u>CN</u> 80 98	cfs @ 12 22 : hethod, UH 100-yr Rai Descripti >75% Gr Paved pa >75% Gr Paved pa	.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G ass cover, G ass cover, G arking, HSG a	ume= hted-CN, <sup>-</sup> ood, HSG O ood, HSG	0.462 a Time Span=	f, Depth= 7.49		
Rout Inoff b (-3214	ted to Pon by SCS TF 42-00 24-1 Area (sf) 6,471 25,183 511 50	d CB-2 R-20 m hr S1 2 <u>CN</u> 80 98 39 98	cfs @ 12 22 : hethod, UH 100-yr Rai >75% Gr Paved pa >75% Gr Paved pa 275% Gr Paved pa 21.67% F	.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G arking, HSG I ass cover, G	ume= hted-CN, <sup>-</sup> ood, HSG O ood, HSG A	0.462 a Time Span=	f, Depth= 7.49		
Rout Inoff k (-3214 <u>A</u> Tc (min)	ted to Pon by SCS TF 42-00 24-1 6,471 25,183 511 50 32,215 6,982 25,233 Length	d CB-2 R-20 m hr S1 2 <u>CN</u> 80 98 39 98 98 93	cfs @ 12 22 : hethod, UH 100-yr Rai >75% Gr Paved pa 75% Gr Paved pa Veightec 21.67% f 78.33% I	.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G ass cover, G rking, HSG I ass cover, G rking, HSG J Average Pervious Area mpervious A ty Capacity	ume= hted-CN, <sup></sup> ood, HSG ood, HSG A a rea Descript	0.462 a Time Span= D A	f, Depth= 7.49		
Rout Inoff k (-3214 A	ted to Pon by SCS TF 42-00 24-1 6,471 25,183 511 50 32,215 6,982 25,233 Length	d CB-2 R-20 m hr S1 2 <u>CN</u> 80 98 39 98 98 93 93	cfs @ 12 22 : hethod, UH 100-yr Rai >75% Gr Paved pa 75% Gr Paved pa Veightec 21.67% f 78.33% I	.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G ass cover, G rking, HSG I ass cover, G rking, HSG J Average Pervious Area mpervious A ty Capacity	ume= hted-CN, <sup>-</sup> ood, HSG O ood, HSG A rea	0.462 a Time Span= D A	f, Depth= 7.49		
Rout Inoff k (-3214 <u>A</u> Tc (min)	ted to Pon by SCS TF 42-00 24-1 6,471 25,183 511 50 32,215 6,982 25,233 Length	d CB-2 R-20 m hr S1 2 <u>CN</u> 80 98 39 98 98 93 93	cfs @ 12 22 : hethod, UH 100-yr Rai >75% Gr Paved pr >75% Gr Paved pr 21.67% I 78.33% I pe Veloci t) (ft/ser	.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G ass cover, G rking, HSG I ass cover, G rking, HSG J Average Pervious Area mpervious A ty Capacity	Jme= hted-CN, <sup>-</sup> ood, HSG ood, HSG a rea Descripi Direct E	0.462 a Time Span= D A tion	f, Depth= 7.49		
Rout Inoff L (-321) A Tc (min) 6.0 Inoff	ted to Pon by SCS TF 42-00 24-1 6,471 25,183 511 50 32,215 6,982 25,233 Length	d CB-2 R-20 m hr S1 2 <u>CN</u> 80 98 39 98 93 93 Slop (ft/1	cfs @ 12 22 : method, UH 100-yr Rai >75% Gr Paved pa >75% Gr Paved pa Paved pa Paved pa 21.67% f 78.33% I weightec 21.67% f 78.33% I be Veloci t) (ft/set SL cfs @ 12	2.04 hrs, Vol =SCS, Weig nfall=8.33" on ass cover, G arking, HSG I ass cover, G rrking, HSG I ass cover, G ervious Area pervious Area mpervious A ty Capacity c) (cfs)	ume= hted-CN, <sup></sup> ood, HSG ood, HSG A a rea Descripi Direct E r Subcat	0.462 a Time Span= D A tion Entry, tchment F	f, Depth= 7.49	s, dt= 0.01 hrs	

	J Post	-Deve	elop_32142	2-00	Newburgh South Logistics Cente NY-32142-00 24-hr S1 100-yr Rainfall=8.33
			ssociates		Printed 1/4/2024
HydroCA	AD® 10.20	-3f s/n	09581 © 202	3 HydroCAE	O Software Solutions LLC Page 158
A	vrea (sf)	CN	Description		
	4,835	80			ood, HSG D
	28,221	98			
	33,056	95	Weighted A		
	4,835 28,221		14.63% Per 85.37% Imp		
	,				
Tc (min)	Length (feet)	Slop (ft/f		Capacity (cfs)	Description
6.0	(ieet)	(101	<u>(1/3ec)</u>	(015)	Direct Entry,
0.0					Shoot Lindy,
			Sun	nmary fo	r Subcatchment PS-4:
D		0.07			
Runoff	ed to Pon		cfs @ 12.1	2 hrs, Volu	me= 0.196 af, Depth= 4.51"
Roui		u CD-2	24.		
Runoff I	ov SCS TH	R-20 m	nethod UH=S	SCS Weigh	nted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
			100-yr Rainfa		100-01, fine opan- 0.00-72.00 his, dt= 0.01 his
	.2 00 2 .		ree ji raann		
A	vrea (sf)	CN			
	6,817	39			bod, HSG A
	15,824 22.641	<u>80</u> 68	Weighted A		ood, HSG D
	22,641	00	100.00% P		a
_		<u>.</u>			-
Tc (min)	Length (feet)		t) (ft/sec)		Description
		0.020		(013)	Sheet Flow.
9.9					
					Grass: Short n= 0.150 P2= 3.15"
9.9 2.4	184	0.032	26 1.26		Shallow Concentrated Flow,
2.4					
		0.032 Total			Shallow Concentrated Flow,
2.4				nmary for	Shallow Concentrated Flow,
2.4 12.3	284	Total	Sun		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps r Subcatchment PS-5:
2.4 12.3 Runoff	284	Total	Sun cfs @ 12.0		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps r Subcatchment PS-5:
2.4 12.3 Runoff	284	Total	Sun cfs @ 12.0		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps r Subcatchment PS-5:
2.4 12.3 Runoff Rout	284 = ed to Pon	0.63 d CB-3 R-20 m	<b>Sun</b> cfs @ 12.0 3 : nethod, UH=S	4 hrs, Volu SCS, Weigh	Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps r Subcatchment PS-5:
2.4 12.3 Runoff Rout	284 = ed to Pon	0.63 d CB-3 R-20 m	<b>Sun</b> cfs @ 12.0 3 :	4 hrs, Volu SCS, Weigh	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       me=       0.052 af, Depth= 7.97"
2.4 12.3 Runoff Rout Runoff I NY-321	284 = ed to Pon	0.63 d CB-3 R-20 m	Sun cfs @ 12.0 3 : nethod, UH=S 100-yr Rainfa	4 hrs, Volu SCS, Weigh all=8.33"	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       Imme=       0.052 af, Depth= 7.97"
2.4 12.3 Runoff Rout Runoff I NY-321	284 = ed to Pon by SCS TF 42-00 24-	0.63 d CB-3 R-20 m hr S1 1	Sun cfs @ 12.0 3 : nethod, UH=S 100-yr Rainfa <u>Description</u> >75% Gras	4 hrs, Volu SCS, Weigh all=8.33" s cover, Go	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       Imme=       0.052 af, Depth= 7.97"         Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs       Imme=       0.00000000000000000000000000000000000
2.4 12.3 Runoff Rout Runoff I NY-321	284 = ed to Pon by SCS TF 42-00 24- <u>area (sf)</u> 151 3,231	Total 0.63 d CB-3 R-20 m hr S1 1 <u>CN</u> 80 98	Sun cfs @ 12.0 3 : nethod, UH=S 100-yr Rainfr Description >75% Gras Paved park	4 hrs, Volu SCS, Weigh all=8.33" s cover, Go	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       respective         imme=       0.052 af, Depth= 7.97"         inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         pood, HSG D
2.4 12.3 Runoff Rout Runoff I NY-321	284 = ed to Pon by SCS Tf 42-00 24- vrea (sf) 151 3,231 24	Total 0.63 d CB-3 d CB-3 R-20 m hr S1 1 <u>CN</u> 80 98 39	Sun cfs @ 12.0 3 : nethod, UH=S 100-yr Rainfa Description >75% Gras Paved park >75% Gras	4 hrs, Volu SCS, Weigh all=8.33" s cover, Go ing, HSG D s cover, Go	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       Imme=       0.052 af, Depth= 7.97"         Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs       Imme=       0.00000000000000000000000000000000000
2.4 12.3 Runoff Rout Runoff I NY-321	= eed to Pon by SCS Tf 42-00 24- vrea (sf) 151 3,231 24 3,406	Total 0.63 d CB-3 R-20 m hr S1 1 <u>CN</u> 80 98	Sun cfs @ 12.0 3 : nethod, UH=S 100-yr Rainfa Description >75% Gras Paved park >75% Gras Weighted A	4 hrs, Volu SCS, Weigh all=8.33" s cover, Go ing, HSG E s cover, Go verage	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       r         ime=       0.052 af, Depth= 7.97"         inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         pood, HSG D
2.4 12.3 Runoff Rout Runoff I NY-321	284 = ed to Pon by SCS Tf 42-00 24- vrea (sf) 151 3,231 24	Total 0.63 d CB-3 d CB-3 R-20 m hr S1 1 <u>CN</u> 80 98 39	Sun cfs @ 12.0 3 : nethod, UH=S 100-yr Rainfa Description >75% Gras Paved park >75% Gras	4 hrs, Volu SCS, Weigh all=8.33" s cover, Go s cover, Go s cover, Go verage vious Area	Shallow Concentrated Flow, Short Grass Pasture       Kv= 7.0 fps         r Subcatchment PS-5:       Imme=       0.052 af, Depth= 7.97"         Inted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs       Imme=       0.000 hrs, dt= 0.01 hrs         Dood, HSG D       Imme=       Imme=

Prepared	d by Lab	ella Ass			N ) Software Sc	IY-32142-00 24-hr Š1	Printed 1/4/20
	Length (feet)		Velocity				Page 1
6.0	(1001)	(1011)	(10300)	(00)	Direct Ent	ry,	
			Sur	nmary fo	r Subcatc	hment PS-6:	
Runoff Route	= d to Pond			4 hrs, Volu	me=	0.542 af, Depth= 7.9	7"
			hod, UH=9 0-yr Rainf		nted-CN, Tim	ne Span= 0.00-72.00 hr	s, dt= 0.01 hrs
Ar	ea (sf)		Description				
3	1,235 34,319			s cover, Go ing, HSG D	ood, HSG D		
	20			ing, HSG A	1		
3	35,574		Veighted A				
3	1,235 34,339		3.47% Per∖ 96.53% Im	nous Area pervious Ar	ea		
Та	Longeth	Clana	Mala situ	Conseitu	Description		
(min)	Length (feet)	(ft/ft)	(ft/sec)	Capacity (cfs)	Descriptior	1	
6.0					Direct Ent	ry,	
			Sur	nmary fo	r Subcatc	hment PS-7:	
Runoff Route	= d to Pond			4 hrs, Volu	me=	0.047 af, Depth= 5.94	4"
			hod, UH=9 0-yr Rainf		nted-CN, Tim	ne Span= 0.00-72.00 hr	s, dt= 0.01 hrs
Ar	ea (sf)	CN E	Description				
	614 1.329			s cover, Go ing, HSG D	ood, HSG D		
	1,329			ing, HSG L ing, HSG A			
	1,083				ood, HSG A		
	4,143		Veighted A				
	1,697 2,446			rvious Area pervious Ar			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Descriptior	1	
6.0					Direct Ent	ry,	

	D@ 10.20	3t s/n 09	581 © 202	3 HydroCA	D Software So	lutions LLC		Page 160
			Sun	nmary fo	r Subcatcl	nment PS-8:		
Runoff Route	= ed to Pon		s@ 12.04	4 hrs, Volu	ime=	0.097 af, Depth	= 5.82"	
			hod, UH=S )-yr Rainfa		nted-CN, Tim	e Span= 0.00-72	.00 hrs, dt= 0.0	01 hrs
A	rea (sf)		Description					
	171 2,834 5,688	39 >	75% Ġras	ing, HSG E s cover, Go ing, HSG A	ood, HSG A			
	8,693 2,834 5,859	3		verage vious Area pervious Ar				
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Descriptior	l		
6.0					Direct Ent	ry,		
			Sun	nmary fo	r Subcatc	nment PS-9:		
	=		s@ 12.04	n <b>mary fo</b> 4 hrs, Volu		<b>nment PS-9:</b> 0.031 af, Depth	= 8.09"	
Runoff Route	= ed to Pon		s@ 12.04				= 8.09"	
Route Runoff b	y SCS TF	d CB-23 R-20 met	s@ 12.04 :	4 hrs, Volu SCS, Weigł	ıme=			01 hrs
Route Runoff b NY-3214	y SCS TF 2-00 24-I rea (sf)	d CB-23 R-20 met nr S1 100 <u>CN E</u>	s @ 12.04 : hod, UH=S )-yr Rainfa Description	4 hrs, Volu SCS, Weigh all=8.33"	ume= nted-CN, Tim	0.031 af, Depth		01 hrs
Route Runoff b NY-3214	y SCS TF 2-00 24-I <u>rea (sf)</u> 2,000	d CB-23 R-20 met hr S1 100 <u>CN E</u> 98 F	s @ 12.04 : hod, UH=S D-yr Rainfa Description Paved park	4 hrs, Volu SCS, Weigh all=8.33"	ume= nted-CN, Tim	0.031 af, Depth		01 hrs
Route Runoff b NY-3214 A	y SCS TF 2-00 24-I rea (sf) 2,000 2,000	d CB-23 R-20 met nr S1 100 <u>CN E</u> 98 F 1	s @ 12.04 : hod, UH=S D-yr Rainfa <u>Description</u> <u>Paved park</u> 00.00% Im	4 hrs, Volu GCS, Weigh all=8.33" ing, HSG A spervious A	ume= nted-CN, Tim A	0.031 af, Depth le Span= 0.00-72		01 hrs
Route Runoff b NY-3214 A A 	y SCS TF 2-00 24-I <u>rea (sf)</u> 2,000	d CB-23 R-20 met nr S1 100 <u>CN E</u> 98 F 1	s @ 12.04 : hod, UH=S O-yr Rainfa <u>Description</u> <u>aved park</u> 00.00% Im Velocity	4 hrs, Volu GCS, Weigh all=8.33" ing, HSG A spervious A	ume= hted-CN, Tim A Area Descriptior	0.031 af, Depth le Span= 0.00-72		01 hrs
Route Runoff b NY-3214 A A 	y SCS TF 2-00 24-I <u>rea (sf) 2,000</u> 2,000 Length	d CB-23 R-20 met nr S1 100 <u>CN E</u> 98 F 1 Slope	s @ 12.04 : hod, UH=S O-yr Rainfa <u>Description</u> <u>2aved park</u> 00.00% Im Velocity	4 hrs, Volu SCS, Weigh all=8.33" ing, HSG A spervious A Capacity	ume= nted-CN, Tim A	0.031 af, Depth le Span= 0.00-72		D1 hrs
Route Runoff b NY-3214 A A 	y SCS TF 2-00 24-I 2,000 2,000 2,000 Length (feet)	d CB-23 R-20 met nr S1 100 <u>CN E</u> 98 F 1 Slope (ft/ft)	s @ 12.04 : hod, UH=S D-yr Rainfa Description aved park 00.00% Im Velocity (ft/sec)	4 hrs, Volu SCS, Weigh all=8.33" ing, HSG A npervious A Capacity (cfs)	ume= hted-CN, Tim A A A Description Direct Ent	0.031 af, Depth le Span= 0.00-72	.00 hrs, dt= 0.	
Route Runoff b NY-3214 A Tc (min) 6.0	y SCS TF (2-00 24-1 2,000 2,000 Length (feet) Sun rea =	d CB-23 R-20 met nr S1 100 <u>CN E</u> 98 F 1 Slope (ft/ft) nmary f 9.376	s @ 12.04 hod, UH=S -yr Rainfa Description Paved park 00.00% Im Velocity (ft/sec) Tor Pond ac, 76.99%	4 hrs, Volu SCS, Weigh all=8.33" ing, HSG A pervious A Capacity (cfs) BIO-1: F % Impervio	Ime= Area Descriptior Direct Ent iltration B us, Inflow D	0.031 af, Depth le Span= 0.00-72	.00 hrs, dt= 0.0	dia)
Route Runoff b NY-3214 A Tc (min) 6.0	y SCS TF 2-00 24-I 2,000 2,000 Length (feet) Sum	d CB-23 R-20 met nr S1 100 <u>CN E</u> <u>98 F</u> 1 Slope (ft/ft) <b>nmary f</b> 9.376 35.47 cf	s @ 12.0. : hod, UH=S -yr Rainfa vescription aved park 00.00% Irr Velocity (ft/sec) for Pond ac, 76.99% s @ 12.0.	4 hrs, Volu SCS, Weigh all=8.33" ing, HSG A pervious A Capacity (cfs) BIO-1: F % Impervio 4 hrs, Volu	Ime= A A Descriptior Direct Ent iltration B us, Inflow D Ime=	0.031 af, Depth le Span= 0.00-72 ry, ioretention (2. epth = 7.32" fc 5.720 af	.00 hrs, dt= 0.0 5ft filter me r 100-yr even	dia)
Route Runoff b NY-3214 A Tc (min) 6.0	y SCS TF i2-00 24-i 2,000 2,000 Length (feet) Sum rea = = =	d CB-23 R-20 met nr S1 100 <u>CN E</u> 98 F 1 Slope (ft/ft) 9.376 35.47 cf 32.31 cf 0.26 cf	s @ 12.04 hod, UH=S -yr Rainfa Description Paved park 00.00% Irr Velocity (ft/sec) for Pond ac, 76.99% s @ 12.04 s @ 1	4 hrs, Volu SCS, Weigh all=8.33" ing, HSG A pervious A Capacity (cfs) BIO-1: F % Imperviou 4 hrs, Volu 6 hrs, Volu 6 hrs, Volu 0 hrs, Volu	Ime= Area Description Direct Ent iltration B us, Inflow D Ime= Ime= Ime=	0.031 af, Depth le Span= 0.00-72	.00 hrs, dt= 0.0 5ft filter me r 100-yr even	dia)
Route Runoff b NY-3214 A Tc (min) 6.0 Inflow Ar Inflow Ar Inflow Outflow Discarde Primary	y SCS TF i2-00 24-1 <u>2,000</u> 2,000 Length (feet) Sum rea = = = = = = = = = =	d CB-23 R-20 met nr S1 100 <u>CN E</u> <u>98 F</u> 1 Slope (ft/ft) <b>nmary f</b> 9.376 32.31 cf 0.26 cf 32.06 cf	s @ 12.04 hod, UH=S )-yr Rainfa Description Paved park 00.00% Irr Velocity (ft/sec) for Pond ac, 76.99% s @ 12.01 s @ 12.11 s @ 12.11	4 hrs, Volu CCS, Weigh all=8.33" ing, HSG A pervious A Capacity (cfs) BIO-1: F % Impervio 4 hrs, Volu 6 hrs, Volu 6 hrs, Volu 6 hrs, Volu	Ime= Area Description Direct Ent iltration B us, Inflow D Ime= Ime= Ime=	0.031 af, Depth le Span= 0.00-72 ry, ioretention (2. 5.720 af 5.720 af, Atten=	.00 hrs, dt= 0.0 5ft filter me r 100-yr even	dia)
Route Runoff b NY-3214 A Tc (min) 6.0 Inflow Ar Inflow Ar Inflow Outflow Discarde Primary Route Seconda	y SCS TF i2-00 24-1 <u>2,000</u> 2,000 Length (feet) <b>Sun</b> rea = = = = = = = = = = = = = = = = = = =	d CB-23 R-20 met nr S1 100 <u>CN E</u> <u>98 F</u> 1 Slope (ft/ft) nmary f 9.376 35.47 cf 32.06 cf 32.06 cf d DET-1 0.00 cf	s @ 12.04 hod, UH=S -yr Rainfa Description Paved park 00.00% Irr Velocity (ft/sec) Yor Pond ac, 76.99% s @ 12.04 s @ 12.14 s @ 12.51 s @ 12.14 : 5 @ 12.14 :	4 hrs, Volu SCS, Weigh all=8.33" ing, HSG A pervious A Capacity (cfs) BIO-1: F % Impervio 4 hrs, Volu 6 hrs, Volu 6 hrs, Volu 1 Basin 0 hrs, Volu 0 hrs, Volu	Ime= Area Descriptior Direct Ent iltration B us, Inflow D Ime= Ime= Ime= Ime= Ime=	0.031 af, Depth le Span= 0.00-72 ry, ioretention (2. 5.720 af, Atten= 1.060 af	.00 hrs, dt= 0.0 5ft filter me r 100-yr even	dia)
Route Runoff b NY-3214 A Tc (min) 6.0 Inflow Ar Inflow Outflow Discarde Primary Route Seconda Route	y SCS TF i2-00 24-1 2,000 2,000 Length (feet) Sum rea = = = = = = = = = = = = = =	d CB-23 R-20 met nr S1 100 <u>98 F</u> 1 Slope (ft/ft) <b>nmary f</b> 9.376 32.31 cf 0.26 cf 32.06 cf 32.06 cf d DET-1 0.00 cf d DP-1 :	s @ 12.04 hod, UH=S )-yr Rainfa Description Paved park 00.00% Irr Velocity (ft/sec) for Pond ac, 76.99% s @ 12.04 s @ 12.04 s @ 12.11 . Detentior s @ 12.56 Gidneytow	4 hrs, Volu GCS, Weigh all=8.33" ing, HSG A appervious A Capacity (cfs) BIO-1: F % Impervio 4 hrs, Volu 6 hrs, Volu 0 hrs, Volu n Basin 0 hrs, Volu n Creek	Ime= hted-CN, Tim Area Description Direct Ent iltration B us, Inflow D Ime= Ime= Ime= Ime= Ime= Ime= Ime=	0.031 af, Depth he Span= 0.00-72 ry, ioretention (2. epth = 7.32" fc 5.720 af 5.720 af, Atten= 1.060 af 4.660 af	.00 hrs, dt= 0.0 5ft filter me r 100-yr even	dia)

	ed by Labella / AD® 10.20-3f_s/r		s 2023 HydroCAD Software	Solutions LLC	Printed 1/4/2024 Page 161			bella Associat -3f_s/n 09581 (	
			Surf.Area= 44,415 sf 5 44,411 sf Storage= 42,					13' @ 12.43 hr: 31' Surf.Area	
			min calculated for 5.719 min(969.3 - 789.8)	af (100% of inflow)				ion time= (not let. time= 7.7 n	
Volume	Invert	Avail.Sto	rage Storage Descript	on		Volume	e Inv	ert Avail.S	Storage
#1	235.50'			ismatic)Listed below (Re	calc)	#1 #2	259. 263.	31' 11	32 cf ,903 cf
Elevati (fee		Area sq-ft)		Store -feet)				11	,935 cf
235.		,373	0	0		Elevat	ion	Surf.Area	Inc
236.		2,881		1,064			et)	(sq-ft)	(cubic
237.	00 45	5,940	44,411 6	5,474		259		9	
Device	Routing	Invert	Outlet Devices			263	.31	9	
#1	Discarded	235.50'		n Through Media over S	urface area	Elevat	ion	Surf.Area	Inc
#2	Primary	236.00'	60.0' long x 10.0' bre	adth Overflow Weir to D	let		eet)	(sq-ft)	(cubic
				0.60 0.80 1.00 1.20 1		263		9	
#2	Casandani	226 50				264		7,196	
#3	Secondary	236.50'		adth Emergency Overfl 0.60 0.80 1.00 1.20 1		265	.00	11,639	
				2.70 2.70 2.64 2.63 2.6		Device	Routing	Inve	rt Outle
<b>_</b> .						#1	Primary		
			fs @ 12.50 hrs HW=236 a (Exfiltration Controls 0.:				,		L= 2
1-27		agniweula		20 013/					Inlet n= 0
				35' TW=236.05' (Dynan	nic Tailwater)	#2	Primary	264.5	
° <u>−</u> 2=0	verflow Weir to	<b>Det</b> (Weir	r Controls 31.33 cfs @ 1	.48 fps)			· · · · · · ,		Head
Second	ary OutFlow M	/ax=0.00 c	fs @ 12.50 hrs. HW=236	3.50' TW=0.00' (Dynam	ic Tailwater)				2.50
			Weir Controls 0.00 cfs						Coef 2.65
	J,					#3	Second	ary 264.7 <sup>-</sup>	
			Summary for Po	nd CB-1:			Cocond	, 201.1	Head
									2.50
			ined flood level	outing					Coef 2.65
			uire smaller dt or Finer R quire smaller dt or Finer						2.05
[21] 11d				i county (coronity-10)				v Max=7.48 cf	
Inflow A				Depth = 6.05" for 100	)-yr event			utlet Controls 7	
Inflow Outflow			2.14 hrs, Volume=	0.687 af	Lag = 37.6 min	2=B	road-Cres	sted Rectang	uar Wei
Primary			2.77 hrs, Volume= 2.77 hrs, Volume=	0.688 af, Atten= 0%, 0.688 af		Secon	darv OutF	low Max=0.00	) cfs @ (
	ted to Pond CB-	-2:		5.000 4.				sted Rectange	
Second Rout	ary = 0.00 ted to Pond CB-		0.00 hrs, Volume=	0.000 af				-	
Douting	by Dyn-Stor-In	d method,	Time Span= 0.00-72.00	hrs, dt= 0.01 hrs					

Prepare	J_Post-De ed by Labella	a Associates	5	NY-32	2142-00 24-hr Š	h South Logistics Center 1 <i>100-yr Rainfall=8.33"</i> Printed 1/4/2024 Page 162
			Surf.Area= 9,1 l8 sf Storage=	14 sf Storage= = 32 cf	6,020 cf	
			culated: outflov ( 824.9 - 817.2	w precedes inflo 2)	w)	
Volume	Invert	Avail.Stor	rage Storage	Description		
#1	259.81				c)Listed below (R	
#2	263.31'			ailable Storage	ismatic)Listed be	low (Recalc)
Elevatio (fee		rf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
259.8 263.3		9 9	0 32	0 32		
Elevatio	et)	rf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
263.3 264.0 265.0	00	9 7,196 11,639	0 2,486 9,418	0 2,486 11,903		
Device	Routing	Invert	Outlet Device	\$		
#1	Primary	259.81'	18.0" Round			
#2	Primary	264.55'	Inlet / Outlet I n= 0.013 Cor <b>10.0' long x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English	nvert= 259.81'/ rugated PE, smo 5.0' breadth Br 0.20 0.40 0.60 50 4.00 4.50 5	.00 5.50 70 2.68 2.68 2.6	00 '/' Cc= 0.900 / Area= 1.77 sf
#3	Secondary	264.71'	<b>10.0' long x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English	5.0' breadth Br 0.20 0.40 0.60 50 4.00 4.50 5	oad-Crested Rec 0.80 1.00 1.20 1 .00 5.50 70 2.68 2.68 2.6	tangular Weir .40 1.60 1.80 2.00 6 2.65 2.65 2.65
1=Ci	ulvert (Outlet	Controls 7.4	2) 12.77 hrs H\ 8 cfs @ 4.23 fp <b>r Weir</b> ( Contro	os)	:262.46' (Dynam	ic Tailwater)
			fs @ 0.00 hrs I <b>r Weir</b> ( Contro		V=259.05' (Dyna	mic Tailwater)

3_App J_Post-Develop_32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 100-yr Rainfall=8.33"
Prepared by Labella Associates	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Softwar	e Solutions LLC Page 163

# Summary for Pond CB-10:

[58] Hint: Peaked 0.92' above defined flood level [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=12)

Inflow Area =	0.807 ac, 9	7.85% Impervious	s, Inflow Depth =	8.49" for 100-yr event
Inflow =	9.84 cfs @	12.04 hrs, Volun	ne= 0.571	af
Outflow =	8.70 cfs @	12.36 hrs, Volun	ne= 0.571	af, Atten= 12%, Lag= 19.1 min
Primary =	8.70 cfs @	12.36 hrs, Volun	ne= 0.571	af
Routed to Por	nd CB-18 :			
Secondary =	0.00 cfs @	0.00 hrs, Volun	ne= 0.000	af
Routed to Por	nd CB-18 ·			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 244.42' @ 12.15 hrs Surf.Area= 8,035 sf Storage= 2,539 cf Flood Elev= 243.50' Surf.Area= 32 sf Storage= 54 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 1.6 min ( 741.5 - 739.9 )

Volume	Invert	Avail.Stor	age Stora	ge Description	
#1	239.00'	5	4 cf STR	JCTURE (Prismatic)Li	isted below (Recalc)
#2	243.50'	5,33	8 cf Cust	om Stage Data (Prism	natic)Listed below (Recalc)
		5,39	2 cf Total	Available Storage	
Elevatio	n Su	rf.Area	Inc.Store	Cum.Store	
(fee			(cubic-feet)	(cubic-feet)	
	/	<u> </u>		<u>`</u>	
239.0		12	0	0	
243.5	50	12	54	54	
Elevatio	on Su	rf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
243.5	50	20	0	0	
244.0	00	1,744	441	441	
244.7	0	12,247	4,897	5,338	
Device	Routing	Invert	Outlet Dev	ices	
#1	<u> </u>	239.00'		ind Culvert	
#1	Primary	239.00			
				CPP, projecting, no he	'.80' S= 0.0050 '/' Cc= 0.900
	0	044.00			n interior, Flow Area= 3.14 sf
#2	Secondary	244.60'			-Crested Rectangular Weir
					0 1.00 1.20 1.40 1.60 1.80 2.00
				3.50 4.00 4.50 5.00	
					2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67	2.66 2.68 2.70 2.74	2.79 2.88

		sociates 9581 © 2023 H	lydroCAD S	Software Solutions LLC		Printed 1/4/202 Page 16
		.08 cfs @ 12.3 trols 6.08 cfs		V=243.72' TW=243.44' s)	(Dynamic Tai	ilwater)
		(=0.00 cfs @ ( ctangular Wei		IW=239.00' TW=237.0 s 0.00 cfs)	8' (Dynamic T	ailwater)
		Sı	ummary	for Pond CB-11:		
[90] Warning	g: Qout>Qin n		naller dt or	Finer Routing or Finer Routing (sever	ty=12)	
Outflow = Primary =	= 4.78 c = 6.18 c	fs @ 12.04 h fs @ 12.10 h fs @ 12.10 h	irs, Volum irs, Volum	ie= 0.385 af, A	' for 100-yr e tten= 0%, Lag:	
	Dyn-Stor-Ind r					
Flood Elev= Plug-Flow d Center-of-M	263.26' @ 12 263.05' Surf etention time= ass det. time=	Area= 18 sf (not calculate 0.2 min ( 758	Storage= ed: outflow 3.4 - 758.3	66 sf Storage= 188 cf 36 cf precedes inflow) )		
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1	263.26' @ 12 263.05' Surf etention time= ass det. time= Invert # 259.05'	Area= 18 sf (not calculate 0.2 min ( 758 (vail.Storage 36 cf	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT	<ul> <li>Sef Storage= 188 cf</li> <li>recedes inflow)</li> <li>)</li> <li>Description</li> <li>URE (Prismatic)Listed</li> </ul>	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M Volume	263.26' @ 12 263.05' Surf etention time= ass det. time= Invert A	Area= 18 sf = (not calculate = 0.2 min ( 758 wail.Storage 36 cf 1,263 cf	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT Custom	66 sf Storage= 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1	263.26' @ 12 263.05' Surf etention time= ass det. time= Invert # 259.05'	Area= 18 sf (not calculate 0.2 min ( 758 (vail.Storage 36 cf	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT Custom	<ul> <li>Sef Storage= 188 cf</li> <li>recedes inflow)</li> <li>)</li> <li>Description</li> <li>URE (Prismatic)Listed</li> </ul>	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1 #2 Elevation	263.26' @ 12 263.05' Surl etention time= ass det. time= <u>Invert #</u> 259.05' 263.05' Surf.An	.Area= 18 sf = (not calculate = 0.2 min ( 758 <u>wail.Storage</u> 36 cf <u>1,263 cf</u> 1,299 cf ea Inc	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT Custom Total Ava Store	<ul> <li>Se sf Storage= 188 cf 36 cf</li> <li>r precedes inflow)</li> <li>)</li> <li>Description</li> <li>URE (Prismatic)Listed</li> <li>Stage Data (Prismatic)</li> <li>allable Storage</li> <li>Cum.Store</li> </ul>	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1 #2	263.26' @ 12 263.05' Surf etention time= ass det. time= Invert A 259.05' 263.05'	.Area= 18 sf = (not calculate = 0.2 min ( 758 <u>wail.Storage</u> 36 cf <u>1,263 cf</u> 1,299 cf ea Inc	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT Custom Total Ava	66 sf Storage= 188 cf 36 cf precedes inflow) ) <u>Description</u> <b>URE (Prismatic)</b> Listed <b>Stage Data (Prismatic</b> illable Storage	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1 #2 Elevation (feet)	263.26' @ 12 263.05' Surl etention time= ass det. time= <u>Invert #</u> 259.05' 263.05' Surf.An	Area= 18 sf (not calculate 0.2 min ( 758 <u>vail.Storage</u> <u>36 cf</u> <u>1,263 cf</u> <u>1,299 cf</u> ea Inc ft) (cubic	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT Custom Total Ava Store c-feet)	Si Storage = 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic) ailable Storage Cum.Store (cubic-feet)	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1 #2 Elevation (feet) 259.05 263.05 Elevation	263.26' @ 12 263.05' Suri etention time= ass det. time= <u>Invert #</u> 259.05' 263.05' Surf.Ar	Area= 18 sf (not calculate 0.2 min ( 758 (vail.Storage 36 cf 1,263 cf 1,299 cf a Inc ft) (cubic 9 9 ea Inc	Storage= ed: outflow 8.4 - 758.3 Storage I STRUCT Custom Total Ava Store c-feet) 0 36 Store	Si Storage = 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic) allable Storage Cum.Store (cubic-feet) 0 36 Cum.Store	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M #1 #2 Elevation (feet) 259.05 263.05 Elevation (feet)	263.26' @ 12 263.05' Surf etention time= ass det. time= <u>Invert 4</u> 259.05' 263.05' Surf.An (sq-	Area= 18 sf (not calculate 0.2 min ( 758 (vail.Storage 36 cf 1,263 cf 1,299 cf ea Inc ft) (cubic 9 9 ea Inc ft) (cubic	Storage= ad: outflow 3.4 - 758.3 Storage I STRUCT Custom Total Ava Store c-feet) 0 36 Store c-feet)	66 sf Storage= 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic) ailable Storage Cum.Store (cubic-feet) 0 36 Cum.Store (cubic-feet)	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M <u>Volume</u> #1 #2 Elevation (feet) 259.05 263.05 Elevation	263.26' @ 12 263.05' Suri etention time= ass det. time= <u>Invert #</u> 259.05' 263.05' Surf.Ar	Area= 18 sf (not calculate 0.2 min ( 758 (vail.Storage 36 cf 1,263 cf 1,299 cf ea Inc ft) (cubic 9 9 ea Inc ft) (cubic 9	Storage= ed: outflow 8.4 - 758.3 Storage I STRUCT Custom Total Ava Store c-feet) 0 36 Store	Si Storage = 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic) allable Storage Cum.Store (cubic-feet) 0 36 Cum.Store	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M #1 #2 Elevation (feet) 259.05 263.05 Elevation (feet) 263.05 263.65	263.26' @ 12 263.05' Surf etention time= ass det. time= <u>Invert 4</u> 259.05' <u>263.05'</u> Surf.An (sq- Surf.Ar	Area= 18 sf (not calculate 0.2 min ( 758 (vail.Storage 36 cf 1,263 cf 1,299 cf a Inc ft) (cubic 9 9 ea Inc ft) (cubic 9 9 10 10 10 10 10 10 10 10 10 10	Storage= ed: outflow 3.4 - 758.3 Storage I STRUCT Custom Total Ave Store c-feet) 0 36 Store c-feet) 0	S6 sf Storage= 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic) allable Storage Cum.Store (cubic-feet) 0 36 Cum.Store (cubic-feet) 0 1,263	below (Recalc	
Flood Elev= Plug-Flow d Center-of-M #1 #2 Elevation (feet) 259.05 263.05 Elevation (feet) 263.05 263.65 Device Ro	263.26' @ 12 263.05' Suri etention time= ass det. time= Invert # 259.05' 263.05' Surf.Ar (sq- Surf.Ar (sq- 4,2)	Area= 18 sf (not calculate 0.2 min (758 (vail.Storage 36 cf 1,263 cf 1,299 cf a Inc ft) (cubic 9 9 ba Inc ft) (cubic 9 0 Invert Outh 259.05' <b>18.0</b> L= 2 Inlet	Storage= ad: outflow 3.4 - 758.3 STRUCT Custom Total Ava Store c-feet) 0 36 Store c-feet) 0 1,263 et Devices " Round 16.0' CP / Outlet In	S6 sf Storage= 188 cf 36 cf precedes inflow) ) Description URE (Prismatic)Listed Stage Data (Prismatic) Storage Cum.Store (cubic-feet) 0 36 Cum.Store (cubic-feet) 0 1,263	below (Recalc )Listed below (I all, Ke= 0.900 S= 0.0100 '/	Čecalc) Cc= 0.900

Sector 2010       Newburgh South Logistics Center         NV-32142-00       NV-32142-00 24-hr S1 100-yr Rainfall=8.33"         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 165	Newburgh South Logistics Complexity           3_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 100-yr Rainfall=           Prepared by Labella Associates         Printed 1/4/2           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page
Summary for Pond CB-12:         [58] Hint: Peaked 0.05' above defined flood level         [80] Warning: Exceeded Pond CB-11 by 0.51' @ 12.01 hrs (4.20 cfs 0.009 af)         Inflow Area =       1.315 ac, 81.40% Impervious, Inflow Depth = 7.66" for 100-yr event         Inflow =       10.51 cfs @ 12.03 hrs, Volume=       0.840 af         Outflow =       9.96 cfs @ 12.08 hrs, Volume=       0.840 af, Atten= 5%, Lag= 3.2 min	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 260.91' @ 12.03 hrs Surf.Area= 12 sf Storage= 71 cf Flood Elev= 263.13' Surf.Area= 24 sf Storage= 98 cf Plug-Flow detention time= 0.2 min calculated for 1.053 af (100% of inflow) Center-of-Mass det. time= 0.1 min (758.4 - 758.3) Volume Invert Avail.Storage Storage Description
Primary = 9.96 cfs @ 12.08 hrs, Volume= 0.840 af Routed to Pond CB-13 : Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs	#1     254.97'     98 cf     STRUCTURE (Prismatic)Listed below (Recalc)       #2     263.13'     1,289 cf     Custom Stage Data (Prismatic)Listed below (Recalc)       1,387 cf     Total Available Storage
Peak Élev= 263.10' @ 12.03 hrs Surf.Area= 309 sf Storage= 81 cf Flood Elev= 263.05' Surf.Area= 24 sf Storage= 74 cf Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 0.1 min (761.1 - 761.0)	ElevationSurf.AreaInc.StoreCum.Store(feet)(sq-ft)(cubic-feet)(cubic-feet)254.971200263.13129898
Volume         Invert         Avail.Storage         Storage Description           #1         256.89'         74 cf         STRUCTURE (Prismatic)Listed below (Recalc)           #2         263.05'         1,868 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           1,942 cf         Total Available Storage	ElevationSurf.AreaInc.StoreCum.Store(feet)(sq-ft)(cubic-feet)(cubic-feet)263.131200263.873,4731,2891,289
ElevationSurf.AreaInc.StoreCum.Store(feet)(sq-ft)(cubic-feet)(cubic-feet)256.891200263.05127474	Device         Routing         Invert         Outlet Devices           #1         Primary         254.97' <b>18.0" Round Culvert</b> L= 137.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 254.97' / 253.60' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           263.05         12         0         0	Primary OutFlow Max=11.78 cfs @ 12.03 hrs HW=260.79' TW=257.72' (Dynamic Tailwater)
263.82     4,839     1,868     1,868       Device     Routing     Invert     Outlet Devices       #1     Primary     256.89' <b>18.0" Round Culvert</b> L= 192.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 256.89' / 254.97' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf	Summary for Pond CB-14:           Inflow Area =         1.654 ac, 84.27% Impervious, Inflow Depth =         7.73" for 100-yr event           Inflow =         12.54 cfs @         12.03 hrs, Volume=         1.065 af           Outflow =         12.44 cfs @         12.03 hrs, Volume=         1.065 af, Atten= 1%, Lag= 0.1 min           Primary =         12.44 cfs @         12.03 hrs, Volume=         1.065 af           Routed to Pond CB-15 :
Primary OutFlow Max=9.89 cfs @ 12.08 hrs HW=262.94' TW=260.30' (Dynamic Tailwater) -1=Culvert (Outlet Controls 9.89 cfs @ 5.60 fps)	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 257.78' @ 12.03 hrs Surf.Area= 12 sf Storage= 50 cf Flood Elev= 262.48' Surf.Area= 12 sf Storage= 107 cf
Summary for Pond CB-13:           Inflow Area =         1.636 ac, 84.10% Impervious, Inflow Depth =         7.72" for 100-yr event           Inflow =         12.63 cfs @         12.03 hrs, Volume=         1.053 af           Outflow =         12.40 cfs @         12.03 hrs, Volume=         1.053 af, Atten= 2%, Lag= 0.0 min           Primary =         12.40 cfs @         12.03 hrs, Volume=         1.053 af           Routed to Pond CB-14 :         1.053 af	Plug-Flow detention time= 0.1 min calculated for 1.065 af (100% of inflow)         Center-of-Mass det. time= 0.1 min (758.4 - 758.2 )         Volume       Invert       Avail.Storage       Storage Description         #1       253.60'       107 cf       STRUCTURE (Prismatic)Listed below (Recalc)

		© 2023 HydroCAD	Software Solutions LLC Page 16	<u>67</u> <u>HydroCAD® 10.20-3f s/n 09</u>
Elevatio		Inc.Store	Cum.Store	Device Routing
(fee 253.6		(cubic-feet) 0	(cubic-feet) 0	#1 Primary 2
262.4		107	107	
262.5	50 20	0	107	#2 Primary 2
Device	Routing Inv	vert Outlet Device	8	#2 Fillialy 2
#1	Primary 253	L= 180.0' Cl Inlet / Outlet I n= 0.013 Co	P, projecting, no headwall, Ke= 0.900 nvert= 253.60' / 249.91' S= 0.0205 '/ Cc= 0.900 rugated PE, smooth interior, Flow Area= 1.77 sf	Deineren Ordfilme Manaf
#2	Primary 262	Head (feet) ( 2.50 3.00 3. Coef. (Englis	5.0' breadth Broad-Crested Rectangular Weir           .20         0.40         0.60         0.80         1.20         1.40         1.60         1.80         2.00           0         4.00         4.50         5.00         5.50	Primary OutFlow Max=13 -1=Culvert (Inlet Control -2=Broad-Crested Rect
-1=Ci	outFlow Max=12.38 Ivert (Inlet Controls) Toad-Crested Rectan	12.38 cfs @ 7.00 fp		[58] Hint: Peaked 0.24' abo [90] Warning: Qout>Qin m
[58] Hint	t: Peaked 0.12' above	-	for Pond CB-15:	Inflow Area = 2.056 Inflow = 15.65 cf Outflow = 15.76 cf Primary = 15.76 cf
			Finan Dauting	
[90] wai	rning: Qout>Qin may	require sinalier at e	Finer Routing	Routed to Pond CB-17
Inflow A Inflow Outflow Primary	rea = 1.815 ac, = 13.70 cfs @ = 13.77 cfs @ = 13.77 cfs @		s, Inflow Depth = 7.71" for 100-yr event ne= 1.166 af ne= 1.166 af, Atten= 0%, Lag= 0.0 min	Routing by Dyn-Stor-Ind m Peak Elev= 247.82' @ 12.0 Flood Elev= 247.58' Surf.
Inflow A Inflow Outflow Primary	rea = 1.815 ac, = 13.70 cfs @ = 13.77 cfs @	82.97% Imperviou 12.03 hrs, Volui 12.03 hrs, Volui	s, Inflow Depth = 7.71" for 100-yr event ne= 1.166 af ne= 1.166 af, Atten= 0%, Lag= 0.0 min	Routing by Dyn-Stor-Ind m Peak Elev= 247.82' @ 12.0 Flood Elev= 247.58' Surf. Plug-Flow detention time=
Inflow A Inflow Outflow Primary Routing Peak Ele	rea = 1.815 ac, = 13.70 cfs @ = 13.77 cfs @ = 13.77 cfs @ ed to Pond CB-16 :	82.97% Imperviou (a) 12.03 hrs, Volue (b) 12.03 hrs, Volue (c)	s, Inflow Depth = 7.71" for 100-yr event ne= 1.166 af ne= 1.166 af, Atten= 0%, Lag= 0.0 min ne= 1.166 af 00-72.00 hrs, dt= 0.01 hrs sf Storage= 46 cf	Routing by Dyn-Stor-Ind m Peak Elev= 247.82' @ 12.0 Flood Elev= 247.58' Surf.
Inflow A Inflow Outflow Primary Routing Peak Ele Flood El Plug-Flo	rea = 1.815 ac, = 13.70 cfs ( = 13.77 cfs ( = 13.77 cfs ( ed to Pond CB-16 : by Dyn-Stor-Ind mett ev= 253.73' (@ 12.03 lev= 253.61' Surf.Are	82.97% Imperviou 9 12.03 hrs, Volue 9 12.03 hrs, Volue 12.03 hrs, Volue 13.05 hr	s, Inflow Depth = 7.71" for 100-yr event he= 1.166 af he= 1.166 af, Atten= 0%, Lag= 0.0 min he= 1.166 af 00-72.00 hrs, dt= 0.01 hrs of Storage= 46 cf 44 cf 1.166 af (100% of inflow)	Routing by Dyn-Stor-Ind m Peak Elev= 247.82' @ 12.0 Flood Elev= 247.58' Surf. Plug-Flow detention time= Center-of-Mass det. time= <u>Volume Invert Av</u> #1 241.94' Elevation Surf.Are (feet) (sq-f
Inflow A Inflow Outflow Primary Routing Peak Ele Flood El Plug-Flo Center-o Volume	rea = 1.815 ac, = 13.70 cfs ( = 13.77 cfs ( = 13.77 cfs ( ed to Pond CB-16 : by Dyn-Stor-Ind metr ev= 253.73' (@ 12.03 lev= 253.61' Surf.Are w detention time= 0.2 of-Mass det. time= 0.1 Invert Avail	82.97% Imperviou 9 12.03 hrs, Volui 9 12.03 hrs, Volui 12.03 hrs, Volui 12.05 hrs, Volui 13.05 hr	s, Inflow Depth = 7.71" for 100-yr event he = 1.166 af he = 1.166 af, Atten = 0%, Lag = 0.0 min he = 1.166 af 00-72.00 hrs, dt = 0.01 hrs sf Storage = 46 cf 44 cf 1.166 af (100% of inflow) :) Description	Kouting by Dyn-Stor-Ind m           Peak Elev= 247.82' @ 12.0           Flood Elev= 247.58' Surf.           Plug-Flow detention time=           Center-of-Mass det. time=           Volume         Invert           #1         241.94'           Elevation         Surf.Are           (feet)         (sq-f)           241.94         1           247.58         1
Inflow A Inflow Outflow Primary Routing Peak Ele Flood El Plug-Flo Center-c	rea = 1.815 ac, = 13.70 cfs ( = 13.77 cfs ( = 13.77 cfs ( ed to Pond CB-16 : by Dyn-Stor-Ind meth ev= 253.73' @ 12.03 lev= 253.61' Surf.Are by detention time= 0.2 of-Mass det. time= 0.1	82.97% Imperviou 9 12.03 hrs, Volui 9 12.03 hrs, Volui 12.03 hrs, Volui 12.05 hrs, Volui 13.05 hr	s, Inflow Depth = 7.71" for 100-yr event he= 1.166 af, he= 1.166 af, Atten= 0%, Lag= 0.0 min he= 1.166 af 00-72.00 hrs, dt= 0.01 hrs hrs Storage= 46 cf 44 cf 1.166 af (100% of inflow) 1)	Routing by Dyn-Stor-Ind m Peak Elev= 247.82' @ 12.0 Flood Elev= 247.58' Surf. Plug-Flow detention time= Center-of-Mass det. time= Volume Invert Av #1 241.94' Elevation Surf.Are (feet) (sq-f 241.94 1
Inflow A Inflow Outflow Primary Routing Peak Ele Flood El Plug-Flo Center-o Volume	rea = 1.815 ac, = 13.77 cfs ( = 13.77 cfs ( = 13.77 cfs ( = 13.77 cfs ( ed to Pond CB-16 : by Dyn-Stor-Ind meth ev= 253.73' @ 12.03 lev= 253.61' Surf.Area by detention time= 0.2 of-Mass det. time= 0.1 Invert Avail 249.91' on Surf.Area	82.97% Imperviou 9 12.03 hrs, Volui 9 12.03 hrs, Volui 12.03 hrs, Volui 12.05 hrs, Volui 13.05 hr	s, Inflow Depth = 7.71" for 100-yr event he = 1.166 af he = 1.166 af, Atten = 0%, Lag = 0.0 min he = 1.166 af 00-72.00 hrs, dt = 0.01 hrs sf Storage = 46 cf 44 cf 1.166 af (100% of inflow) :) Description	Kouting by Dyn-Stor-Ind m           Peak Elev= 247.82' @ 12.0           Flood Elev= 247.58' Surf.           Plug-Flow detention time=           Center-of-Mass det. time=           Volume         Invert           #1         241.94'           Elevation         Surf.Are           (feet)         (sq-f)           241.94         1           247.58         1
Inflow A Inflow Outflow Outflow Primary Routi Routing Peak Ele Flood El Plug-Flo Center-co <u>Volume</u> #1 Elevatic (fee 249.5	rea = 1.815 ac, = 13.70 cfs ( = 13.77 cfs ( = 13.77 cfs ( = 13.77 cfs ( ed to Pond CB-16 : by Dyn-Stor-Ind mett ev= 253.73' (@ 12.03 lev= 253.61' Surf.Are by detention time= 0.2 of-Mass det. time= 0.1 <u>Invert Avail</u> 249.91' on Surf.Area et) (sq-ft) 91 12	82.97% Imperviou 9 12.03 hrs, Volue 9 12.03 hrs, Volue 12.03 hr	s, Inflow Depth = 7.71" for 100-yr event he = 1.166 af he = 1.166 af, Atten = 0%, Lag = 0.0 min he = 1.166 af 00-72.00 hrs, dt = 0.01 hrs of Storage = 46 cf 44 cf 1.166 af (100% of inflow) 1) Description <b>TURE (Prismatic)</b> Listed below (Recalc) Cum.Store (cubic-feet) 0	Routing by Dyn-Stor-Ind m         Peak Elev= 247.82' @ 12.         Flood Elev= 247.58' Surf.         Plug-Flow detention time=         Center-of-Mass det. time=         Volume       Invert         #1       241.94'         Elevation       Surf.Are         (feet)       (sq-f)         241.94       1         247.58       1         247.85       2         Device       Routing
Inflow A Inflow Outflow A Outflow Primary Routing Peak Ele Flood El Plug-Flo Center-o Volume #1 Elevatio (fee	rea = 1.815 ac, = 13.70 cfs ( = 13.77 cfs ( = 13.77 cfs ( = 13.77 cfs ( ed to Pond CB-16 : by Dyn-Stor-Ind mett ev= 253.73' (@ 12.03 lev= 253.61' Surf.Are w detention time= 0.2 of-Mass det. time= 0.1 <u>Invert Avail</u> 249.91' on Surf.Area et) (sq-ft) 91 12 91 12	82.97% Imperviou 2 12.03 hrs, Volue 2 12.03 hrs, Volue 1 12.03 hrs, Volue 1 12.03 hrs, Volue 1 12.03 hrs, Volue 1 2.03 hrs, Volue 1 2.05 hr	s, Inflow Depth = 7.71" for 100-yr event he= 1.166 af he= 1.166 af, Atten= 0%, Lag= 0.0 min he= 1.166 af 00-72.00 hrs, dt= 0.01 hrs f Storage= 46 cf 44 cf 1.166 af (100% of inflow) :) Description <b>TURE (Prismatic)</b> Listed below (Recalc) Cum.Store (cubic-feet)	Routing by Dyn-Stor-Ind m         Peak Elev= 247.82' @ 12.         Flood Elev= 247.58' Surf.         Plug-Flow detention time=         Center-of-Mass det. time=         Volume       Invert         #1       241.94'         Elevation       Surf.Are         (feet)       (sq-f)         241.94       1         247.58       1         247.85       2         Device       Routing

		Develop_321		N			uth Logistics Center <i>)-yr Rainfall</i> =8.33" Printed 1/4/2024
		f s/n 09581 © 2		Software Sol	utions LLC		Page 168
evice	Routing	Invert	Outlet Device	S			
#1 #2	Primary Primary	249.91' 253.61'	<b>18.0" Round</b> L= 180.0' CF Inlet / Outlet II n= 0.013 Cor <b>20.0' long x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6	PP, projecting hvert= 249.9 rugated PE, <b>5.0' breadth</b> .20 0.40 0. 50 4.00 4.5 b) 2.34 2.50	1'/241.94' smooth inter Broad-Cres 60 0.80 1.00 0 5.00 5.50 0 2.70 2.68	S= 0.0443 '/' ior, Flow Ares sted Rectang 0 1.20 1.40 2.68 2.66 2.1	Cc= 0.900 a= 1.77 sf <b>ular Weir</b> 1.60 1.80 2.00
-1=Cu	Ilvert (Inle	Max=13.72 cfs t Controls 11.77 e <b>d Rectangula</b>	7 cfs @ 6.66 fp:	s)			ailwater)
			Summary	for Pond	CB-16:		
		.24' above defi >Qin may requ		r Finer Routi	ng		
flow A flow utflow imary Route	= 1 = 1	5.65 cfs @ 12 5.76 cfs @ 12 5.76 cfs @ 12	2.03 hrs, Volun	ne= ne=	1.314 af	for 100-yre en= 0%, Lag	
eak Ĕle	ev= 247.82	or-Ind method, <sup>-</sup> ' @ 12.03 hrs 3' Surf.Area= 1	Surf.Area= 19	sf Storage=		5	
		n time= 0.1 min t. time= 0.1 min			0% of inflow)		
olume	Inve	rt Avail.Stor	age Storage	Description			
#1	241.94	1' 7	2 cf STRUCT	TURE (Prisr	natic)Listed	below (Recald	:)
levatio (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Sto (cubic-fe			
241.9		12	0		0		
247.8 247.8		12 20	68 4		68 72		
evice	Routing	Invert	Outlet Device	S			
#1 #2	Primary Primary	241.94' 247.58'	<b>18.0" Round</b> L= 194.0' CF Inlet / Outlet In n= 0.013 Cor <b>20.0' long x</b> Head (feet) 0 2.50 3.00 3.5	P, projecting nvert= 241.9 rugated PE, 5.0' breadth .20 0.40 0.	4' / 240.00' smooth inter <b>Broad-Cres</b> 60 0.80 1.0	S= 0.0100 '/' ior, Flow Ares sted Rectang	Cc= 0.900 a= 1.77 sf

Prepared by Labella Ass HydroCAD® 10.20-3f s/n 09	<b>59_32142-00</b> sociates 581 © 2023 HydroCAD Softwa	Newburgh South Logistics Center NY-32142-00 24-hr S1 100-yr Rainfall=8.33" Printed 1/4/2024 are Solutions LLC Page 169	Prepar	<b>J_Post-Dev</b> ed by Labella AD® 10.20-3f_s/	Associates	
		4 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 8 2.70 2.74 2.79 2.88	Device #1	Routing Primary		Outlet Devices 24.0" Round C
-1=Culvert (Outlet Cont	5.59 cfs @ 12.03 hrs HW=24 trols 10.02 cfs @ 5.67 fps) <b>tangular Weir</b> (Weir Controls	47.82' TW=245.10' (Dynamic Tailwater)	#2	Primary	245 26'	L= 192.0' CPF Inlet / Outlet Inv n= 0.013 Corru <b>10.0' long x 5</b> .
	Summary for P		π2	Thinkiry	240.20	Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)
[58] Hint: Peaked 1.21' abo [87] Warning: Oscillations	ove defined flood level may require smaller dt or Fine	er Routing (severity=7)	#3	Secondary	245.34'	2.65 2.67 2.66 <b>10.0' long x 5</b> Head (feet) 0.2
nflow = 32.89 cf Dutflow = 20.19 cf	s @ 12.03 hrs, Volume= s @ 12.39 hrs, Volume=	ow Depth = 7.82" for 100-yr event 2.729 af 2.729 af, Atten= 39%, Lag= 21.4 min				2.50 3.00 3.50 Coef. (English) 2.65 2.67 2.66
Routed to Pond CB-18 Secondary = 1.62 cf	s @ 12.15 hrs, Volume=	2.703 af 0.019 af	#4	Tertiary	245.40'	<b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50
Routed to Pond PF-2 : Tertiary = 0.84 cf Routed to Pond DP-1 :	s @ 12.15 hrs, Volume=	0.008 af	Brimar		v-19 12 ofc	Coef. (English) 2.65 2.67 2.66 s @ 12.39 hrs HV
Peak Elev= 245.51' @ 12.1	nethod, Time Span= 0.00-72.0 15 hrs Surf.Area= 15,496 sf	f Storage= 8,540 cf	1=C	ulvert (Inlet Co	ontrols 18.1	ar Weir (Controls
	Area= 40 sf Storage= 96 cf 1.5 min calculated for 2.729 a 1.5 min (755.3 - 753.8 )		Second I—3=B	lary OutFlow road-Crested	Max=1.62 c <b>Rectangul</b> ส	cfs @ 12.15 hrs I <b>ar Weir</b> (Weir Co
	vail.Storage Storage Descri	iption (Prismatic)Listed below (Recalc)				@ 12.15 hrs HW <b>ar Weir</b> (Weir Co
#1 239.50 #2 244.30'	18,411 cf Custom Stage	e Data (Priśmatic)Listed below (Recalc)				Summary
	18,507 cf Total Available a Inc.Store Cu	a Storage um.Store ubic-feet)	[87] Wa	rning: Oscillati	ons may ree	fined flood level quire smaller dt c 3-10 by 2.73' @ 1
Elevation Surf.Are (feet) (sq-f					583 ac 92	700/ Imam am viewa
(feet) (sq-f 239.50 2 244.30 2	rt) (cubic-feet) (cu 20 0 20 96	0 96	Inflow A Inflow	= 40.0	)3 cfs @ 1	2.02 hrs, Volum
(feet)         (sq-f           239.50         2           244.30         2           Elevation         Surf.Are (feet)           (sq-f         (sq-f           244.30         2	(cubic-feet)         (cu           20         0           20         96           21         Inc.Store         Cu           22         Cubic-feet)         (cu           23         Inc.Store         Cu           24         Cubic-feet)         (cu           20         0         0	0 96 um.Store <u>ibic-feet)</u> 0	Inflow A Inflow Outflow Primary	= 40.0 = 33.1	03 cfs @ 11 18 cfs @ 11 18 cfs @ 11	2.02 hrs, Volum 2.10 hrs, Volum 2.10 hrs, Volum
(feet) (sq-f 239.50 2 244.30 2 Elevation Surf.Are (feet) (sq-f	(cubic-feet)         (cu           20         0           20         96           20         1nc.Store         Cu           20         (cubic-feet)         (cu           20         0         0         0           20         0         0         2,716           38         3,519         3	0 96 um.Store ubic-feet)	Inflow A Inflow Outflow Primary Rou Routing Peak E	= 40.0 = 33.1 = 33.1 ted to Pond DIV by Dyn-Stor-Ir lev= 244.34' @	03 cfs @ 1. 18 cfs @ 1. 18 cfs @ 1. V-2 : Divers nd method, 9 12.10 hrs	2.02 hrs, Volum 2.10 hrs, Volum 2.10 hrs, Volum sion 2 Time Span= 0.00 Surf.Area= 5,25
(feet)         (sq-f           239.50         2           244.30         2           Elevation         Surf.Are           (feet)         (sq-f           244.30         2           245.30         2	(cubic-feet)         (cu           20         0           20         96           20         1nc.Store         Cu           20         (cubic-feet)         (cu           20         0         0         0           20         0         0         2,716           38         3,519         3	0 96 um.Store <u>ubic-feet)</u> 0 2,716 6,235	Inflow A Inflow Outflow Primary Rou Routing Peak E Flood E Plug-Fl	= 40.0 = 33.1 r = 33.1 ted to Pond DIV by Dyn-Stor-Ir lev= 244.34' @ ilev= 243.50' \$	03 cfs @ 1. 18 cfs @ 1. 18 cfs @ 1. 18 cfs @ 1. V-2 : Divers nd method, 0 12.10 hrs Surf.Area= 4 me= 0.3 mir	.78% Impervious, (2.02 hrs, Volume (2.10 hrs, Volume (2.10 hrs, Volume sion 2 Time Span= 0.00 Surf.Area= 5,25 40 sf Storage= n calculated for 5 n ( 748.9 - 748.7
(feet)         (sq-f           239.50         2           244.30         2           Elevation         Surf.Are           (feet)         (sq-f           244.30         2           245.30         2	(cubic-feet)         (cu           20         0           20         96           20         1nc.Store         Cu           20         (cubic-feet)         (cu           20         0         0         0           20         0         0         2,716           38         3,519         3	0 96 um.Store <u>ubic-feet)</u> 0 2,716 6,235	Inflow A Inflow Outflow Primary Rou Routing Peak E Flood E Plug-Fl	= 40.0 = 33.1 r = 33.1 ted to Pond DIV by Dyn-Stor-Ir lev= 244.34' @ ilev= 243.50' \$	03 cfs @ 1. 18 cfs @ 1. 18 cfs @ 1. 18 cfs @ 1. V-2 : Divers nd method, 0 12.10 hrs Surf.Area= 4 me= 0.3 mir	2.02 hrs, Volumi (2.10 hrs, Volumi (2.10 hrs, Volumi sion 2 Time Span= 0.00 Surf Area= 5,25 40 sf Storage= n calculated for 5

App	J Post-De	velop 321	42-00	NY-32142		h South Logistics Center 1 100-γr Rainfall=8.33"
repare	ed by Labella	Associates				Printed 1/4/2024
ydroCA	D® 10.20-3f s	/n 09581 © 2	023 HydroCAD S	oftware Solutions Ll	LC	Page 170
evice	Routing	Invert	Outlet Devices			
#1	Primary	239.50'	L= 192.0' CPF Inlet / Outlet Inv	<b>Culvert</b> ', projecting, no he 'ert= 239.50' / 237 igated PE, smooth	.58' S= 0.01	00 '/' Cc= 0.900
#2	Primary	245.26'	<b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)	0' breadth Broad 0 0.40 0.60 0.80 4.00 4.50 5.00	-Crested Re 0 1.00 1.20 5.50 2.68 2.68 2.	
#3	Secondary	245.34'	<b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)	0' breadth Broad 0 0.40 0.60 0.80 4.00 4.50 5.00	-Crested Re 0 1.00 1.20 5.50 2.68 2.68 2.	<b>ctangular Weir</b> 1.40 1.60 1.80 2.00 66 2.65 2.65 2.65
#4	Tertiary	245.40'	<b>10.0' long x 5.</b> Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)	0' breadth Broad 0 0.40 0.60 0.80 4.00 4.50 5.00	-Crested Re 0 1.00 1.20 5.50 2.68 2.68 2.	c <b>tangular Weir</b> 1.40 1.60 1.80 2.00 66 2.65 2.65 2.65
–1=Ci	Ilvert (Inlet Co	ontrols 18.12	@ 12.39 hrs HV 2 cfs @ 5.77 fps) <b>r Weir</b> ( Controls		l2.87' (Dyna	mic Tailwater)
				IW=245.51' TW=: htrols 1.62 cfs @ 0		namic Tailwater)
				=245.51' TW=0.00 trols 0.84 cfs @ 0		Tailwater)
			Summary f	or Pond CB-18	3:	
7] Wa	ning: Oscillati	ons may rec		r Finer Routing (se 2.37 hrs (18.85 cfs		
flow A flow utflow rimary Rout	= 40.0 = 33.1	)3 cfs @ 12 18 cfs @ 12 18 cfs @ 12	2.02 hrs, Volume 2.10 hrs, Volume 2.10 hrs, Volume	e= 5.047 a	f f, Atten= 179	00-yr event %, Lag= 4.4 min
eak Ĕl	ev= 244.34' @	12.10 hrs		9-72.00 hrs, dt= 0.0 1 sf Storage= 2,3 128 cf		

5.047 af (100% of inflow) ′)

		bella Associat -3f s/n 09581 @	es 2023 HydroCAD :	Software Solu	itions LLC	Printe	Page 171
Volume	Inv	vert Avail.S	torage Storage	Description			
#1	237.				natic)Listed below	(Recalc)	
#2	243.				(Prismatic)Listed	below (Recalc)	
		4,	978 cf Total Ava	ailable Stora	ge		
Elevatio	าท	Surf.Area	Inc.Store	Cum.Sto	re		
(fee		(sq-ft)	(cubic-feet)	(cubic-fee			
237.0		20	0		0		
243.5	50	20	128	12	28		
Elevatio	n	Surf.Area	Inc.Store	Cum.Sto	re		
(fee		(sq-ft)	(cubic-feet)	(cubic-fee			
243.5	50	20	0		0		
244.7	75	7,740	4,850	4,85	50		
Device	Routing	Inver	t Outlet Devices				
#1	Primary						
	,		L= 64.0' CPP	, projecting,	no headwall, Ke=		
					B'/236.06' S= 0.		
#2	Primary	244.70			smooth interior, F		
						octangular wo	NIT
	1 minury	211.70			60 0.80 1.00 1.2		
	1 minuty	211.70	Head (feet) 0. 2.50 3.00 3.5	.20 0.40 0.6 0 4.00 4.50	60 0.80 1.00 1.20 0 5.00 5.50	0 1.40 1.60 1.8	80 2.00
	1 mildiry	211.70	Head (feet) 0. 2.50 3.00 3.5 Coef. (English	.20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50	60 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00
	- mildry	211.10	Head (feet) 0. 2.50 3.00 3.5 Coef. (English	.20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50	60 0.80 1.00 1.20 0 5.00 5.50	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00
Primary	outFlov	<b>v</b> Max=33.17 c	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H	20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50 6 2.68 2.70 W=244.34'	60 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary	/ OutFlov ulvert (In	v Max=33.17 c let Controls 33.	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps	20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50 6 2.68 2.70 W=244.34' S)	60 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 2.74 2.79 2.88	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary	/ OutFlov ulvert (In	v Max=33.17 c let Controls 33.	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H	20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50 6 2.68 2.70 W=244.34' S)	60 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 2.74 2.79 2.88	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary	/ OutFlov ulvert (In	v Max=33.17 c let Controls 33.	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps	20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50 6 2.68 2.70 W=244.34' s) s 0.00 cfs)	0 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary	o OutFlov Jivert (In oad-Cres	<b>v</b> Max=33.17 c let Controls 33. <b>sted Rectang</b> u	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary	20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50 6 2.68 2.70 W=244.34' s) s 0.00 cfs)	0 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary 1=Cu 2=Br	v OutFlov ulvert (In oad-Cres	v Max=33.17 c let Controls 33 s <b>ted Rectangu</b> prage range exc	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary ceeded by 0.23'	20 0.40 0.6 0 4.00 4.50 ) 2.34 2.50 6 2.68 2.70 W=244.34' s) s 0.00 cfs)	0 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary -1=Cu -2=Br [93] Wa [58] Hin [90] Wa	r OutFlov Jlvert (In oad-Crest rning: Sto t: Peakeo rning: Qo	v Max=33.17 c let Controls 33. sted Rectangu prage range exo l 0.88' above do ut>Qin may rec	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary ceeded by 0.23' efined flood level juire smaller dt or	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) s 0.00 cfs) for Pond	0 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19:	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary -1=Cu -2=Br [93] Wa [58] Hin [90] Wa	r OutFlov Jlvert (In oad-Crest rning: Sto t: Peakeo rning: Qo	v Max=33.17 c let Controls 33. sted Rectangu prage range exo l 0.88' above do ut>Qin may rec	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary ceeded by 0.23' efined flood level	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) s 0.00 cfs) for Pond	0 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19:	0 1.40 1.60 1.8 2.66 2.65 2.65	80 2.00 2.65
Primary 1=Cu 2=Br [93] Wa [58] Him [90] Wa [80] Wa	y OutFlov Jivert (In road-Cres rning: Sto t: Peakec rning: Qo rning: Ex	v Max=33.17 c let Controls 33 sted Rectangu prage range exc 0.88' above de ut>Qin may rec ceeded Pond C	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level juire smaller dt or B-20 by 0.86' @	20 0.40 0.6 0 4.00 4.5 ) 2.34 2.50 6 2.68 2.7 W=244.34' s) s 0.00 cfs) <b>for Pond</b> Finer Routii 11.98 hrs (8.	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af)	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater	80 2.00 2.65
Primary -1=Cu -2=Br [93] Wa [58] Hin [90] Wa	y OutFlov Jivert (In road-Cres rning: Sto t: Peakec rning: Qo rning: Ex	v Max=33.17 c let Controls 33. sted Rectangu orage range exc 0.88' above du ut>Qin may rec ceeded Pond C 4.759 ac,10	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level juire smaller dt or B-20 by 0.86' @	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) s 0.00 cfs) for Pond f Finer Routii 11.98 hrs (8. s, Inflow Dep	0 0.80 1.00 1.20 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19:	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater	80 2.00 2.65
Primary 1=Cu 2=Br [93] Wai [58] Him [80] Wai [80] Wai	routFlov Jivert (In oad-Crest roing: Sto roing: Ex rea = = = =	v Max=33.17 c let Controls 33 sted Rectangu prage range exc l 0.88' above de ut>Qin may rec ceeded Pond 4.759 ac,10 32.08 cfs @ 32.41 cfs @	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level juire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 6 2.68 2.7( W=244.34' s) s 0.00 cfs) for Pond f Finer Routii 11.98 hrs (8 s, Inflow Dep te= 5	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=Cu 2=Br [93] Wai [58] Hini [90] Wai [80] Wai Inflow A Inflow Outflow Primary	routFlov Jlvert (In road-Cres rning: Sto t: Peakec rning: Qo rning: Ex rea = = = = = =	v Max=33.17 c let Controls 33. sted Rectangu prage range exc l 0.88' above du ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level juire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 6 2.68 2.7( W=244.34' s) s 0.00 cfs) for Pond f Finer Routii 11.98 hrs (8 s, Inflow Dep te= 5	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=CL 2=Br [93] Wai [58] Hini [90] Wai [80] Wai Inflow A Inflow Outflow Primary Rout	rning: Sto t: Peakec rning: Qo rning: Ex rea = = = = ed to Por	v Max=33.17 c let Controls 33. sted Rectangu orage range exc 0.88' above d ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @ d PF-1 : Pretre	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level quire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum atment Forebay	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) for Pond f Finer Routin 11.98 hrs (8. s, Inflow Dep ne=	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=Cu 2=Br [93] Wai [58] Hini [90] Wai [80] Wai [93] Wai [9	rning: Sto t: Peakeo rning: Qo rning: Qo rning: Ex rea = = = = = = = = = =	v Max=33.17 c let Controls 33. sted Rectangu orage range exc 0.88' above d ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @ d PF-1 : Pretre	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level juire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) for Pond f Finer Routin 11.98 hrs (8. s, Inflow Dep ne=	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0 3.134 af	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=Cu 2=Br [93] Wai [58] Him [90] Wai [80] Wai [80	routFlov Jlvert (In road-Cres rning: Sto t: Peakeo rning: Qo rning: Ex rea = = = = ed to Por ary = ed to Por	v Max=33.17 c let Controls 33. sted Rectangu orage range exc 10.88' above du ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @ nd PF-1 : Pretrec 4.33 cfs @ nd CB-8 :	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control <b>Summary</b> ceeded by 0.23' efined flood level uire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum atment Forebay 12.03 hrs, Volum	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.7( W=244.34' s) s 0.00 cfs) for Pond f Finer Routin 11.98 hrs (8. s, Inflow Dep ne= ne= ne=	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0 3.134 af 0.019 af	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=CL 2=Br [93] Wai [58] Hini [90] Wai [80] Wai Inflow A Inflow A Inflow Outflow Primary Rout Seconda Routing	rning: Sto t: Peakeor rning: Sto t: Peakeor rning: Qo rning: Ex- rea = = = ed to Por ed to Por by Dyn-5	v Max=33.17 c let Controls 33. sted Rectangu orage range exit 0.88' above du ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @ d PF-1 : Pretre 4.33 cfs @ dd CB-8 : Stor-Ind method	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level quire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum 15.04 hrs, Volum 16.05 hrs, Volum 17.05 h	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) for Pond Finer Routin 11.98 hrs (8. s, Inflow Den te= the= the= the= 00-72.00 hrs,	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0 3.154 af 0.019 af . dt= 0.01 hrs	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=Cu 2=Br [93] Wai [58] Hini [90] Wai [80] Wai [8	rning: Sto t: Peaked rning: Qo rning: Qo rning: Ex rea = = = ed to Por ary = ed to Por ary = ed to Por sy Dyn-S ev= 246.6	v Max=33.17 c let Controls 33. sted Rectangu orage range exit 0.88' above d ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @ 28.07 cfs @ d PF-1 : Pretre 4.33 cfs @ nd CB-8 : Stor-Ind methoo 33' @ 12.03 hrs	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' sfined flood level juire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum 13.05 hrs, Volum 14.7 ime Span= 0.0 5.5 surf.Area= 170	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) s 0.00 cfs) for Pond Finer Routin 11.98 hrs (8. s, Inflow Dep ne=	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0 3.154 af 0.019 af . dt= 0.01 hrs	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )
Primary 1=Cu 2=Br [93] Wai [58] Hini [90] Wai [80] Wai [8	rning: Sto t: Peaked rning: Qo rning: Qo rning: Ex rea = = = ed to Por ary = ed to Por ary = ed to Por sy Dyn-S ev= 246.6	v Max=33.17 c let Controls 33. sted Rectangu orage range exit 0.88' above d ut>Qin may rec ceeded Pond C 4.759 ac,10 32.08 cfs @ 32.41 cfs @ 28.07 cfs @ 28.07 cfs @ d PF-1 : Pretre 4.33 cfs @ nd CB-8 : Stor-Ind methoo 33' @ 12.03 hrs	Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6 fs @ 12.10 hrs H 17 cfs @ 6.76 fps lar Weir ( Control Summary Seeded by 0.23' efined flood level quire smaller dt or B-20 by 0.86' @ 0.00% Impervious 12.04 hrs, Volum 12.03 hrs, Volum 15.04 hrs, Volum 16.05 hrs, Volum 17.05 h	20 0.40 0.6 0 4.00 4.5( ) 2.34 2.50 66 2.68 2.70 W=244.34' s) s 0.00 cfs) for Pond Finer Routin 11.98 hrs (8. s, Inflow Dep ne=	60 0.80 1.00 1.20 0 5.00 5.50 2.70 2.68 2.68 0 2.74 2.79 2.88 TW=241.18' (Dy CB-19: ng 68 cfs 0.071 af) oth = 7.95" for 3.154 af 3.154 af, Atten= 0 3.154 af 0.019 af . dt= 0.01 hrs	0 1.40 1.60 1.8 2.66 2.65 2.65 namic Tailwater 100-yr event	30 2.00 2.65 )

HydroCA	ed by Labella D® 10.20-3f			Software Solutions LLC	Printed 1/4/202 Page 17
Center-c	of-Mass det. t	ime= 0.1 min	( 741.2 - 741.1	)	
Volume	Invert	Avail.Stor	age Storage	Description	
#1	239.82'			URE (Prismatic)Listed bel	
#2	245.95'		5 cf Custom '8 cf Total Ava	Stage Data (Prismatic)List	ted below (Recalc)
		17		allable Storage	
Elevatio		rf.Area	Inc.Store	Cum.Store	
(fee	/	(sq-ft)	(cubic-feet)	(cubic-feet)	
239.8 245.9		20 20	0 123	0 123	
210.0				120	
Elevatio		rf.Area	Inc.Store	Cum.Store	
(fee) 245.9	- /	(sq-ft) 20	(cubic-feet) 0	(cubic-feet) 0	
245.8		150	55	55	
Device #1	Routing Primary	Invert 239.82'	Outlet Devices 24.0" Round		
t_1=Cu	<b>Ilvert</b> (Barrel	Controls 28.	2.0' long x 2. Head (feet) 0. 2.50 3.00 3.5 Coef. (English 2.85 3.07 3.2 @ 12.03 hrs H 03 cfs @ 8.92 f	) 2.54 2.61 2.61 2.60 2.6 0 3.32 W=246.81' TW=239.33' (	Rectangular Weir           1.20         1.40         1.60         1.80         2.00           36         2.70         2.77         2.89         2.88           Dynamic Tailwater)         X         X         X         X
2-01	Jau-Gresteu	Rectanyula	·	for Pond CB-2:	
			-		
		tions may rec		or Finer Routing (severity=2 1.97 hrs (5.44 cfs 0.049 af)	
[87] War					
[87] War [80] War Inflow Al Inflow	rning: Exceed rea = 2 = 9.	22 cfs @ 12	2.77 hrs, Volum		
[87] War [80] War Inflow Ar Inflow Outflow Primary	rning: Exceed rea = 2 = 9. = 9.	22 cfs @ 12 09 cfs @ 12 09 cfs @ 12		ne= 1.414 af ne= 1.414 af, Atten	or 100-yr event = 1%, Lag= 0.0 min

		evelop_3			ewburgh South Logistics Center 24-hr S1 100-yr Rainfall=8.33"
		a Associat	es © 2023 HydroCAD Sot	ftware Solutions LLC	Printed 1/4/2024 Page 173
2			*		
			nin calculated for 1.4 nin(802.1 - 800.7)	14 af (100% of inflow)	
/olume	Invert		torage Storage De	scription	
#1 #2	257.54			RE (Prismatic)Listed b	
#2	263.36'		199 cf Total Availa	age Data (Prismatic)	isted below (Recalc)
		14,		able otorage	
Elevation	Si	urf.Area	Inc.Store	Cum.Store	
(feet) 257.54		<u>(sq-ft)</u> 12	(cubic-feet) 0	(cubic-feet) 0	
257.54 263.36		12	70	70	
		. –			
Elevation (feet)	Si	urf.Area	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
263.36		<u>(sq-ft)</u> 12	(cubic-teet)		
264.00		4,336	1,391	1,391	
265.00		21,139	12,738	14,129	
Device R	outing	Invo	t Outlet Devices		
	rimary	257.54		ulvort	
	rimary	264.55	Inlet / Outlet Inve n= 0.013 Corruc 5' <b>10.0' long x 5.0</b> Head (feet) 0.20 2.50 3.00 3.50 Coef. (English) 2 2.65 2.67 2.66	ated PE, smooth interi breadth Broad-Cres 0.40 0.60 0.80 1.00 4.00 4.50 5.00 5.50 2.34 2.50 2.70 2.68 2 2.68 2.70 2.74 2.79	S= 0.0100 '/' Cc= 0.900 or, Flow Area= 1.77 sf ted Rectangular Weir 0 1.20 1.40 1.60 1.80 2.00 2.68 2.66 2.65 2.65 2.65 2.88
-1=Culve	ert (Outle	t Controls 8	s @ 12.71 hrs HW= 3.91 cfs @ 5.04 fps) Ilar Weir (Controls (	263.55' TW=260.99' ).00 cfs)	(Dynamic Tailwater)
			Summary fo	or Pond CB-20:	
		17' above d	efined flood level	in an Dauting	
90] Warnir	ng: Qout>	Qin may re	quire smaller dt or Fi equire smaller dt or	Finer Routing (severity	/=6)
90] Warnir	ng: Qout> ng: Oscilla	Qin may re ations may r	equire smaller dt or		,
90] Warnir 87] Warnir nflow Area nflow	ng: Qout> ng: Oscilla a = 6	Qin may reations may reations may r 0.793 ac,10 0.42 cfs @	equire smaller dt or 0.00% Impervious, 12.04 hrs, Volume=	Finer Routing (severity Inflow Depth = 8.09" = 0.535 af	for 100-yr event
90] Warnir 87] Warnir nflow Area nflow Dutflow Primary	ng: Qout> ng: Oscilla = 6 = 6 = 6	Qin may rea ations may r 0.793 ac,10 0.42 cfs @ 0.64 cfs @ 0.43 cfs @	equire smaller dt or 0.00% Impervious,	Finer Routing (severity Inflow Depth = 8.09" = 0.535 af = 0.535 af, Atte	,
90) Warnir 87] Warnir nflow Area nflow Dutflow Primary Routed Secondary	ng: Qout> ng: Oscilla = 6 = 6 = 5 to Pond 0 = 3	Qin may reations may reations may reations may reations (0.793 ac,10) 0.793 ac,10 0.42 cfs (0) 0.44 cfs (0) 0.43 cfs (0) 0.8-19 : 0.32 cfs (0)	equire smaller dt or 0.00% Impervious, 12.04 hrs, Volume= 12.04 hrs, Volume=	Finer Routing (severity Inflow Depth = 8.09" = 0.535 af = 0.535 af, Atte = 0.481 af	for 100-yr event
] Warnir ] Warnir ow Area ow tflow mary Routed condary	ng: Qout> ng: Oscilla = 6 = 6 to Pond 0 = 3 to Pond 0	Qin may reations may r ations may r 0.793 ac,10 6.42 cfs @ 6.64 cfs @ 6.43 cfs @ CB-19 : 8.32 cfs @ CB-10 :	equire smaller dt or 0.00% Impervious, 12.04 hrs, Volume= 12.04 hrs, Volume= 12.12 hrs, Volume=	Finer Routing (severity Inflow Depth = 8.09" = 0.535 af = 0.535 af, Attu = 0.481 af = 0.027 af	for 100-yr event

Routing	by Dyn-Stor-Ir	nd method,	Time Span= 0.0	Software Solutions LLC 10-72.00 hrs, dt= 0.01 l sf Storage= 43 cf	hrs	Page 174
			18 sf Storage=			
			n calculated for ( n ( 740.9 - 740.8	0.535 af (100% of inflo <sup>.</sup> )	w)	
Volume			rage Storage			
#1 #2	241.97' 245.95'			URE (Prismatic)Liste Stage Data (Prismati		
#2	245.95		06 cf Total Ava			
				0		
Elevatio (fee		.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
241.9	/	<u>9</u>	(cubic-ieet) 0	0		
245.		9	36	36		
Elevatio	on Surf	Area	Inc.Store	Cum.Store		
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)		
245.		9	0	0		
246.9	90	350	171	171		
Device	Routing	Invert				
#1	Primary	241.97'	24.0" Round			000
				P, projecting, no head vert= 241.97' / 239.81		
			n= 0.013 Corr	ugated PE, smooth int	erior, Flow	Area= 3.14 sf
#2	Secondary	245.95'		5.0' breadth Broad-Cr 20 0.40 0.60 0.80 1		
				0 4.00 4.50 5.00 5.5		10 1.00 1.00 2.00
						6 2.65 2.65 2.65
#3	Tertiary	245.95'		6 2.68 2.70 2.74 2.7 5.0' breadth Broad-Cr		angular Weir
	,		Head (feet) 0.	20 0.40 0.60 0.80 1	.00 1.20 1.	
				0 4.00 4.50 5.00 5.5 ) 2.34 2.50 2.70 2.6		265 265 265
				6 2.68 2.70 2.74 2.7		2.00 2.00 2.00
Primary	/ OutFlow Mai ulvert (Outlet (	x=5.82 cfs ( Controls 5.8	@ 12.12 hrs HV 82 cfs @ 1.85 fp	V=245.23' TW=244.84 s)	' (Dynamic	c Tailwater)
Second	lary OutFlow	Max=3.32 c	fs @ 12.04 hrs	HW=246.12' TW=244 Introls 3.32 cfs @ 0.97		mic Tailwater)
				/=246.12' TW=244.18 introls 3.32 cfs @ 0.97		: Tailwater)

HydroCAD® 10.20-3f s/r	Associates n 09581 © 2023	HydroCAD S	oftware Solutior	ns LLC	Printed 1/4/2024 Page 175
	s	ummary f	for Pond CB	-22:	
[58] Hint: Peaked 0.50' [87] Warning: Oscillatio			or Finer Routing	g (severity=2)	
Inflow = 10.6 <sup>-</sup> Outflow = 10.18	1 cfs @ 11.97 8 cfs @ 12.72 8 cfs @ 12.72	hrs, Volume hrs, Volume	e= 1.87 e= 1.87	= 6.81" for 100 76 af 76 af, Atten= 4%, 76 af	
Routing by Dyn-Stor-In Peak Elev= 263.76' @ Flood Elev= 263.26' S	12.09 hrs Surf	.Area= 2,12	6 sf Storage=		
Plug-Flow detention tim Center-of-Mass det. tim				of inflow)	
Volume Invert	Avail.Storage				
#1 255.03' #2 263.26'				c)Listed below (Re ismatic)Listed bel	
			ilable Storage		
	0,0100		lasie eterage		
		c.Store	Cum.Store		
	sq-ft) (cub	pic-feet)	(cubic-feet)		
	10				
255.03	12	0	0		
	12 12	99	99		
255.03 263.26	12				
255.03 263.26 Elevation Surf. (feet) (s	12 Area In sq-ft) (cub	99	99		
255.03 263.26 Elevation Surf. (feet) (s 263.26	12 Area In sq-ft) (cub 12	99 c.Store <u>bic-feet)</u> 0	99 Cum.Store (cubic-feet) 0		
255.03 263.26 Elevation Surf. (feet) (s 263.26 264.00 3	12 Area In sq-ft) (cub 12 3,123	99 c.Store <u>bic-feet)</u> 0 1,160	99 Cum.Store (cubic-feet) 0 1,160		
255.03 263.26 Elevation Surf. (feet) (s 263.26 264.00 3	12 Area In sq-ft) (cub 12	99 c.Store <u>bic-feet)</u> 0	99 Cum.Store (cubic-feet) 0		
255.03         263.26           Elevation         Surf.           (feet)         (s           263.26         263.26           263.26         3           265.00         13	12 Area In sq-ft) (cub 12 3,123 3,500	99 c.Store <u>bic-feet)</u> 0 1,160	99 Cum.Store (cubic-feet) 0 1,160 9,471		
255.03         263.26           Elevation         Surf.           (feet)         (s           263.26         263.26           263.26         3           265.00         3           265.00         13	12 Area In sq-ft) (cub 12 3,123 3,500 Invert Ou 255.03' <b>18.</b> L=	99 c.Store <u>ic-feet)</u> 0 1,160 8,312 ttet Devices 0" Round ( 99.0' CPP,	99 Cum.Store (cubic-feet) 0 1,160 9,471 Culvert projecting, no	headwall, Ke= 0.9	

[58] Hint: Peaked	0.25' above defi	ned flood level	
Inflow Area = Inflow = Outflow = Primary = Routed to Pon	16.47 cfs @ 12 16.47 cfs @ 12 16.47 cfs @ 12	2.02 hrs, Volum 2.02 hrs, Volum	e= 2.841 af, Atten= 0%, Lag= 0.0 min
Peak Elev= 246.9 Flood Elev= 246.7	8' @ 12.02 hrs 73' Surf.Area= 1	Surf.Area= 19 s 2 sf Storage=	
Center-of-Mass de			
Volume Inve	ert Avail.Stor	age Storage D	Description
#1 242.4	40' 5	6 cf STRUCT	URE (Prismatic)Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
242.40	12	0	0
246.73 247.00	12 20	52 4	52 56
Device Routing	Invert	Outlet Devices	3
#1 Primary #2 Primary	242.40' 246.73'	L= 135.0' CPF Inlet / Outlet Inv n= 0.013 Corru	Culvert P, projecting, no headwall, Ke= 0.900 vert= 242.40' / 240.70' S= 0.0126 '/' Cc= 0.900 ugated PE, smooth interior, Flow Area= 1.77 sf .0' breadth Broad-Crested Rectangular Weir
#z Fiinary	240.73	Head (feet) 0.2 2.50 3.00 3.50 Coef. (English)	20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 0 4.00 4.50 5.00 5.50 ) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 6 2.68 2.70 2.74 2.79 2.88
1=Culvert (Inle	et Controls 9.30	cfs @ 5.26 fps)	W=246.98' TW=245.06' (Dynamic Tailwater) ntrols 7.09 cfs @ 1.19 fps)
		Summary	for Pond CB-24:
[58] Hint: Peaked	1.10' above defi	red flood level	

Summary for Pond CB-23:

Newburgh South Logistics Center NY-32142-00 24-hr S1 100-yr Rainfall=8.33" Printed 1/4/2024

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[58] Hint: Peaked 1.10' above defined flood level[90] Warning: Qout>Qin may require smaller dt or Finer Routing[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=36)

3\_App J\_Post-Develop\_32142-00 NY-32142-00 Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC

Prepared b	Post-Develop_32 y Labella Associate 10.20-3f s/n 09581 ©	S		142-00 24-hr Š	Printed	
Outflow = Primary =	= 2.07 cfs @ 2 = 2.79 cfs @ 2	.00% Imperviou  2.12 hrs, Volur  2.63 hrs, Volur  2.63 hrs, Volur	ne= 0.19	6 af 6 af, Atten= 0%		1
Peak Elev= Flood Elev=	Dyn-Stor-Ind method, 261.60'@ 12.24 hrs 260.50' Surf.Area=	Surf.Area= 3,0 8 sf Storage=	57 sf Storage= 16 cf	1,473 cf		
	etention time= (not ca ass det. time= 4.4 mi			v)		
Volume	Invert Avail.Sto	orage Storage	Description			
#1	256.50'		TURE (Prismatio	c)Listed below (F	lecalc)	
#2	260.50' 16,8	57 cf Custom	Stage Data (Pr	ismatic)Listed be	elow (Recalc)	
	16,8	73 cf Total Av	ailable Storage			
Elevation	Surf.Area	Inc.Store	Cum.Store			
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)			
256.50	4	0	0			
260.50	4	16	16			
Elevation	Surf.Area	Inc.Store	Cum.Store			
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)			
260.50	4	0	0			
261.00	1,000	251	251			
262.00	4,450	2,725	2,976			
263.00	6,787	5,619	8,595			
264.00	9,737	8,262	16,857			
Device Ro	uting Invert	Outlet Device	s			
#1 Pri	mary 256.50'	L= 26.0' CPF Inlet / Outlet I	l <b>Culvert</b> P, projecting, no nvert= 256.50' / 2 rugated PE, smo	256.24' S= 0.01	00 '/' Cc= 0.90	
	tFlow Max=2.13 cfs rt (Inlet Controls 2.13			260.47' (Dynam	nic Tailwater)	
		Summary	for Pond CB	-25:		
[58] Hint: Pe	aked 0.36' above de	fined flood level uire smaller dt o				

Prepare	J_Post-De	Associates	5		32142-00 24-hr Š1	n South Logistics Center 100-yr Rainfall=8.33 Printed 1/4/2024
-IydroC/	D® 10.20-3f s	s/n 09581 © 2	2023 HydroCAD	Software Solut	ions LLC	Page 178
nflow A	roo = 5	318 22 60	94% Impervious		th - 6.60" for 10	0-yr event
nflow A			2.02 hrs. Volun		.966 af	J-yr event
Dutflow			2.02 hrs, Volun 2.02 hrs, Volun		.966 af, Atten= 0%,	lag = 0.0 min
Primary			2.02 hrs, Volun		.865 af	Lug 0.0 min
			tment Forebay			
Second			2.02 hrs, Volun	ne= 0.	.101 af	
Rout	ed to Pond Cl	B-7 :				
			Time Span= 0.0			
			Surf.Area= 31		54 cf	
·lood E	lev= 244.70'	Surf.Area= 2	24 sf Storage=	48 ct		
			a a laulata difa d	0.000 af (100)	)/ of inflow)	
			calculated for 2		% of inflow)	
Jenter-	ot-iviass det. ti	ime= 0.1 min	( 790.3 - 790.3	5)		
/olume	Invert	Avail.Sto	rane Storane	Description		
#1	240.70'				Listed below (Recal	c)
#2	240.70	-			Prismatic)Listed be	
#2	244.70			ailable Storag		
		i	54 cf Total Ava	allable Storag	e	
Elevati	n Sur	f.Area	Inc.Store	Cum.Store	<u>م</u>	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet		
240.	/	12	0		2	
244.		12	-	,		
			48	49		
	10	12	48	48		
					3	
Elevati	on Sur	f.Area	Inc.Store	Cum.Store	3 e	
Elevatio (fee	on Sur et)	f.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet	3 e <u>)</u>	
Elevatio (fee 244.	on Sur et) 70	f.Area (sq-ft) 12	Inc.Store (cubic-feet) 0	Cum.Store (cubic-feet	3 e	
Elevatio (fee	on Sur et) 70	f.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet	3 e <u>)</u> O	
Elevatio (fee 244. 245.	on Sur et) 70	f.Area (sq-ft) 12	Inc.Store (cubic-feet) 0 6	Cum.Store (cubic-feet (	3 e <u>)</u> O	
Elevatio (fee 244. 245.	on Sur et) 70 10	f.Area (sq-ft) 12 20	Inc.Store (cubic-feet) 0 6	Cum.Store (cubic-feet ( s	3 e <u>)</u> O	
Elevatio (fee 244. 245. Device	on Sur et) 70 10 Routing	f.Area (sq-ft) 12 20 Invert	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round	Cum.Store (cubic-feet ( s Culvert	3 e <u>)</u> O	900
Elevatio (fee 244. 245. Device	on Sur et) 70 10 Routing	f.Area (sq-ft) 12 20 Invert	Inc.Store (cubic-feet) 0 6 Outlet Device: 18.0" Round L= 82.0' CPF	Cum.Store (cubic-feet ( s <b>Culvert</b> P, projecting, r	3 9 <u>)</u> 0 6	
Elevatio (fee 244. 245. Device	on Sur et) 70 10 Routing Primary	f.Area (sq-ft) 12 20 Invert	Inc.Store (cubic-feet) 0 6 Outlet Devices <b>18.0" Round</b> L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Corr	Cum.Storr (cubic-feet ) s Culvert P, projecting, r hvert= 240.70 rugated PE, s	3 <u>)</u> 5 10 headwall, Ke= 0. ' / 239.00' S= 0.020 mooth interior, Flow	)7 '/' Cc= 0.900 / Area= 1.77 sf
Elevatio (fee 244. 245. Device	on Sur et) 70 10 Routing	f.Area (sq-ft) 12 20 Invert	Inc.Store (cubic-feet) 0 6 Outlet Devices 18.0" Round L= 82.0' CPF Inlet / Outlet In n= 0.013 Cort 10.0' long x 5	Cum.Stord (cubic-feet) ( ) S Culvert , projecting, r vvert= 240.70 vvert= 240.70 vvert	3 2 3 5 10 headwall, Ke= 0. 7 239.00' S= 0.020 mooth interior, Flow <b>Broad-Crested Rec</b>	)7 '/' Cc= 0.900 / Area= 1.77 sf <b>tangular Weir</b>
Elevatio (fee 244. 245. Device #1	on Sur et) 70 10 Routing Primary	f.Area (sq-ft) 12 20 Invert 240.70'	Inc. Store (cubic-feet) 0 6 0utlet Devices 18.0" Round L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Cort 10.0' Iong x t Head (feet) 0	Cum.Stor (cubic-feet ) Culvert , projecting, r nvert= 240.70 rugated PE, s 5.0' breadth E 2.0 0.40 0.60	3 2 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5	)7 '/' Cc= 0.900 / Area= 1.77 sf
Elevatio (fee 244. 245. <u>Device</u> #1	on Sur et) 70 10 Routing Primary	f.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 Outlet Device: 18.0" Round L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Corr 10.0' long x § Head (feet) 0 2.50 3.00 3.5	Cum.Storr (cubic-feet s Culvert P, projecting, r vvert= 240.70 rugated PE, s 5.0° breadth B 2.0° 0.40° 0.6( 0° 4.00° 4.50°	3 b) b) c) c) c) c) c) c) c) c) c) c	07 '/' Cc= 0.900 / Area= 1.77 sf tangular Weir .40 1.60 1.80 2.00
Elevatio (fee 244. 245. Device #1	on Sur et) 70 10 Routing Primary	f.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 0utlet Devices 18.0" Round L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Corr 10.0' long x 1 Head (feet) 0 2.50 3.00 3.5 Coef. (English	Cum.Stor (cubic-feet Culvert P, projecting, r vvert= 240.70 rugated PE, s 5.0' breadth I .20 0.40 0.6( 0 4.00 4.50	B b c c c c d c c c d c c c c d c c c c c c c c c c c c c	07 '/' Cc= 0.900 / Area= 1.77 sf tangular Weir .40 1.60 1.80 2.00
Elevatio (fee 244. 245. Device #1	on Sur et) 70 10 Routing Primary	f.Area (sq-ft) 12 20 Invert 240.70'	Inc.Store (cubic-feet) 0 6 0utlet Devices 18.0" Round L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Corr 10.0' long x 1 Head (feet) 0 2.50 3.00 3.5 Coef. (English	Cum.Stor (cubic-feet Culvert P, projecting, r vvert= 240.70 rugated PE, s 5.0' breadth I .20 0.40 0.6( 0 4.00 4.50	3 b) b) c) c) c) c) c) c) c) c) c) c	07 '/' Cc= 0.900 / Area= 1.77 sf tangular Weir .40 1.60 1.80 2.00
Elevatio (fee 244. 245. Device #1 #2	on Sur ot) 70 10 Primary Secondary	f.Area (sq-ft) 12 20 Invert 240.70' 244.70'	Inc. Store (cubic-feet) 0 6 <b>Outlet Device:</b> <b>18.0" Round</b> L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Corr <b>10.0' Iong x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6	Cum.Storr (cubic-feet ), projecting, r vvert= 240.70 rugated PE, s 5.0' breadth E .20 0.40 0.6( 50 4.00 4.50 )) 2.34 2.50 56 2.68 2.70	B b b c c c c c c c c c c c c c	77'/ Cc= 0.900 Area= 1.77 sf tangular Weir .40 1.60 1.80 2.00 6 2.65 2.65 2.65
Elevation (fec 244.2 245.2 Device #1 #2 #2	on Sur ot) 70 10 Primary Secondary	f.Area (sq-ft) 12 20 <u>Invert</u> 240.70' 244.70'	Inc. Store (cubic-feet) 0 6 <b>Outlet Device:</b> <b>18.0" Round</b> L= 82.0' CPF Inlet / Outlet Ir n= 0.013 Corr <b>10.0' Iong x</b> Head (feet) 0 2.50 3.00 3.5 Coef. (English 2.65 2.67 2.6	Cum.Storr (cubic-feet s Culvert P, projecting, r vvert= 240.70 rugated PE, s 5.0° breadth B 2.0° 0.40° 0.6( 50° 4.00° 4.50° 1) 2.34° 2.50 66° 2.68° 2.70°	B b c c c c d c c c d c c c c d c c c c c c c c c c c c c	77'/ Cc= 0.900 Area= 1.77 sf tangular Weir .40 1.60 1.80 2.00 6 2.65 2.65 2.65

Secondary OutFlow Max=5.43 cfs @ 12.02 hrs HW=245.06' TW=243.84' (Dynamic Tailwater) -2=Broad-Crested Rectangular Weir (Weir Controls 5.43 cfs @ 1.49 fps) 
 Sewburgh South Logistics Center

 3\_App J\_Post-Develop\_32142-00
 NY-32142-00 24-hr S1 100-yr Rainfall=8.33"

 Prepared by Labella Associates
 Printed 1/4/2024

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### Summary for Pond CB-3:

[80] Warning: Exceeded Pond CB-24 by 1.79' @ 12.03 hrs (4.00 cfs 0.075 af)

Inflow Area =	3.902 ac, 5	52.30% Impervious, Inflov	v Depth = 6.53" for 100-yr event
Inflow =	11.80 cfs @	12.63 hrs, Volume=	2.124 af
Outflow =	11.45 cfs @	12.59 hrs, Volume=	2.124 af, Atten= 3%, Lag= 0.0 min
Primary =	11.45 cfs @	12.59 hrs, Volume=	2.124 af
Routed to Po	nd CB-4 :		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 262.83' @ 12.07 hrs Surf.Area= 20 sf Storage= 176 cf Flood Elev= 264.59' Surf.Area= 40 sf Storage= 211 cf

Plug-Flow detention time= 0.3 min calculated for 2.124 af (100% of inflow) Center-of-Mass det. time= 0.2 min (798.4 - 798.2)

Volume	Inv	ert Avail.Sto	orage	Storage De	escription	
#1	254.0	04' 2	11 cf 🗧	STRUCTU	RE (Prismati	ic)Listed below (Recalc)
#2	264.					rismatic)Listed below (Recalc)
		4	69 cf	Total Avail	able Storage	
		~ ~ ~			<b>a a</b>	
Elevatio		Surf.Area		Store	Cum.Store	
(fee	/	(sq-ft)	(cubic-	/	(cubic-feet)	
254.0	-	20		0	0	
264.5	59	20		211	211	
Elevatio	'n	Surf.Area	Inc	Store	Cum.Store	
(fee		(sq-ft)	(cubic-	510.0	(cubic-feet)	
264.5	/	20	(oublo	0	0	
265.0	-	500		107	107	
265.2	-	1,010		151	258	
200.2	.0	1,010		131	230	
Device	Routing	Invert	Outle	t Devices		
#1	Primary	254.04'	18.0"	Round C	ulvert	
			L= 20	3.0' CPP,	projecting, n	o headwall, Ke= 0.900
			Inlet /	Outlet Inve	ert= 254.04' /	252.01' S= 0.0100 '/' Cc= 0.900
			n= 0.0	013 Corrug	gated PE, sm	ooth interior, Flow Area= 1.77 sf
#2	Primary	265.15'	10.0'	long x 5.0	breadth Br	oad-Crested Rectangular Weir
	,		Head	(feet) 0.20	0.40 0.60	0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50	3.00 3.50	4.00 4.50 5	.00 5.50
			Coef.	(English)	2.34 2.50 2.	70 2.68 2.68 2.66 2.65 2.65 2.65
						.74 2.79 2.88

Primary OutFlow Max=10.42 cfs @ 12.59 hrs HW=260.77' TW=257.74' (Dynamic Tailwater) 1=Culvert (Outlet Controls 10.42 cfs @ 5.90 fps) 2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)

Prepared by	ost-Develop_3 Labella Associat .20-3f s/n 09581 @	es			1 100-yr Rainfall=8.33" Printed 1/4/2024 Page 180
		Summary	for Pond CE	8-4:	
Inflow Area = Inflow = Outflow = Primary = Routed to	14.57 cfs @ 14.35 cfs @	9.95% Impervious 12.01 hrs, Volum 12.01 hrs, Volum 12.01 hrs, Volum	ne= 2.66 ne= 2.66	6 af 6 af, Atten= 1%	
Peak Elev= 26	/n-Stor-Ind methoo 61.46' @ 12.02 hrs 63.70' Surf.Area=	Surf.Area= 12	sf Storage= 113		
	ention time= 0.1 m ss det. time= 0.1 m			of inflow)	
Volume	Invert Avail.St	torage Storage	Description		
		140 cf STRUCT			
#2 2		379 cf Custom		ismatic)Listed be	elow (Recalc)
	8,	519 cf Total Ava	ailable Storage		
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)		
252.01	12	0	0		
263.70	12	140	140		
Elevation	Surf.Area	Inc.Store	Cum.Store		
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)		
263.70	12	0			
264.00	970	147	147		
265.00	15,493	8,232	8,379		
Device Rout	ting Inver	t Outlet Devices			
#1 Prim	<u>u</u>				
				headwall, Ke=	0.900
		Inlet / Outlet Ir	nvert= 252.01' / 2	249.60' S= 0.01	00 '/' Cc= 0.900
		n= 0.013 Cori	rugated PE, smo	oth interior, Flow	w Area= 1.77 sf
	Flow Max=13.82 c (Outlet Controls 1			=255.19' (Dyna	mic Tailwater)
		Summary	for Pond CE	8-5:	
Inflow Area = Inflow = Outflow = Primary = Routed to	14.95 cfs @ 14.89 cfs @	9.93% Impervious 12.01 hrs, Volun 12.02 hrs, Volun 12.02 hrs, Volun	ne= 2.71 ne= 2.71	3 af 3 af, Atten= 0%	,
Routing by Dy	/n-Stor-Ind method	Time Span= 0.0	0.72 00 hrs dt=	: 0 01 hrs	
r country by Dy		, Time Opan- 0.0	70-72.00 m3, ut-	0.01113	

3_App J_Post-Develop_32142-00         NY-32142-00 24-hr Š1 100-yr         Rainfall=8.33"           Prepared by Labella Associates         Printed 1/4/2024           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 181	3_App J_Post-Develop_32142-00         NY-32142-00 24-hr Š1 100-yr Řainfall=8.3           Prepared by Labella Associates         Printed 1/4/202           HydroCAD® 10.20-3f s/n 09581         © 2023 HydroCAD Software Solutions LLC         Page 18
Peak Elev= 255.27' @ 12.02 hrs Surf.Area= 12 sf Storage= 68 cf Flood Elev= 258.09' Surf.Area= 12 sf Storage= 102 cf	Volume         Invert         Avail.Storage         Storage Description           #1         245.40'         36 cf         STRUCTURE (Prismatic)Listed below (Recalc)
Plug-Flow detention time=0.1 min calculated for 2.713 af (100% of inflow) Center-of-Mass det. time=0.1 min ( 788.6 - 788.5 )	Elevation         Surf.Area         Inc.Store         Cum.Store          (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)
Volume         Invert         Avail.Storage         Storage Description           #1         249.60'         105 cf         STRUCTURE (Prismatic)Listed below (Recalc)	245.40         9         0         0           248.93         9         32         32           249.25         20         5         36
Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           249.60         12         0         0           258.09         12         102         102           258.30         20         3         105           Device         Routing         Invert         Outlet Devices           #1         Primary         249.60' <b>18.0" Round Culvert</b> L= 178.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 249.60' / 245.40' S= 0.0236 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         258.09' <b>20.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88           Primary OutFlow Max=14.84 cfs @ 12.02 hrs HW=255.23' TW=249.18' (Dynamic Tailwater) 1=Culvert (Inlet Controls 14.84 cfs @ 8.40 fps) 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)           Summary for Pond CB-6:           [58] Hint: Peaked 0.25' above defined flood level           Inflow Area =         5.014 ac, 60.23% Impervious, Inflow Depth = 6.72" for 100-yr event	Device         Routing         Invert         Outlet Devices           #1         Primary         245.40'         18.0" Round Culvert L = 85.0" CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 245.40' / 242.40' S= 0.0353 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf           #2         Primary         248.93'         20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88           Primary OutFlow Max=16.06 cfs @ 12.02 hrs HW=249.18' TW=246.98' (Dynamic Tailwater) -1=Culvert (Inlet Controls 9.97 cfs @ 5.64 fps) -2=Broad-Crested Rectangular Weir (Weir Controls 6.08 cfs @ 1.20 fps)           Summary for Pond CB-7:           [58] Hint: Peaked 0.61' above defined flood level           Inflow Area =         2.850 ac, 99.06% Impervious, Inflow Depth = 8.39" for 100-yr event Inflow = 27.95 cfs @ 12.03 hrs, Volume=           1.993 af Outflow =         24.47 cfs @ 12.07 hrs, Volume=         1.993 af, Atten= 12%, Lag= 2.4 min Primary =           Primary =         24.47 cfs @ 12.07 hrs, Volume=         1.993 af Routed to Pond PF-1 : Pretreatment Forebay           Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         1.901 hrs
Inflow       =       16.15 cfs @       12.02 hrs, Volume=       2.810 af         Outflow       =       16.12 cfs @       12.02 hrs, Volume=       2.810 af         Primary       =       16.12 cfs @       12.02 hrs, Volume=       2.810 af         Routed to Pond CB-23 :       Image: State of the state	Peak Elev= 244.11' @ 12.07 hrs Surf.Area= 3,318 sf Storage= 870 cf Flood Elev= 243.50' Surf.Area= 58 sf Storage= 92 cf Plug-Flow detention time= 0.4 min calculated for 1.993 af (100% of inflow) Center-of-Mass det. time= 0.2 min (746.4 - 746.2) <u>Volume Invert Avail.Storage Storage Description</u> #1 238.91' 92 cf STRUCTURE (Prismatic)Listed below (Recalc)
Plug-Flow detention time= 0.1 min calculated for 2.809 af (100% of inflow) Center-of-Mass det. time= 0.1 min ( 789.6 - 789.5 )	#2       243.50'       8,702 cf       Custom Stage Data (Prismatic) isted below (Recalc)         8,793 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       0         238.91       20       0       0         243.50       20       92       92

Newburgh South Logistics Center           S_App J_Post-Develop_32142-00         NY-32142-00 24-hr S1 100-yr         Rainfall=8.33"           Prepared by Labella Associates         Printed 1/4/2024           HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC         Page 183	Newburgh South Logistics Cente         3_App J_Post-Develop_32142-00       NY-32142-00 24-hr S1 100-yr Rainfall=8.33         Prepared by Labella Associates       Printed 1/4/2024         HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Software Solutions LLC       Page 184
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
243.50         38         0         0           244.00         1,938         494         494           245.00         14,477         8,208         8,702	244.30         12         0         0           245.00         8,154         2,858         2,858           245.20         11,676         1,983         4,841
evice Routing Invert Outlet Devices	Device Routing Invert Outlet Devices
#1       Primary       238.91'       24.0" Round Culvert L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 238.91' / 238.50' S= 0.0051 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf         #2       Primary       244.60'       10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88	#1       Primary       239.53' <b>18.0" Round Culvert</b> L= 144.0' CPP, projecting, no headwall, Ke= 0.900       Inlet / Outlet Invert= 239.53' / 238.81' S= 0.0050 '/ Cc= 0.900         #2       Primary       245.10' <b>10.0' long x 5.0' breadth Broad-Crested Rectangular Weir</b> Head (feet)       0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00       2.50 3.00 3.50 4.00 4.50 5.00 5.50         Coef. (English)       2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65       2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
rimary OutFlow Max=24.47 cfs @ 12.07 hrs HW=244.11' TW=239.40' (Dynamic Tailwater) —1=Culvert (Inlet Controls 24.47 cfs @ 7.79 fps) —2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)	Primary OutFlow Max=13.45 cfs @ 12.04 hrs HW=244.39' TW=239.33' (Dynamic Tailwater) -1=Culvert (Barrel Controls 13.45 cfs @ 7.61 fps) -2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)
Summary for Pond CB-8:	Summary for Pond CB-9:
58] Hint: Peaked 0.22' above defined flood level 87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2) 80] Warning: Exceeded Pond CB-9 by 0.23' @ 12.01 hrs (2.89 cfs 0.006 af)	[58] Hint: Peaked 0.41' above defined flood level [90] Warning: Qout>Qin may require smaller dt or Finer Routing [87] Warning: Oscillations may require smaller dt or Finer Routing (severity=10)
nflow Area = 1.601 ac, 93.07% Impervious, Inflow Depth = 8.07" for 100-yr event nflow = 17.66 cfs @ 12.03 hrs, Volume= 1.076 af Dutflow = 13.69 cfs @ 12.04 hrs, Volume= 1.076 af, Atten= 22%, Lag= 0.3 min Primary = 13.69 cfs @ 12.04 hrs, Volume= 1.076 af Routed to Pond PF-1 : Pretreatment Forebay	Inflow Area = 0.759 ac, 85.37% Impervious, Inflow Depth = 7.73" for 100-yr event Inflow = 6.07 cfs @ 12.04 hrs, Volume= 0.489 af Outflow = 10.27 cfs @ 12.14 hrs, Volume= 0.489 af, Atten= 0%, Lag= 6.3 min Primary = 10.27 cfs @ 12.14 hrs, Volume= 0.489 af Routed to Pond CB-8 :
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs 'eak Elev= 244.52' @ 12.04 hrs Surf.Area= 2,621 sf Storage= 350 cf 'lood Elev= 244.30' Surf.Area= 24 sf Storage= 57 cf	Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 244.46' @ 12.08 hrs Surf.Area= 3,527 sf Storage= 753 cf Flood Elev= 244.05' Surf.Area= 18 sf Storage= 32 cf
Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 0.1 min(748.7-748.5)	Plug-Flow detention time= 0.3 min calculated for 0.489 af (100% of inflow) Center-of-Mass det. time= 0.3 min ( 758.6 - 758.3 )
/olume Invert Avail.Storage Storage Description	Volume Invert Avail.Storage Storage Description
#1 239.53' 57 cf STRUCTURE (Prismatic)Listed below (Recalc)	#1 240.55' 32 cf STRUCTURE (Prismatic)Listed below (Recalc)
#2         244.30'         4,841 cf         Custom Stage Data (Prismatic)Listed below (Recalc)           4.898 cf         Total Available Storage	#2 244.05' 5,860 cf Custom Stage Data (Prismatic)Listed below (Recalc) 5.892 cf Total Available Storage
Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)	Elevation Surf.Area Inc.Store Cum.Store (feet) (sq-ft) (cubic-feet) (cubic-feet)
239.53 12 0 0 244.30 12 57 57	240.55         9         0         0           244.05         9         32         32

HydroCA	D® 10.20	ella Associate: 3f_s/n 09581_©	S 2023 HydroCAD	Fill Software Solutions LLC	inted 1/4/2024 Page 185
Elevatio (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
244.0 245.0 245.2	00	9 8,154 11,676	0 3,877 1,983	0 3,877 5,860	
Device	Routing	Invert	Outlet Devices		
#1	Primary		18.0" Round L= 204.0' CP Inlet / Outlet Ir		
#2	Primary	245.10'	<b>10.0' long x 5</b> Head (feet) 0.	<b>.0' breadth Broad-Crested Rectangular</b> 20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 0 4.00 4.50 5.00 5.50	Weir
			Coef. (English	2.34 2.50 2.70 2.68 2.68 2.66 2.65 2 6 2.68 2.70 2.74 2.79 2.88	2.65 2.65
Ê—1=Ci	<b>Ivert</b> (Ou	Itlet Controls 4.0	Coef. (English 2.65 2.67 2.6	2.34 2.50 2.70 2.68 2.68 2.66 2.65 2 6 2.68 2.70 2.74 2.79 2.88 /=244.30' TW=243.83' (Dynamic Tailwat	
Ê—1=Ci	<b>Ivert</b> (Ou	itlet Controls 4.0 ted Rectangula	Coef. (English 2.65 2.67 2.6 @ 12.14 hrs HV 99 cfs @ 2.32 fp ar Weir( Control	2.34 2.50 2.70 2.68 2.68 2.66 2.65 2 6 2.68 2.70 2.74 2.79 2.88 /=244.30' TW=243.83' (Dynamic Tailwat	
1=Ci 2=Br	ilvert (Ou oad-Cres	itlet Controls 4.0 ted Rectangula Sumi	Coef. (English 2.65 2.67 2.6 @ 12.14 hrs HV 99 cfs @ 2.32 fp ar Weir( Control	2.34 2.50 2.70 2.68 2.68 2.66 2.65 2 6 2.68 2.70 2.74 2.79 2.88 /=244.30' TW=243.83' (Dynamic Tailwat s) s 0.00 cfs) d DET-1: Detention Basin	
[44] Hini [44] Hini Inflow A Inflow Outflow Primary Rout Seconda	Ilvert (Ou oad-Cress t: Outlet d rea = = = = ed to Pon ary =	titet Controls 4.( ted Rectangula Sumi evice #2 is belor 9.923 ac, 72. 42.98 cfs @ 1 24.18 cfs @ 1 24.18 cfs @ 1 d DP-1 : Gidney 0.00 cfs @	Coef. (English 2.65 2.67 2.6 @ 12.14 hrs HV 99 cfs @ 2.32 fp ar Weir ( Control mary for Pon w defined storag 74% Impervious 2.12 hrs, Volum 2.51 hrs, Volum 2.51 hrs, Volum town Creek 0.00 hrs, Volum	2.34 2.50 2.70 2.68 2.68 2.66 2.65 2 6 2.68 2.70 2.74 2.79 2.88 /=244.30' TW=243.83' (Dynamic Tailwat s) 5 0.00 cfs) d DET-1: Detention Basin e , Inflow Depth = 6.31" for 100-yr even e= 5.218 af e= 5.218 af, Atten= 44%, Lag= 2 e= 5.218 af	ter)
[44] Hini [44] Hini Inflow A Outflow Primary Rout Seconda Routing Peak Ele Flood E	Ilvert (Ou oad-Cress t: Outlet d rea = = = ed to Pon ary = ed to Pon sev= 236.4 lev= 236.4	ttlet Controls 4.0 ted Rectangula Summ evice #2 is belor 9.923 ac, 72. 42.98 cfs @ 1 24.18 cfs @ 1 24.18 cfs @ 1 d DP-1 : Gidney 0.00 cfs @ d DP-1 : Gidney tor-Ind method, 7' @ 12.51 hrs 50' Surf.Area=	Coef. (English 2.65 2.67 2.6 @ 12.14 hrs HV 9 cfs @ 2.32 fp ar Weir (Control mary for Pon w defined storag 74% Impervious 2.12 hrs, Volum 2.51 hrs, Volum town Creek 0.00 hrs, Volum town Creek 0.00 hrs, Volum town Creek Time Span= 0.0 Surf.Area= 17,6	2.34 2.50 2.70 2.68 2.68 2.66 2.65 2 6 2.68 2.70 2.74 2.79 2.88 /=244.30' TW=243.83' (Dynamic Tailwat s) 5 0.00 cfs) d DET-1: Detention Basin e , Inflow Depth = 6.31" for 100-yr event e= 5.218 af e= 5.218 af, Atten= 44%, Lag= 2 e= 5.218 af e= 0.000 af 0-72.00 hrs, dt= 0.01 hrs 57 sf Storage= 63,826 cf ge= 64,365 cf	ter)
[44] Hini [44] Hini Inflow A Inflow Outflow Primary Rout Seconda Routing Peak El- Flood El Plug-Flc	Ilvert (Ou oad-Cres t: Outlet d rea = = = ed to Pon ary = ed to Pon by Dyn-S ev= 236.4 ev= 236.4	titet Controls 4.0 ted Rectangula Summ evice #2 is belor 9.923 ac, 72. 42.98 cfs @ 1 24.18 cfs @ 1 24.18 cfs @ 1 4.18 cfs @ 1 d DP-1 : Gidney 0.00 cfs @ d DP-1 : Gidney tor-Ind method, 7' @ 12.51 hrs 50' Surf.Area= on time= 173.9 r	Coef. (English 2.65 2.67 2.6 @ 12.14 hrs HV 9 cfs @ 2.32 fp ar Weir (Control mary for Pon w defined storag 74% Impervious 2.12 hrs, Volum 2.51 hrs, Volum town Creek 0.00 hrs, Volum town Creek 0.00 hrs, Volum town Creek Time Span= 0.0 Surf.Area= 17,6	<ul> <li>2.34 2.50 2.70 2.68 2.68 2.66 2.65 2</li> <li>6 2.68 2.70 2.74 2.79 2.88</li> <li>/=244.30' TW=243.83' (Dynamic Tailwat s)</li> <li>s 0.00 cfs)</li> <li>d DET-1: Detention Basin</li> <li>e <ul> <li>, Inflow Depth = 6.31" for 100-yr eventes</li> <li>5.218 af</li> <li>e 5.218 af</li> <li>e 5.218 af</li> <li>e 5.218 af</li> </ul> </li> <li>e 0.000 af</li> <li>0-72.00 hrs, dt= 0.01 hrs <ul> <li>57 sf Storage= 63,826 cf</li> <li>ge= 64,365 cf</li> <li>r 5.217 af (100% of inflow)</li> </ul> </li> </ul>	ter)

Instruction         Surf Area         Inc.Store         Cum.Store           [feet]         (sq-ft)         (cubic-feet)         (cubic-feet)           232.00         11,095         0         0           233.00         12,455         11,775         11,775           234.00         13,886         13,171         24,946           235.00         16,908         16,139         55,712           237.00         18,504         17,706         73,418           Device         Routing         Invert         Outlet Devices           #1         Primary         231.91'         12.0" Round Culvert           L= 15.0'         CPP, projecting, no headwall, Ke=0.900         Inlet / Outlet Invert= 231.91'/231.84'         S=0.0047'/           #2         Device 1         233.65'         Vert. CPV Orffice C=0.600         Linited to where a 0.79 sf           #3         Device 1         233.65'         Vert. CPV Orffice C=0.600         Lob 0.80 1.00         Lob 1.40 1.80 2.00           #4         Primary         236.05'         10.0' long x 5.0' breadth Broad-Crested Rectangular Weir           #5         Secondary         236.50'         10.0' long x 5.0' D 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65	Prepared by Labella Associates HydroCAD® 10.20-3f s/n 09581 © 2023 Hydro				Software Solutions II	.C Printed 1/4/20		
(feet)         (sq.ft)         (cubic-feet)           232.00         11,095         0         0           233.00         12,455         11,775         11,775           234.00         13,886         13,171         24,946           235.00         16,398         16,139         55,712           237.00         18,504         17,706         73,418           Device         Routing         Invert         Outlet Devices           #1         Primary         231.91'         12.0" Round Culvert         L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' 231.84' S= 0.0047 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf           #2         Device 1         233.65'         4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00         1.00 1.20 1.40 1.60 1.80 2.00           2.50 3.00 3.50         4.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00         2.50 3.00 3.50 4.00 4.50 5.00 5.50           Coef (English) 2.80 2.92 3.08 3.30 3.32         #4         Primary         236.50'         10.0' long x 5.0' breadth Emergency Overflow           #4         Primary         236.50'         10.0' long x 5.0' cas 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65								
232.00         11,095         0         0           233.00         12,455         11,775         11,775           234.00         13,886         13,171         24,946           235.00         15,369         14,628         39,573           236.00         16,908         16,139         55,712           237.00         18,504         17,706         73,418           Device         Routing         Invert         Outlet Devices           #1         Primary         231.91'         12.0" Round Culvert         L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         Source = 0.007 / Cc= 0.900 n= 0.013 Corrugated PE, smooth Interior, Flow Area= 0.79 sf           #2         Device 1         231.91'         3.0" Vert. CPV Orifice C = 0.600 Limited to weir flow at low heads           #3         Device 1         233.65'         4.0 long x 0.5' breadth Broad-Crested Rectangular Weir           Head (feet) 0.20 0.40 0.60 0.80 1.00         1.20 1.80 2.00         2.60 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65								
233.00       12.455       11,775       11,775         234.00       13,886       13,171       24,946         235.00       15,369       14,628       39,573         236.00       16,908       16,139       55,712         237.00       18,504       17,706       73,418         Device Routing Invert Outlet Devices         #1       Primary       231.91'       12.0" Round Culvert         L=15.0° CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'       S=0.0047 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         #2       Device 1       233.65'       4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00         #3       Device 1       233.65'       4.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65		<i>′</i>		(cubic-feet)	(cubic-feet)			
234.00       13,886       13,171       24,946         235.00       15,369       14,628       39,573         237.00       18,504       17,706       73,418         Device       Routing       Invert       Outlet Devices         #1       Primary       231.91'       12.0" Round Culvert L= 15.0" CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'       S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         #2       Device 1       231.91'       3.0" Vert. CPV Orifice C= 0.600 Limited to weir flow at low heads 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32         #4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65	232.0	00	11,095	0	0			
235.00       15,369       14,628       39,573         236.00       16,908       16,139       55,712         237.00       18,504       17,706       73,418         Device Routing Invert Outlet Devices         #1       Primary       231.91'       12.0" Round Culvert L= 15.0" CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'       S= 0.0047 '/       Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         #2       Device 1       231.91'       3.0" Vert. CPV Orifice C = 0.600 Limited to weir flow at low heads         #3       Device 1       233.65'       4.0' long x 0.5' 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 Coef (English) 2.80 2.92 3.08 3.30 3.32         #4       Primary       236.05'       10.0' long x 5.0' breadth Emergency Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65								
236.00         16,908         16,139         55,712           237.00         18,504         17,706         73,418           Device         Routing         Invert         Outlet Devices           #1         Primary         231.91'         12.0" Round Culvert L = 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / Outlet Invert= 231.91' / 231.84'         S= 0.0047 '/ Cc= 0.900 Inlet / 0.0' Iong x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65			- ,	- /				
237.00         18,504         17,706         73,418           Device         Routing         Invert         Outlet Devices           #1         Primary         231.91'         12.0" Round Culvert L=15.0' CPP, projecting, no headwall, Ke=0.900 Inlet / Outlet Invert= 231.91', 231.84' S=0.0047 '/ Cc=0.900 n=0.013 Corrugated PE, smooth interior, Flow Area=0.79 sf           #2         Device 1         231.91'         3.0" Vert. CPv Orifice         C=0.600 Limited to weir flow at low heads           #3         Device 1         233.65'         4.0" long x 0.5" breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00         Coef. (English) 2.80 2.92 3.08 3.30 3.32           #4         Primary         236.05'         10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50           Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88           #5         Secondary         236.5'           10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 4.50 5.00 5.50           Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65				,	,			
Device         Routing         Invert         Outlet Devices           #1         Primary         231.91'         12.0" Round Culvert L = 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf           #2         Device 1         231.91'         3.0" Vert. CPV Orifice C = 0.600 Limited to weir flow at low heads 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00           #4         Primary         236.05'         10.0' long x 5.0' breadth Stabilized Overflow to Wetland 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         Secondary         236.50'         10.0' long x 5.0' breadth Emergency Overflow 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         2.65 2.65 2.65 2.65 2.65 2.65 2.65 2.65								
#1       Primary       231.91'       12.0" Round Culvert L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91'/ 231.84' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         #2       Device 1       231.91'       3.0" Vert. CPv Orifice C = 0.600 Limited to weir flow at low heads         #3       Device 1       233.65'       4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32         #4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #6       Primary       233.65'       12.0" Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 i/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) -=CUvert (Inlet Controls 6.02 cfs @ 7.66 fps) -2=CPv Orifice (Passes < 0.50 cfs potential flow) -3=Broad-Crested Rectangular Weir(Passes < 62.86 cfs potential flow) -4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) -	257.0	0	10,304	17,700	73,410			
L= 15.0° CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 231.91' / 231.84' S= 0.0047 '/° Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf #3 Device 1 231.91' 3.0" Vert. CPv Orifice C= 0.600 Limited to weir flow at low heads #3 Device 1 233.65' 4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32 #4 Primary 236.05' 10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #5 Secondary 236.50' 10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #6 Primary 233.65' 12.0" Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPV Orifice (Passes < 0.50 cfs potential flow) -3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) -4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)		5		-				
#2       Device 1       231.91'       3.0" Vert. CPv Orifice       C= 0.600       Limited to weir flow at low heads         #3       Device 1       231.91'       3.0" Vert. CPv Orifice       C= 0.600       Limited to weir flow at low heads         #3       Device 1       233.65'       4.0" long x 0.5" breadth Broad-Crested Rectangular Weir         Head (feet)       0.20       0.40       0.60       0.80       1.00         Coef. (English)       2.80       2.92       3.08       3.03       3.2         #4       Primary       236.05'       10.0" long x 5.0" breadth Stabilized Overflow to Wetland         Head (feet)       0.20       0.40       0.60       0.80       1.00       1.60       1.80       2.00         2.50       3.00       3.50       4.00       4.00       6.0       0.80       1.00       1.20       1.40       1.60       1.80       2.00         2.55       2.65       2.67       2.66       2.70       2.74       2.79       2.88         #5       Secondary       236.50'       10.0" long x 5.0" breadth Emergency Overflow       Head (feet)       0.20       4.0       60       0.80       1.00       1.20       1.40       1.60       1.80       2.00 <tr< td=""><td>#1</td><td>Primary</td><td>231.91'</td><td></td><td></td><td></td></tr<>	#1	Primary	231.91'					
#2       Device 1       231.91'       3.0" Vert. CPV Orifice C= 0.600 Limited to weir flow at low heads         #3       Device 1       233.65'       4.0' long x 0.5' breadth Broad-Crested Rectangular Weir         #4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland         #44       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow         #4       Primary       236.50'       10.0' long x 5.0' breadth Emergency Overflow         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow         #6       Primary       236.50'       10.0' long x 5.0' breadth Emergency Overflow         #ead (feet)       0.20       0.40       0.60       0.80       1.00       1.60       1.80       2.00         2.65       2.67       2.66       2.68       2.70       2.74       2.79       2.88         #5       Secondary       233.65'       10.0' CPP, end-section conforming to fill, Ke= 0.500       Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050'' Cc= 0.900       n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary       233.65'       12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater)       1=Culv								
#2       Device 1       231.91'       3.0" Vert. CPv Örifice C = 0.600 Limited to weir flow at low heads         #3       Device 1       233.65'       4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32         #4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #6       Primary       233.65'       12.0" Round Culvert X 2.00 L = 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S = 0.0050 '/' Cc= 0.900 n = 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary       0utFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) - 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) - 2=CPv Orifice (Passes < 0.50 cfs potential flow) - 3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) - 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) - 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)         Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) - 5=Emergency Overflow ( Controls 0.00 cfs)								
#3       Device 1       233.65'       4.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32         #4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #6       Primary       233.65'       12.0" Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary       0utFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) -1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) -2=CPv Orifice (Passes < 0.50 cfs potential flow) -3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) -4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) -6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)         Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)	40	Davias 1	004 041					
#4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #6       Primary       233.65'       12.0'' Round Culvert X 2.00 L = 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050'' Cc= 0.900 n = 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary       0utFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPV Orifice (Passes < 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir(Passes < 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)         #econdary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)								
#4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #6       Primary       233.65'       12.0'' Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050'' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) -1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) -2=CPV Orifice (Passes < 0.50 cfs potential flow) -3=Broad-Crested Rectangular Weir(Passes < 62.86 cfs potential flow) -4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) -6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)         #econdary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)	#3	Device 1	233.05					
#4       Primary       236.05'       10.0' long x 5.0' breadth Stabilized Overflow to Wetland Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88         #6       Primary       233.65'       12.0'' Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf         Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) -1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) -2=CPV Orifice (Passes < 0.50 cfs potential flow) -3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) -4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) -6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)         secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)								
Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60       1.80       2.00         2.50       3.00       3.50       4.00       4.50       5.00       5.50         Coef. (English)       2.34       2.50       2.70       2.68       2.68       2.65 <td< td=""><td>#A</td><td>Primary</td><td>236.05</td><td></td><td></td><td></td></td<>	#A	Primary	236.05					
#5       Secondary       236.50       3.50       4.00       4.50       5.00       5.50         Coef. (English)       2.34       2.50       2.70       2.68       2.68       2.68       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.65       2.67       2.66       2.68       2.70       2.74       2.79       2.88         #5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow       Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60       1.80       2.00         2.50       3.00       3.50       4.00       4.50       5.00       5.50       Coef. (English)       2.34       2.50       2.70       2.68       2.66       2.65 <t< td=""><td></td><td>Timary</td><td>200.00</td><td></td><td></td><td></td></t<>		Timary	200.00					
Coef. (English) 2.34 2.50 2.70 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #5 Secondary 236.50' 10.0' long x 5.0' breadth Emergency Overflow Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #6 Primary 233.65' 12.0' Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) -2=CPV Orifice (Passes < 0.50 cfs potential flow) -3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) -4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) -6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Eccondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)								
#5       Secondary       236.50'       10.0' long x 5.0' breadth Emergency Overflow         Head (feet)       0.20       0.40       0.60       0.80       1.00       1.20       1.40       1.60       1.80       2.00         2.50       3.00       3.50       4.00       4.50       5.00       5.50         Coef. (English)       2.34       2.50       2.70       2.68       2.66       2.65				Coef. (English	n) 2.34 2.50 2.70 2	2.68 2.68 2.66 2.65 2.65 2.65		
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88 #6 Primary 233.65' 12.0" Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050'' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPV Orifice (Passes < 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Recondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) 5=Emergency Overflow ( Controls 0.00 cfs)								
2.50 3.00 3.50 4.00 4.50 5.00 5.50         Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65	#5	Secondar	y 236.50'					
#6       Primary       233.65'       Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.65 2.65 2.65								
<ul> <li>#6 Primary</li> <li>233.65'</li> <li>233.65'</li> <li>2.67 2.66 2.68 2.70 2.74 2.79 2.88</li> <li>12.0" Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050'/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf</li> <li>Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater)</li> <li>1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps)</li> <li>2=CPv Orifice (Passes &lt; 0.50 cfs potential flow)</li> <li>3=Broad-Crested Rectangular Weir (Passes &lt; 62.86 cfs potential flow)</li> <li>4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps)</li> <li>6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)</li> <li>Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater)</li> <li>5=Emergency Overflow ( Controls 0.00 cfs)</li> </ul>								
<ul> <li>#6 Primary 233.65' 12.0" Round Culvert X 2.00 L= 30.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf</li> <li>Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=2CPv Orifice (Passes &lt; 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir (Passes &lt; 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps)</li> <li>Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) 5=Emergency Overflow ( Controls 0.00 cfs)</li> </ul>								
L= 30.0° CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPV Orifice (Passes < 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) -5=Emergency Overflow ( Controls 0.00 cfs)	40	Duine e m /	000 651			2.79 2.88		
Inlet / Outlet Invert= 233.65' / 233.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPV Orifice (Passes < 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) 5=Emergency Overflow ( Controls 0.00 cfs)	#0	Primary	233.05			rming to fill Ko= 0.500		
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPv Orifice (Passes < 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir(Passes < 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) 5=Emergency Overflow ( Controls 0.00 cfs)								
Primary OutFlow Max=24.17 cfs @ 12.51 hrs HW=236.47' TW=0.00' (Dynamic Tailwater) 1=Culvert (Inlet Controls 6.02 cfs @ 7.66 fps) 2=CPv Orifice (Passes < 0.50 cfs potential flow) 3=Broad-Crested Rectangular Weir(Passes < 62.86 cfs potential flow) 4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) 6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) 5=Emergency Overflow ( Controls 0.00 cfs)								
-1=Culvert (Inlet Controls 6.02 ofs @ 7.66 fps)     -2=CPv Orifice (Passes < 0.50 ofs potential flow)     -3=Broad-Crested Rectangular Weir (Passes < 62.86 ofs potential flow)     -4=Stabilized Overflow to Wetland (Weir Controls 6.84 ofs @ 1.63 fps)     -6=Culvert (Barrel Controls 11.32 ofs @ 7.21 fps)     secondary OutFlow Max=0.00 ofs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater)     -5=Emergency Overflow ( Controls 0.00 ofs)				11- 0.010 001				
Controls of the second se						00' (Dynamic Tailwater)		
→3=Broad-Crested Rectangular Weir (Passes < 62.86 cfs potential flow) →4=Stabilized Overflow to Wetland (Weir Controls 6.84 cfs @ 1.63 fps) →6=Culvert (Barrel Controls 11.32 cfs @ 7.21 fps) Becondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) →5=Emergency Overflow ( Controls 0.00 cfs)								
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) —5=Emergency Overflow ( Controls 0.00 cfs)						3 fps)		
-5=Emergency Overflow ( Controls 0.00 cfs)	-6=01	livert (Barr	el Controis 11	.32 CTS @ 7.211	ips)			
Summary for Pond DIV-2: Diversion 2					HW=232.00' TW=0.	00' (Dynamic Tailwater)		
-			Su	mmary for P	ond DIV-2: Dive	rsion 2		
				•				

Prepare	J_Post-Dev ed by Labella / D® 10.20-3f s/r	Associates			NY-32142-00 Solutions LLC	) 24-hr Š1		nfall=8.33' d 1/4/2024 Page 187
Seconda Rout	= 33.18 = 33.20 = 24.29 ed to Pond PF- ary = 8.99 ed to Pond DE	8 cfs @ 12 0 cfs @ 12 5 cfs @ 12 2 : Pretreat 5 cfs @ 12 T-1 : Deten	.10 hrs, Volun ion Basin	ne= ne= ne=	5.047 af 5.047 af, <i>A</i> 4.760 af 0.287 af	utten= 0%,	)-yr event Lag= 0.1 mir	n
Peak El	by Dyn-Stor-In ev= 241.18' @ lev= 244.67' S	12.10 hrs	Surf.Area= 24	sf Storag		irs		
	ow detention tim of-Mass det. tim				100% of inflow	v)		
Volume			age Storage					<u></u>
#1	236.06'	20	7 cf Ponding	before V	Veir (Prismat	ic)Listed b	elow (Recalc	)
Elevatio	et) (s	sq-ft)	Inc.Store (cubic-feet)	Cum.S (cubic-	feet)			
236.0 244.0		24 24	0 207		0 207			
	Routing		Outlet Device					
#1 #2	Primary Device 3	236.06' 240.50'	<b>24.0" Round</b> L= 44.0' CPF Inlet / Outlet In n= 0.013 Cor <b>5.0' long x 0</b> Head (feet) 0 Coef. (English	P, projectir nvert= 236 rugated Pl . <b>5' breadt</b> .20 0.40	ng, no headwa 5.06' / 235.50' E, smooth inte <b>h Broad-Cre</b> s 0.60 0.80 1.	all, Ke= 0.9 S= 0.012 erior, Flow sted Recta 00	7 '/' Cc= 0.9 Area= 3.14	sf
#3	Secondary	236.06'	<b>24.0" Round</b> L= 45.0' CPF Inlet / Outlet In n= 0.012 Cor	<b>Outlet Pi</b> P, projectir nvert= 236	pe to Detent ng, no headwa 5.06' / 235.83'	ion all, Ke= 0.9 S= 0.005	1 '/' Cc= 0.9	
	OutFlow Max utlet Pipe to Bi					8' (Dynan	nic Tailwater)	
€3=Oı	ary OutFlow M utlet Pipe to De Broad-Creste	etention (P	asses 8.95 cfs	of 24.25 c	fs potential fle	ow)	amic Tailwate	er)
		Summ	ary for Pon	d DP-1: (	Gidneytow	n Creek		
	t: Not Describe	d (Outflow=	Inflow)					
[40] Hin	rea = 50.0	70	5% Imponyiou		Depth > 5.73	" for 100	)-vr event	

3 App J Post-Develop 32142-00	Newburgh South Logistics Center NY-32142-00 24-hr S1 100-yr Rainfall=8.33"
Prepared by Labella Associates	Printed 1/4/2024
HydroCAD® 10.20-3f s/n 09581 © 2023 HydroCAD Softwar	e Solutions LLC Page 188

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

# Summary for Pond P-1: Wet Pond

Inflow Area =	16.392 ac, 7	5.11% Impervious, Inflo	w Depth = 7.39" for 100-yr event
Inflow =	89.46 cfs @	12.04 hrs, Volume=	10.100 af
Outflow =	42.77 cfs @	12.27 hrs, Volume=	9.301 af, Atten= 52%, Lag= 13.8 min
Primary =	42.77 cfs @	12.27 hrs, Volume=	9.301 af
Routed to Po	nd DP-1 : Gidn	eytown Creek	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Routed to Po	nd DP-1 : Gidn	eytown Creek	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 239.46' @ 12.27 hrs Surf.Area= 84,741 sf Storage= 174,984 cf Flood Elev= 239.50' Surf.Area= 84,891 sf Storage= 177,145 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 408.5 min ( 1,173.1 - 764.6 )

Volume	Inver	t Avail.Stor	rage S	Storage D	escription	
#1	232.00	)'				natic)Listed below (Recalc)
				,	Overall x 0.09	
#2	236.00	,				Prismatic)Listed below (Recalc)
		208,22	29 cf 1	Fotal Avai	lable Storage	
Elevatio	on S	Surf.Area	Inc.S	Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-	feet)	(cubic-feet)	
232.0	00	12,694		0	0	
233.0	00	13,630	13	,162	13,162	
234.0	00	14,592	14	,111	27,273	
235.0	00	15,579	15	,086	42,359	
236.0	00	23,780	19	,680	62,038	
Elevatio	on S	Surf.Area	Inc.S	Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-	feet)	(cubic-feet)	
236.0	00	23,780		0	0	
237.0	00	50,853	37	,317	37,317	
238.0	00	54,875	52	,864	90,181	
239.0	00	58,999	56	,937	147,118	
240.0	00	63,223	61	,111	208,229	
Device	Routing	Invert	Outlet	Devices		
#1	Primary	235.10'	12.0" Round Culvert From OCS L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 235.10' / 235.00' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf			
#2	Device 1	235,10'	235.10' <b>3.0" Vert. CPv Orifice</b> C= 0.600 Limited to weir f			
#3	Device 1	238.00'				

	ed by Labella AD® 10.20-3f s/			Page 18
			Coef. (English) 2.80 2.92 3.08 3.30 3.32	-
#4	Primary	238.00'	12.0" Round Culverts to Floodplain X 2.00	
			L= 33.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 238.00' / 235.00' S= 0.0909 '/' Cc= 0.900	0
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf	
#5	Primary	238.40'		r
			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 2.64	
#6	Secondary	239.50'	20.0' long x 10.0' breadth Emergency Overflow Weir	
			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 2.64	
-1=Ci -2: -3: -4=Ci -5=Bi	ulvert From O =CPv Orifice ( =Broad-Creste ulverts to Floo road-Crested I	CS (Inlet Co Passes < 0 ed Rectang odplain (Inle Rectangula	s @ 12.27 hrs HW=239.46' TW=0.00' (Dynamic Tailwater) ontrols 5.87 cfs @ 7.47 fps) .49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) et Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) efs @ 0.00 hrs $LW=222.00!$ TW=0.00! (Dynamic Tailwater)	
-1=Ci -2: -3: -4=Ci -5=Bi	ulvert From O =CPv Orifice ( =Broad-Creste ulverts to Floo road-Crested I dary OutFlow I	CS (Inlet Co Passes < 0 ed Rectang odplain (Inle Rectangula Max=0.00 c	ontrols 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) et Controls 7.43 cfs @ 4.73 fps)	
-1=Ci -2: -3: -4=Ci -5=Bi	ulvert From O =CPv Orifice ( =Broad-Creste ulverts to Floo road-Crested I dary OutFlow I	CS (Inlet Co Passes < 0 ed Rectang odplain (Inle Rectangula Max=0.00 c orflow Weir	controls 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) tet Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater)	
-1=Ci -2: -3: -3: -5=Bi -5=Bi econc	ulvert From O =CPv Orifice ( =Broad-Crested ulverts to Floo road-Crested I dary OutFlow ! mergency Ove	CS (Inlet Co Passes < 0 ad Rectang doplain (Inle Rectangula Max=0.00 c rflow Weir Summa 310 ac, 83.	controls 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) let Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) r (Controls 0.00 cfs) ary for Pond PF-1: Pretreatment Forebay .14% Impervious, Inflow Depth = 7.47" for 100-yr event	
-1=Ci -2: -3: -4=Ci -5=Bi econc -6=Ei	ulvert From O =CPv Orifice ( =Broad-Creste ulverts to Floc road-Crested I lary OutFlow I mergency Ove wrea = 14.8 = 80.4	CS (Inlet Co Passes < 0 ed Rectangula Max=0.00 c rflow Weir Summa 310 ac, 83. 9 cfs @ 12	iontrols 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) et Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) r ( Controls 0.00 cfs) ary for Pond PF-1: Pretreatment Forebay .14% Impervious, Inflow Depth = 7.47" for 100-yr event 12.04 hrs, Volume= 9.223 af	
-1=Ci -2: -3: -4=Ci -5=Bi conc -6=Ei	ulvert From O =CPv Orifice ( =Broad-Creste ulverts to Floo road-Crested I dary OutFlow I mergency Ove vrea = 14.6 = 80.4 = 77.8	CS (Inlet Co Passes < 0 ed Rectang doplain (Inle Rectangula Max=0.00 c rflow Weir Summa 310 ac, 83. 9 cfs @ 12	controls 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) let Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) r (Controls 0.00 cfs) ary for Pond PF-1: Pretreatment Forebay .14% Impervious, Inflow Depth = 7.47" for 100-yr event	
-1=Ci -2: -3: -4=Ci -5=Bi conc -6=Ei flow A flow utflow imary	ulvert From O =CPv Orifice ( =Broad-Creste ulverts to Floo road-Crested I dary OutFlow I mergency Ove vrea = 14.6 = 80.4 = 77.8	CS (Inlet Cc Passes < 0 ed Rectang doplain (Inle Rectangula Max=0.00 c rrflow Weir Summa 310 ac, 83. 9 cfs @ 11 6 cfs @ 12	tontrols 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) et Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) r ( Controls 0.00 cfs) ary for Pond PF-1: Pretreatment Forebay .14% Impervious, Inflow Depth = 7.47" for 100-yr event 12.04 hrs, Volume= 9.223 af, Atten= 3%, Lag= 0.4 min 12.04 hrs, Volume= 9.223 af	
-1=Ci -2: -3: -4=Ci -5=Bi -5=Bi -5=Bi -6=Ei flow A flow utflow imary Routing	Verter From Of =CPV Orifice ( =Broad-Crested ulverts to Floo road-Crested I dary OutFlow I mergency Ove verea = 14.6 = 80.4 = 77.8 v = 77.8 v = 77.8 ted to Pond P-1 ) by Dyn-Stor-Ir	CS (Inlet Cc Passes < 0 ed Rectang ddplain (Inle Rectangula Max=0.00 c rflow Weir Summa 310 ac, 83. 9 cfs @ 11 6 cfs @ 12 6 cfs @ 12 1 : Wet Pon- ad method, 7	tontrols 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) et Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) r ( Controls 0.00 cfs) ary for Pond PF-1: Pretreatment Forebay .14% Impervious, Inflow Depth = 7.47" for 100-yr event 12.04 hrs, Volume= 9.223 af 12.04 hrs, Volume= 9.223 af 13.04 hrs, Volume= 9.223 af 14.05 hrs, Volume= 9.223 af 15.05 hrs, Volume= 9.223 af 16.05 hrs, Volume= 9.223 af 17.05 hrs, Volume= 9.223 af 18.05 hrs, Volume= 9.223 af 19.05 hrs, Volume= 9.223 af 19.05 hrs, Volume= 9.223 af 10.05 hrs, Volume= 9.223 hrs, Vol	
flow A flow A flow withow Routing eak El	Verter From Of =CPv Orifice ( =Broad-Crested ulverts to Floo road-Crested I dary OutFlow I mergency Ove vrea = 14.6 = 80.4 = 77.8 te 77.8 ted to Pond P-1 by Dyn-Stor-Ir lev= 239.49 @	CS (Inlet Cd Passes < 0 ed Rectang doplain (Inle Rectangula Max=0.00 c rrflow Weir Summa 310 ac, 83. 9 cfs @ 11 6 cfs @ 11 6 cfs @ 11 1 : Wet Pond d method, 12.26 hrs	tontrols 5.87 cfs @ 7.47 fps) 0.49 cfs potential flow) gular Weir (Passes < 23.54 cfs potential flow) et Controls 7.43 cfs @ 4.73 fps) ar Weir (Weir Controls 29.47 cfs @ 2.77 fps) cfs @ 0.00 hrs HW=232.00' TW=0.00' (Dynamic Tailwater) r ( Controls 0.00 cfs) ary for Pond PF-1: Pretreatment Forebay .14% Impervious, Inflow Depth = 7.47" for 100-yr event 12.04 hrs, Volume= 9.223 af 12.04 hrs, Volume= 9.223 af	

Volume	Invert	Avail.	Storage	Storag	e Description				
#1	235.00'		0 cf	Pretrea	atment Forebay	(Prismatic)Listed below (Recalc)			
				7,202 0	7,202 cf Overall x 0.0% Voids				
#2	238.50'	ę	9,918 cf	Overfl	ow (Prismatic)Li	sted below (Recalc)			
		ç	9,918 cf	Total A	vailable Storage				
Elevation	Surf	Area	Inc	Store	Cum.Store				
(feet)	(	(sq-ft)	(Cubio	c-feet)	(cubic-feet)				
235.00		496		0	0				
236.00		1,348		922	922				
237.00	:	2,257		1,803	2,725				
238.00		3,223		2,740	5,465				
238.50		3,726		1,737	7,202				

Outflow       =       27.97 cfs @       12.14 hrs, Volume=       5.088 af, Atten= 1%, Lag= 6.2 min         Primary       =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51' @       12.50 hrs       Surf.Area= 15,416 sf       Storage= 7,800 cf         Flood Elev= 236.50'       Surf.Area= 15,398 sf       Storage= 7,696 cf         Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)       Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )	HydroCAD®	10.20-3f s/n 09581	© 2023 HydroCAD	Software Solutions LLC	F
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           238.50         3,726         0         0         0           239.00         4,244         1.993         1.993           240.00         5,323         4,784         6,776           240.50         7,246         3,142         9,918           Device         Routing         Invert         Outlet Devices           #1         Primary         238.50'         50.0' long x 10.0' 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)         2.49         2.56         2.70         2.69         2.67         2.64           Primary OutFlow Max=73.96 cfs @ 12.04 hrs         VM=239.35'         TW=239.10'         (Dynamic Tailwater)           -1=Broad-Crested Rectangular Weir (Weir Controls 73.96 cfs @ 1.74 fps)         Summary for Pond PF-2: Pretreatment Forebay           [58] Hint: Peaked 0.01' above defined flood level         Inflow Area =         8.123 ac, 88.14% Impervious, Inflow Depth =         7.52"         for 100-yr event           Inflow         = 27.97 cfs @         12.14 hrs, Volume =         5.088 af         Atten = 1%, Lag = 6.2 min <tr< th=""><th><b>-</b></th><th></th><th></th><th>Ourse Otherse</th><th></th></tr<>	<b>-</b>			Ourse Otherse	
238.50         3,726         0         0           239.00         4,244         1,993         1,993           240.00         5,323         4,784         6,776           240.50         7,246         3,142         9,918           Device         Routing         Invert         Outlet Devices           #1         Primary         238.50' <b>50.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet)         0.26 2.70         2.69 2.67         2.64           Primary OutFlow Max=73.96 cfs @ 12.04 hrs HW=239.35'         TW=239.10'         (Dynamic Tailwater)					
239.00       4,244       1,993       1,993         240.00       5,323       4,784       6,776         240.50       7,246       3,142       9,918         Device Routing Invert Outlet Devices         #1       Primary       238.50'       50.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64         Primary OutFlow Max=73.96 cfs @ 12.04 hrs HW=239.35'       TW=239.10'       (Dynamic Tailwater)         L=1=Broad-Crested Rectangular Weir (Weir Controls 73.96 cfs @ 1.74 fps)       Summary for Pond PF-2: Pretreatment Forebay         [58] Hint: Peaked 0.01' above defined flood level         Inflow Area =       8.123 ac, 88.14% Impervious, Inflow Depth = 7.52" for 100-yr event         Inflow =       28.23 cfs @ 12.04 hrs, Volume=       5.088 af         Outflow =       27.97 cfs @ 12.14 hrs, Volume=       5.088 af         Outflow =       27.97 cfs @ 12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)       Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51' @ 12.50 hrs       Surf.Area= 15,416 sf Storage= 7,696 cf       Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)         Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )       Volume <td></td> <td></td> <td></td> <td><u> </u></td> <td></td>				<u> </u>	
240.50         7,246         3,142         9,918           Device         Routing         Invert         Outlet Devices           #1         Primary         238.50'         50.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64           Primary OutFlow Max=73.96 cfs @ 12.04 hrs HW=239.35' TW=239.10' (Dynamic Tailwater)         (Dynamic Tailwater)           L=1Broad-Crested Rectangular Weir (Weir Controls 73.96 cfs @ 1.74 fps)         Summary for Pond PF-2: Pretreatment Forebay           [58] Hint: Peaked 0.01' above defined flood level         Inflow Area = 8.123 ac, 88.14% Impervious, Inflow Depth = 7.52" for 100-yr event Inflow = 28.23 cfs @ 12.04 hrs, Volume= 5.088 af           [0utflow = 27.97 cfs @ 12.14 hrs, Volume= 5.088 af         South = 5.088 af           Primary = 27.97 cfs @ 12.14 hrs, Volume= 5.088 af         South = 7.50'' for 100-yr event Inflow Depth = 7.52'' for 100-yr event Inflow = 28.23 cfs @ 12.50 hrs           Primary = 27.97 cfs @ 12.14 hrs, Volume= 5.088 af         South = 7.97 cfs @ 12.14 hrs, Volume= 5.088 af           Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51' @ 12.50 hrs           Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51' @ 12.50 hrs           Flood Elev= 236.50' Surf.Area= 15,398 sf         Storage = 7,696 cf           Plug-Flow detention time= 35.1 min calculated for 5.088					
DeviceRoutingInvertOutlet Devices#1Primary238.50'50.0' long x 10.0' 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) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64Primary OutFlow Max=73.96 cfs @ 12.04 hrs HW=239.35' TW=239.10' (Dynamic Tailwater) T=1=Broad-Crested Rectangular Weir (Weir Controls 73.96 cfs @ 1.74 fps)Summary for Pond PF-2: Pretreatment Forebay[58] Hint: Peaked 0.01' above defined flood levelInflow Area =8.123 ac, 88.14% Impervious, Inflow Depth = 7.52" for 100-yr event Inflow =28.23 cfs @ 12.04 hrs, Volume=5.088 af 0.024 hrs, Volume=0utflow =27.97 cfs @ 12.14 hrs, Volume=5.088 af 0.88 afOutflow =27.97 cfs @ 12.14 hrs, Volume=5.088 af 0.88 afRouted to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs Peak Elev= 236.51' @ 12.50 hrsPeak Elev= 236.50' Surf.Area= 15,398 sfStorage 7,896 cfPlug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow) Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )VolumeInvertAvail.Storage#1232.00'0 cfPretreatment Forebay (Prismatic)_isted below (Recalc) 15.694 cf Overall x 0.0% Voids#2235.50'12,118 cfStorAge BADVE (Prismatic)_isted below (Recalc) 15.694 cf Overall x 0.0% Voids#2235.00'12,118 cfStorAge Could A 0.0% Orgo 233.003,4342,7922,792234.004,7914,113					
#1       Primary       238.50'       50.0' long x 10.0' 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)       2.49       2.56       2.70       2.68       2.69       2.67       2.64         Primary OutFlow Max=73.96 cfs @       12.04 hrs       HW=239.35'       TW=239.10'       (Dynamic Tailwater)         —1=Broad-Crested Rectangular Weir (Weir Controls 73.96 cfs @       1.74 fps)         Summary for Pond PF-2: Pretreatment Forebay         [58] Hint: Peaked 0.01' above defined flood level       Inflow Area =       8.123 ac, 88.14% Impervious, Inflow Depth =       7.52"       for 100-yr event         Inflow =       28.23 cfs @       12.04 hrs, Volume=       5.088 af       Outflow =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)       Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routing by Dyn-Stor-Ind method, Time Span=       0.00-72.00 hrs, dt= 0.01 hrs       Peak Elev=       236.50'       Surf.Area=       15,398 sf       Storage=       7,800 cf         Flood Elev=       236.50'       Surf.Area=       15,416 of       Storage       7,696 cf	240.50	7,246	3,142	9,918	
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       2.68       2.69       2.67       2.64         Primary OutFlow Max=73.96 cfs @       12.04 hrs       HW=239.35'       TW=239.10'       (Dynamic Tailwater)         L=Broad-Crested Rectangular Weir (Weir Controls 73.96 cfs @       1.74 fps)         Summary for Pond PF-2: Pretreatment Forebay         [58] Hint: Peaked 0.01' above defined flood level         Inflow Area =       8.123 ac, 88.14% Impervious, Inflow Depth =       7.52"       for 100-yr event         Inflow =       28.23 cfs @       12.04 hrs, Volume=       5.088 af         Outflow =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routed to Pond BIO-1 : Filtration acculated for 5.088 af (100% of inflow)         Center-of-					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	#1 Pr	imary 238.	Head (feet) (	0.20 0.40 0.60 0.80 1.00 1.	20 1.40 1.60
	Primary Oι <sup>€</sup> —1=Broac	utFlow Max=73.96 d-Crested Rectang	ö cfs @ 12.04 hrs ∃ <b>gular Weir</b> (Weir C	HW=239.35' TW=239.10' (E ontrols 73.96 cfs @ 1.74 fps)	ynamic Tailwater)
Inflow Area =       8.123 ac, 88.14% Impervious, Inflow Depth = 7.52" for 100-yr event Inflow =         1nflow =       28.23 cfs @       12.04 hrs, Volume=       5.088 af         Outflow =       27.97 cfs @       12.14 hrs, Volume=       5.088 af, Atten= 1%, Lag= 6.2 min         Primary =       27.97 cfs @       12.14 hrs, Volume=       5.088 af, Atten= 1%, Lag= 6.2 min         Primary =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51' @       12.50 hrs       Surf.Area= 15,416 sf       Storage= 7,800 cf         Flood Elev= 236.50'       Surf.Area= 15,398 sf       Storage= 7,696 cf         Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)       Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )         Volume       Invert       Avail.Storage       Storage Description         #1       232.00'       0 cf       Pretreatment Forebay (Prismatic)Listed below (Recalc)         12,118 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         232.00       2,149       0		Sum	mary for Pond	PF-2: Pretreatment For	ebay
Inflow Area =       8.123 ac, 88.14% Impervious, Inflow Depth = 7.52" for 100-yr event Inflow =         1nflow =       28.23 cfs @       12.04 hrs, Volume=       5.088 af         Outflow =       27.97 cfs @       12.14 hrs, Volume=       5.088 af, Atten= 1%, Lag= 6.2 min         Primary =       27.97 cfs @       12.14 hrs, Volume=       5.088 af, Atten= 1%, Lag= 6.2 min         Primary =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51' @       12.50 hrs       Surf.Area= 15,416 sf       Storage= 7,800 cf         Flood Elev= 236.50'       Surf.Area= 15,398 sf       Storage= 7,696 cf         Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)       Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )         Volume       Invert       Avail.Storage       Storage Description         #1       232.00'       0 cf       Pretreatment Forebay (Prismatic)Listed below (Recalc)         12,118 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum.Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         232.00       2,149       0	[58] Hint: P	eaked 0.01' above	defined flood level		
Inflow       =       28.23 cfs @       12.04 hrs, Volume=       5.088 af         Outflow       =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Primary       =       27.97 cfs @       12.14 hrs, Volume=       5.088 af         Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)         Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs         Peak Elev= 236.51'@       12.50 hrs       Surf.Area= 15,416 sf       Storage 7,800 cf         Flood Elev= 236.50'       Surf.Area= 15,398 sf       Storage= 7,696 cf         Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)       Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )         Volume       Invert       Avail.Storage       Storage Description         #1       232.00'       0 cf       Pretreatment Forebay (Prismatic)Listed below (Recalc) 15,694 cf Overall x 0.0% Voids         #2       235.50'       12,118 cf       STORAGE ABOVE (Prismatic)Listed below (Recalc) 15,694 cf Overall x 0.0% Voids         #2       235.00'       12,118 cf       Total Available Storage         Elevation       Surf.Area       Inc.Store       Cum Store         (feet)       (sq-ft)       (cubic-feet)       (cubic-feet)         233.00       3,434       2,792       2,792 </td <td></td> <td></td> <td></td> <td></td> <td></td>					
Routed to Pond BIO-1 : Filtration Bioretention (2.5ft filter media)           Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs           Peak Elev= 236.51' @ 12.50 hrs         Surf.Area= 15,416 sf         Storage= 7,800 cf           Flood Elev= 236.50'         Surf.Area= 15,398 sf         Storage= 7,696 cf           Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)         Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )           Volume         Invert         Avail.Storage         Storage Description           #1         232.00'         0 cf         Pretreatment Forebay (Prismatic) isted below (Recalc) 15,694 cf Overall x 0.0% Voids           #2         235.50'         12,118 cf         STORAGE ABOVE (Prismatic) isted below (Recalc)           12,118 cf         Total Available Storage           Elevation         Surf.Area         Inc.Store         Cum.Store           (feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Area	= 8.123 ac,	88.14% Imperviou	is, Inflow Depth = 7.52" fo	r 100-yr event
Peak Elev= 236.51' @ 12.50 hrs         Surf.Area= 15,416 sf         Storage= 7,800 cf           Flood Elev= 236.50'         Surf.Area= 15,398 sf         Storage= 7,696 cf           Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow) Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )         Storage Description           #1         232.00'         0 cf         Pretreatment Forebay (Prismatic)_isted below (Recalc) 15,694 cf Overall x 0.0% Voids           #2         235.50'         12,118 cf         STORAGE ABOVE (Prismatic)_isted below (Recalc) 12,118 cf           Elevation         Surf.Area         Inc.Store         Cum.Store (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow	= 28.23 cfs @ = 27.97 cfs @	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> </ul>	me= 5.088 af me= 5.088 af, Atten=	,
Flood Elev= 236.50'       Surf.Area= 15,398 sf       Storage= 7,696 cf         Plug-Flow detention time= 35.1 min calculated for 5.088 af (100% of inflow)         Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )         Volume       Invert       Avail.Storage         #1       232.00'       0 cf         #2       235.50'       12,118 cf         Storage ABOVE (Prismatic)_isted below (Recalc)       15,694 cf Overall x 0.0% Voids         #2       235.50'       12,118 cf         Total Available Storage       Storage Description         Elevation       Surf.Area       Inc.Store         (feet)       (sq-ft)       (cubic-feet)         232.00       2,149       0         233.00       3,434       2,792         234.00       4,791       4,113         235.00       6,213       5,502	Inflow Outflow Primary	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> </ul>	ne= 5.088 af ne= 5.088 af, Atten= ne= 5.088 af	,
Center-of-Mass det. time= 35.0 min (787.3 - 752.3 )           Volume         Invert         Avail.Storage         Storage Description           #1         232.00'         0 cf         Pretreatment Forebay (Prismatic)_isted below (Recalc) 15,694 cf Overall x 0.0% Voids           #2         235.50'         12,118 cf         STORAGE ABOVE (Prismatic)_isted below (Recalc) 12,118 cf           Total Available Storage         Total Available Storage           Elevation         Surf.Area         Inc.Store           (feet)         (sq-ft)         (cubic-feet)           232.00         2,149         0           233.00         3,434         2,792           234.00         4,791         4,113           235.00         6,213         5,502	Inflow Outflow Primary Routed t	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Fill Dyn-Stor-Ind meth	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>tration Bioretention</li> <li>tration Time Span= 0.</li> </ul>	ne= 5.088 af ne= 5.088 af, Atten= ne= 5.088 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs	,
#1         232.00'         0 cf         Pretreatment Forebay (Prismatic)Listed below (Recalc) 15,694 cf Overall x 0.0% Voids           #2         235.50'         12,118 cf         STORAGE ABOVE (Prismatic)Listed below (Recalc)           12,118 cf         Total Available Storage           Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routed t Routing by Peak Elev=	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Fill Dyn-Stor-Ind meth 236.51' @ 12.50 f	<ul> <li>12.04 hrs, Volut</li> <li>12.14 hrs, Volut</li> <li>12.14 hrs, Volut</li> <li>12.14 hrs, Volut</li> <li>tration Bioretention</li> <li>nod, Time Span= 0.</li> <li>hrs Surf.Area= 15</li> </ul>	ne= 5.088 af ne= 5.088 af, Atten= ne= 5.088 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs ,416 sf Storage= 7,800 cf	,
#1         232.00'         0 cf         Pretreatment Forebay (Prismatic)Listed below (Recalc) 15,694 cf Overall x 0.0% Voids           #2         235.50'         12,118 cf         STORAGE ABOVE (Prismatic)Listed below (Recalc)           12,118 cf         Total Available Storage           Elevation         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routed t Routing by Peak Elev= Flood Elev= Plug-Flow c	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Fill Dyn-Stor-Ind meth 236.51' @ 12.50 f = 236.50' Surf.Are detention time= 35.	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>tration Bioretention</li> <li>nod, Time Span= 0.</li> <li>nrs Surf.Area= 15</li> <li>na= 15,398 sf Stor</li> <li>1 min calculated for</li> </ul>	me= 5.088 af me= 5.088 af, Atten= me= 5.088 af (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs ,416 sf Storage= 7,800 cf age= 7,696 cf r 5.088 af (100% of inflow)	,
#2         235.50'         12,118 cf         STORAGE ABOVE (Prismatic)_isted below (Recalc)           12,118 cf         Total Available Storage           Elevation         Surf.Area (sq-ft)         In. Store (cubic-feet)         Cum.Store (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routed t Routing by Peak Elev= Flood Elev= Plug-Flow c	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Filt Dyn-Stor-Ind meth : 236.51' @ 12.50 f = 236.50' Surf.Are detention time= 35. Aass det. time= 35.	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>tration Bioretention</li> <li>nod, Time Span= 0.</li> <li>nrs Surf.Area= 15</li> <li>ra= 15,398 sf Stor</li> <li>1 min calculated fc</li> <li>0 min (787.3 - 752</li> </ul>	me= 5.088 af me= 5.088 af, Atten= me= 5.088 af, Atten= (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs (416 sf Storage= 7,800 cf age= 7,696 cf rr 5.088 af (100% of inflow) 2.3 )	,
Elevation (feet)         Surf.Area (sq-ft)         Inc.Store (cubic-feet)         Cum.Store (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routed t Routing by Peak Elev= Flood Elev= Plug-Flow c Center-of-W Volume	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Fill Dyn-Stor-Ind meth 236.50' @ 12.50 f = 236.50' Surf.Are detention time= 35. fass det. time= 35. Invert Avail.	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>tration Bioretention</li> <li>nod, Time Span= 0.</li> <li>nrs Surf.Area= 15</li> <li>sa= 15,398 sf Stor</li> <li>1 min calculated fc</li> <li>0 min (787.3 - 752</li> <li><u>.Storage Storage</u></li> <li>0 cf Pretrea</li> </ul>	me= 5.088 af me= 5.088 af, Atten= me= 5.088 af, Atten= (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs (416 sf Storage= 7,800 cf age= 7,696 cf r 5.088 af (100% of inflow) 2.3 ) Description tment Forebay (Prismatic) i	1%, Lag= 6.2 min
(feet)         (sq-ft)         (cubic-feet)         (cubic-feet)           232.00         2,149         0         0           233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routed t Routing by Peak Elev= Flood Elev= Plug-Flow c Center-of-W Volume #1	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Fill Dyn-Stor-Ind meth 236.51' @ 12.50 f = 236.50' Surf.Are detention time= 35. Mass det. time= 35. Invert Avail. 232.00'	<ul> <li>2.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>tration Bioretention</li> <li>and, Time Span= 0.</li> <li>nrs Surf.Area= 15</li> <li>and Surf.Area= 15<td>me= 5.088 af me= 5.088 af, Atten= me= 5.088 af, Atten= (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs (416 sf Storage= 7,800 cf age= 7,696 cf r 5.088 af (100% of inflow) 2.3 ) Description tment Forebay (Prismatic)Lic cf Overall x 0.0% Voids</td><td>1%, Lag= 6.2 min</td></li></ul>	me= 5.088 af me= 5.088 af, Atten= me= 5.088 af, Atten= (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs (416 sf Storage= 7,800 cf age= 7,696 cf r 5.088 af (100% of inflow) 2.3 ) Description tment Forebay (Prismatic)Lic cf Overall x 0.0% Voids	1%, Lag= 6.2 min
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233.00         3,434         2,792         2,792           234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routed t Routing by Peak Elev= Flood Elev= Plug-Flow c Center-of-M Volume #1 #2	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Fill Dyn-Stor-Ind meth 236.51' @ 12.50 f = 236.50' Surf.Are detention time= 35. Mass det. time= 35. Invert Avail. 232.00' 235.50' 1 1	2         12.04 hrs, Volui           2         12.14 hrs, Volui           2         12.14 hrs, Volui           tration Bioretention         nors           od, Time Spane 0.         nrs           nrs Surf.Area= 15         sa=           1 min calculated fo         0 min (787.3 - 752           .Storage         Storage           0 cf         Pretrea           15,694         2,118 cf           2,118 cf         Total Av	me=         5.088 af ne=         5.088 af, Atten=           me=         5.088 af, Atten=           00-72.00 hrs, dt=0.01 hrs         4.16 sf Storage= 7,800 cf           age=         7,696 cf           rr 5.088 af (100% of inflow)         2.3 )           Description         100% Voids           tment Forebay (Prismatic) ister         7ailable Storage	1%, Lag= 6.2 min
234.00         4,791         4,113         6,904           235.00         6,213         5,502         12,406	Inflow Outflow Primary Routing by Peak Elev= Flood Elev= Plug-Flow c Center-of-W Volume #1 #2 Elevation (feet)	= 28.23 cfs @ = 27.97 cfs @ = 27.97 cfs @ to Pond BIO-1 : Filt Dyn-Stor-Ind meth = 236.51' @ 12.50 f = 236.50' Surf.Are detention time= 35. <u>Invert Avail.</u> 232.00' <u>235.50' 1</u> Surf.Area (sq-ft)	<ul> <li>12.04 hrs, Volui</li> <li>12.14 hrs, Volui</li> <li>13.14 hrs, Volui</li> <li>14.15 span= 0.</li> <li>15.398 sf Stor</li> <li>1 min calculated fc</li> <li>0 min (787.3 - 752</li> <li><u>Storage Storage</u></li> <li>0 cf Pretrea</li> <li>15.694</li> <li>2.118 cf STORA</li> <li>2.118 cf Total Av</li> <li>Inc.Store</li> <li>(cubic-feet)</li> </ul>	me= 5.088 af me= 5.088 af, Atten= me= 5.088 af, Atten= (2.5ft filter media) 00-72.00 hrs, dt= 0.01 hrs (4.16 sf Storage= 7,800 cf age= 7,696 cf r 5.088 af (100% of inflow) 2.3 ) Description tment Forebay (Prismatic) ister for Overall x 0.0% Voids GE ABOVE (Prismatic) ister vailable Storage Cum.Store (cubic-feet)	1%, Lag= 6.2 min
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			2023 HydroCAD So	oftware Solutions	s LLC Page 1	<u>91</u>
<b>-</b> 14		Overf Area a	la a Otana	Ourse Otherse		
Elevatio		Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
235.	50	6,937	0	0		
236.0	00	7,693	3,658	3,658		
237.0	00	9,228	8,461	12,118		
Device	Routing	Invert	Outlet Devices			
#1	Primary	235.50'	40.0' long x 22	.0' breadth Br	road-Crested Rectangular Weir	_
	,				0.80 1.00 1.20 1.40 1.60	
					0 2.64 2.63 2.64 2.64 2.63	

Primary OutFlow Max=27.73 cfs @ 12.14 hrs HW=236.38' TW=236.35' (Dynamic Tailwater) —1=Broad-Crested Rectangular Weir (Weir Controls 27.73 cfs @ 0.79 fps)

Appendix K: Project Evaluation and Design Calculations

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#### Appendix K - Table A

#### Step 1 - Evaluation of Green Infrastructure Planning Measures

Group	Practice	Description	Applicable	Project Specific Evaluation
	of Undisturbed	Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	No	The proposed site layout has been designed to limit land disturbance to the greatest extent practical. Approximately 17.5 +/- Acres of land will remain undisturbed, in its natural state, which accounts for 35.7% of the total project parcel. The project does not propose permanent conservation of this area at this time.
	Preservation of Buffers	Define, delineate and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	No	There is a stream and wetlands located on the project site. The wetland is regulated by the US ACOE therefore it does not have a regulated setback associated with it. The stream is within the City WPO which requires that no structures be located within 100' of the stream. The project does not propose any structures within this setback however some grading is required.
sources	Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Yes	Clearing and grading will be limited to the area of disturbance and will be minimized to the greatest extent practical. The limits of all proposed clearing will be demarcated in the field with orange construction fencing, prior to construction, to prevent unnecessary removal of trees.
Preservation of Natural Resources	Development	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	No	The project does not propose disturbance to the onsite ACOE wetland. However, minor grading within the 100-year floodplain and WPO setback are required. No fill is proposed within the floodplain.
Preserva		Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	N/A	The project site is an industrial use on a single lot. As such, the measure does not apply.
	Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of practices such as downspout disconnections, grass channels, filter strips, and tree clusters.	Yes	Full soil restoration is proposed for all areas of disturbance that will not become hardscape. All areas will be stabilized with seed & mulch, and landscaped areas will be provided.
		Minimize roadway widths and lengths to reduce site impervious area	N/A	No new roads are proposed as a part of this project.
	Sidewalk Reduction	Minimize sidewalk lengths and widths to reduce site impervious area	No	Sidewalk widths and lengths have been minimized to the greatest extent practical. Quantity of sidewalk has been reduced to that required to ensure safe pedestrian access throughout the site. Sidewalk widths however, have not been reduced to the 3' minimum required by ADA.

Cover	Driveway Reduction	Minimize driveway lengths and widths to reduce site impervious area	No	Driveway widths and lengths have been minimized to the greatest extent practical. Reducing the driveway width further is not feasible for the intended industrial use. Tractor trailers must be able to enter and exit the site safely and efficiently.
of Impervious	Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	N/A	No cul-de-sacs are proposed as part of this project.
	Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	No	All new building area has been allocated to efficiently implement the intended industrial use. The building has been sized to accommodate the required floor space and number of loading docks. The proposed offices will be two stories within the warehouse footprint, to reduce the overall footprint required.
Reduction	Parking	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimensions, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	Yes	On-site parking has been allocated to provide a sufficient number of spaces for the intended use. Based upon the Applicant's experience at similarly sized facilities, and in an effort to reduce impervious area, the Applicant has receievd a waiver from the Planning Board reduce the number of required parking spaces from 429 to 154.

#### Appendix K - Table B Step 2 - Determine Water Quality Treatment Volume (WQv)

Section 4.2 of the NYSDEC Stormwater Management Design Manual describes the Water Quality Volume equation as:

WQv = (P x Rv x A) / 12

where: WQv = Water Quality Volume (acre-feet)

 $\mathsf{P}$  = 90% Rainfall Event Number (inches) (interpolated from Design Manual Fig 4.1) Rv = 0.05 + 0.009 (I)

I = Impervious Cover (%) within the drainage area contributing to the SMP

A = Drainage area (acres) contributing to the SMP

The following table presents the WQv calculations for each of the proposed stormwater management practices (SMPs).

SMP ID			Impervious Cover	I	Rv	WQv		
			(acres)	(%)		(acre-feet)	(cubic feet)	
WET-1	1.40	16.392	12.313	75	0.73	1.396	60,810	
BIO-1	1.40	9.376	7.219	77	0.74	0.809	35,240	
	Tota	al				2.205	96,050	

#### Appendix K - Table C

#### Step 3 - Evaluation of Runoff Reduction Techniques and Standard SMPs with RRv Capacity

Design Variant	Practice	Description	Applicable	Project Specific Evaluation/Justification
RR-1	Conservation	Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas, stream and wetland buffers by restoring and/or permanently conserving these areas on a site.		The proposed site layout has been designed to limit land disturbance to the greatest extent practical. Approximately 17.5 +/- Acres will remain undisturbed, in its natural state, which accounts for 35.7% of the total property. The pre-development hydrologic and water quality characteristics of the undisturbed natural areas and the stream buffer will be maintained. The project does not propose permanent conservation of these areas at this time.
RR-2	Sheet flow to Riparian Buffers or Filter Strips	Riparianconservation areas and stream buffers or vegetated filter strips and riparian buffers can be used to treat and control stormwater runoff		Sheet flow to riparian buffers or filter strips is not proposed as a part of this project.
RR-3	Tree Planting/ Tree Pit	Plant or conserve trees to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. Trees can be used for applications such as landscaping, stormwater management practice areas, and conservation areas.	No	The project proposes the preservation of existing mature trees, as well as the planting of numerous trees throughout the site, in order to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. However, credit for these trees will not be taken toward an area reduction in the RRv calculations.
RR-4	Disconnection of Rooftop Runoff	Direct runoff from residential rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	N/A	Rooftop disconnect is not applicable, since this is a commercial building project.
RR-5	Vegetated Swale	The natural drainage paths, or properly designed vegetated channels, can be used instead of constructing underground storm sewers or concrete open channels to increase time of concentration, reduce the peak discharge, and provide infiltration.	No	The site has been designed to place greater emphasis on sheet flow instead of channeled flow. Stormwater practices have been designed to provide management and treatment at the source. Vegetated swales are proposed at several locations on-site. However, credit for these practices will not be taken in the RRv calculations.

RR-6	Rain Garden	Manage and treat small volumes of stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.	No	Due to the limited tributary area to rain gardens (≤ 1,000SF), a bioretention facility will be implemented instead of rain gardens.
RR-7	Stormwater Planter	Small landscaped stormwater treatment devices that can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve water quality.	No	The stormwater management approach for this project is intended to provide a more natural aesthetic that is consistent with the wooded surrounding. Since, stormwater planters have significant maintenance considerations and a more structured aesthetic, they have not been proposed for this project.
RR-8	Rain Barrels/ CisternsCapture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.		No	Rain Barrels/Cisterns are not proposed on-site due to the need for active management/maintenance and initial capital cost. In addition, the cold climate of the project area would require additional protection measures from freezing.
RR-9	Porous Pavement			Porous pavement is not proposed as part of this project due to low permeability of on-site soils, as well as concerns regarding winter maintenance.
RR-10	Green Roof Green Roof Green Roof		No	A green roof is not proposed on-site due to significant structural, insurance, and maintenance considerations.
	Stream Daylighting	Stream Daylight previously-culverted/piped streams to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.	No	No stream daylighting opportunities are present on this site.

				-
I-1	Trench	Excavated, stone-filled trenches designed to capture and temporarily store runoff in the stone reservoir to promote infiltration. Can be constructed as sheet flow to a ground surface depression or piped flow discharged directly into the trench.	No	Infiltration is not proposed due to poor draining soils.
I-2		Vegetated excavations designed to capture and infiltrate the WQv. Can be designed off-line to bypass larger flows to downstream flood control facilities or as combined infiltration/flood control facilities by providing temporary detention ponding.	No	Infiltration is not proposed due to poor draining soils.
I-3	Dry Wells	Underground structures designed to capture, treat, and infiltrate runoff from small drainage areas (rooftop only) that have low sediment or pollutant loadings. Larger stormwater volumes can be bypassed directly to a flood control facility.	No	Infiltration is not proposed due to poor draining soils.
1-4	Infiltration	Underground, proprietary systems designed to capture and infiltrate the WQv, reduce runoff, remove fine sediment and associated pollutants, recharge groundwater, and attenuate peak flows.	No	Infiltration is not proposed due to poor draining soils.
F-5	Bioretention	Shallow landscaped depressions where stormwater flows into the practice, ponds at the surface, and gradually filters through the media to remove pollutants. Filtered runoff can either infiltrate into the surrounding soil, or be collected by an underdrain system and discharged to the storm sewer system or directly to receiving waters.	Yes	Bioretention has been applied to this project.
0-1	Dry Swale	Designed to temporarily hold the WQv in a pool or series of pools created by permanent check dams. The soil bed consists of native soils or highly permeable fill material, underlain by an underdrain system. Pollutants are removed through sedimentation, nutrient uptake, and infiltration.	No	Dry swales are not proposed because they are intended for use with roads, highways, or residential development.

#### Appendix K - Table D Step 4 - Determine Minimum Runoff Reduction Volume (RRv) Required

Section 4.3 of the NYSDEC Stormwater Management Design Manual describes the equation for minimum Runoff Reduction Volume as:

 $RRv_{min} = (P \times \bar{R}v \times Aic \times S) / 12$ 

where: RRv<sub>min</sub> = Minimum Runoff Reduction Volume Required (acre-feet)

P = 90% Rainfall Event Number (inches) (interpolated from Design Manual Fig 4.1)

 $\bar{R}v = 0.05 + 0.009$  (I), where I is 100% impervious = 0.95 constant

Aic = Total area of new impervious cover (acres)

S = Hydrologic Soil Group (HSG) Specific Reduction Factor

where:			
HSG A=	0.55	HSG C=	0.30
HSG B=	0.40	HSG D=	0.20

The following table presents the RRv calculations for each of the proposed stormwater management practices (SMPs).

SMP ID	Р	Rv*	Specifc Reduction	Impervious Cover (Aic)	F	Rv
	(inches)		Factor (S)	(acres)	(acre feet)	(cubic feet)
WET-1	1.4	0.95	0.55	3.868	0.236	10,280
WET-1	1.4	0.95	0.2	8.445	0.187	8,150
BIO-1	1.4	0.95	0.2	7.219	0.16	6,970
				Total:	0.583	25,395

			BIORE	ETENTIC	ON FILTE	R (BIO-1)			
		[	Determin	e Require	d Water Q	uality Volum	e		
	WQv = (P/12) * Rv	* A							
where:	WQv = Water Qua P = 90% Rainfall Ev Rv = 0.05 + 0.009 ( I = Impervious Cov A = Drainage area	ent Numb l) er (%) with	er (inches	s) (interpo ainage are	a contribu	iting to the S			
	Required WQv =	35,240	CF	*Value t	aken from	Appendix K -	Table B		
			Calcu	ilate Requ	ired Filter	Bed Area			
	Af=(WQv)*(df)/[(k	)*(hf+df)*	'(tf)]						
where:	Af = Surface area c WQv = Required W df = Filter bed dep	/ater Qual		e (CF)		hf = Average	nt of permeability o height of water ab lter bed drain time	ove filter bed	
	CMD ID	WQv	df	k	hf	tf	Minimum Af	Provided Af	]
	SMP ID	WQv (cubic feet)	df (feet)	k (ft/day)	hf (feet)	tf (days)	Minimum Af (sq-ft)	Provided Af (sq-ft)	-
	SMP ID BIO-1	(cubic							
	-	(cubic feet) 35,240	(feet) 2.5	(ft/day) 0.5	(feet) 0.5	(days)	<b>(sq-ft)</b> 29,367	(sq-ft)	
where:	-	(cubic feet) 35,240 f + Vs + Vp er (CF) = A one Draina	(feet) 2.5 Calculate o f * df * n- ge Course	(ft/day) 0.5 Provided	(feet) 0.5 Water Qu	(days) 2.0 uality Volume	<b>(sq-ft)</b> 29,367	(sq-ft) 41,373 2.5 0.30 1.00	ft ft
where:	BIO-1 Provided WQv = V Vf = Volume of Filt Vs = Volume of Sto	(cubic feet) 35,240 f + Vs + Vp er (CF) = A one Draina	(feet) 2.5 Calculate f * df * n- ge Course CF	(ft/day) 0.5 Provided	(feet) 0.5 Water Qu	(days) 2.0 uality Volume	(sq-ft) 29,367 df = n-filter = ds =	(sq-ft) 41,373 2.5 0.30 1.00	ft
where:	BIO-1 Provided WQv = V Vf = Volume of Filt Vs = Volume of Sto Vp = Volume of Po Vf =	(cubic feet) 35,240 f + Vs + Vp er (CF) = A one Draina nding (CF) 31030 16549	(feet) 2.5 Calculate f * df * n- ge Course CF CF	(ft/day) 0.5 Provided	(feet) 0.5 Water Qu * ds * n-st	(days) 2.0 uality Volume	(sq-ft) 29,367 df = n-filter = ds = n-stone =	(sq-ft) 41,373 2.5 0.30 1.00	ft
where:	BIO-1 Provided WQv = V Vf = Volume of Filt Vs = Volume of Sto Vp = Volume of Po Vf = Vs =	(cubic feet) 35,240 f + Vs + Vp er (CF) = A me Draina nding (CF) 31030 16549 21064	(feet) 2.5 Calculate o f * df * n- ge Course CF CF CF	(ft/day) 0.5 Provided	(feet) 0.5 Water Qu * ds * n-st	(days) 2.0 uality Volume	(sq-ft) 29,367 df = n-filter = ds = n-stone =	(sq-ft) 41,373 2.5 0.30 1.00	ft
where:	BIO-1 Provided WQv = V Vf = Volume of Filt Vs = Volume of Po Vf = Vs = Vs = Vp =	(cubic feet) 35,240 f + Vs + Vp er (CF) = A nding (CF) 31030 16549 21064 68,643	(feet) 2.5 Calculate o f * df * n- ge Course CF CF CF CF CF	filter e (CF) = Af	(feet) 0.5 Water Qu * ds * n-st aken direc	(days) 2.0 uality Volume	(sq-ft) 29,367 df = n-filter = ds = n-stone =	(sq-ft) 41,373 2.5 0.30 1.00	ft
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	BIO-1 Provided WQv = V Vf = Volume of Filt Vs = Volume of Po Vf = Vs = Vs = Vp =	(cubic feet) 35,240 f + Vs + Vp er (CF) = A one Draina nding (CF) 31030 16549 21064 68,643 C Yes	(feet) 2.5 Calculate o f * df * n- ge Course CF CF CF CF CF CF CF CF	filter e (CF) = Af	(feet) 0.5 Water Qu * ds * n-st aken direc	(days) 2.0 wality Volume	(sq-ft) 29,367 df = n-filter = ds = n-stone =	(sq-ft) 41,373 2.5 0.30 1.00	ft



# **APPENDIX D**

Community Action Monitoring Plan



#### Appendix 1A New York State Department of Health Generic Community Air Monitoring Plan

#### Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

#### Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

**Continuous monitoring** will be required for all <u>ground intrusive</u> activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

**Periodic monitoring** for VOCs will be required during <u>non-intrusive</u> activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

#### VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

#### Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter  $(mcg/m^3)$  greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m<sup>3</sup> above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m<sup>3</sup> above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m<sup>3</sup> of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

### Special Requirements CAMP

- 1. When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.
- 2. If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.
- 3. If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m<sub>3</sub>, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m<sub>3</sub> or less at the monitoring point.
- 4. Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Especially if machinery with internal combustion engines are utilized for indoor work. Response levels and actions should be pre-determined, as necessary, for each site.
- 5. Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.



# **APPENDIX E**

G

Site-Specific Health and Safety Plan

# Site-Specific Health and Safety Plan



Project Title:

DuPont-Stauffer Landfill Site NYSDEC Site 336009

Location:

700 South Street, City of Newburgh, Orange County, New York

Prepared For:

**Brookfield Properties** 

LaBella Project No. 2222335 Phase .11

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#### ATTACHMENTS

- A Daily Pre-Job Safety Tailgate/Toolbox Meeting Form
- B Accident/Incident/Near Miss/Hazard Report

#### 0.0 HASP Acknowledgment

All LaBella project personnel are required to sign the following agreement prior to conducting work:

- 1. I have read and fully understand the requirements of this site-specific HASP including my individual responsibilities listed above.
- 2. I agree to abide by the provisions of the HASP and participate in any health and safety meetings or modifications to the HASP criteria during the implementation of work.

Name	Company	Date

#### 1.0 Introduction

The purpose of this Health and Safety Plan (HASP) is to provide guidelines for responding to potential health and safety issues that may be encountered during the Remedial Investigation (RI) at the project site, located at 700 South Street, City of Newburgh, Orange County, New York. This HASP only reflects the policies of LaBella Associates D.P.C. The requirements of this HASP are applicable to all approved LaBella personnel at the work site. This document's project specifications are to be consulted for guidance in preventing and quickly abating any threat to human safety or the environment. The provisions of the HASP do not replace or supersede any federal, state or local regulatory requirements.

#### 2.0 Responsibilities

This HASP presents guidelines to minimize the risk of injury to project personnel, and to provide rapid response in the event of injury. The HASP is applicable only to activities of approved LaBella personnel and their authorized visitors specific to this project. The Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of LaBella employees to follow the requirements of this HASP, and all applicable company safety procedures.

#### 3.0 Daily Pre-Job Safety Meetings

Prior to the beginning of work each day the Field Supervisor/Foreman or on-site Project Manager will review upcoming daily job requirements, anticipated hazards and hazard control measures with the project team members. At this meeting information such as personal protective equipment, site conditions, emergency procedures, and other applicable topics may be addressed.

A copy of the **Daily Pre-Job Safety Tailgate/Toolbox Meeting Form** is attached to this HASP.

#### 4.0 Site Information

Project Name:	DuPont-Stauffer Landfill Site NYSDEC Site 336009
LaBella Project No.:	2222335 Phase .11
Project Location:	700 South Street, City of Newburgh, Orange County, New York
Current Use of Project Location:	Vegetated property that has previously undergone remediation via removal of buried waste and impacted soil. Capped landfill is on the northern end of the Site

	and was used to consolidate non- hazardous waste from other parts of the property.
Uses of Surrounding Areas (Res Vacant Land, Commercial, etc.):	Landfills, Commercial, and Residential, Industrial
Proposed Date(s) of Field Activity - Start:	2023-11-01
Proposed Date(s) of Field Activity - End:	2023-12-29

#### 5.0 Scope of Work

The proposed field work covered under this HASP includes the following:

• Soil borings to delineate area of buried waste and impacted debris that was discovered during a geotech investigation. Characterize waste for disposal, excavate and remove impacted material, backfill.

#### 6.0 Emergency Information

The personnel and emergency response contacts associated with the proposed scope of work are presented below and are to be posted onsite during all field activities. The Site Safety Officer (SSO) is the primary authority for directing site operations and relaying communications under emergency conditions. During the SSO's absence, the Project Manager or Site Supervisor will lead emergency operations.

	Project Personnel	
Contact	Name	Phone
LaBella Project Manager	Arlette St. Romain	518-824-1928
LaBella Site Supervisor	Branson Fields or Eric Orlowski	720-626-6362 518-928-5823
Corporate Safety Manager	Catherine Monian	845-486-1557
Site Safety Officer	Branson Fields or Eric Orlowski	720-626-6362 518-928-5823
Site Contact	NA – Site is unoccupied	NA – Site is unoccupied
Human Resources	Michelle Hoyt	
Emergency Personnel in	cluding Police and Fire Dept a	and Ambulance – Dial 911
Hospital- see Hospital Route	Buffalo General Hospital	716-859-5600

Section below for directions		
Poison Control		800-336-6997
NYSDEC Spill Response Hotli	ne	800-457-7362

#### First Aid

A First Aid Kit will be located in each field vehicle. The injured person may be transported to a trained medical center for further examination and treatment. he preferred transport method is a professional emergency transportation service; however, if this option is not readily available or would result in excessive delay, other transport is authorized.

Under no circumstances should an injured person transport themselves to a medical facility for treatment, no matter how minor the injury may appear.

#### **Incident Reporting**

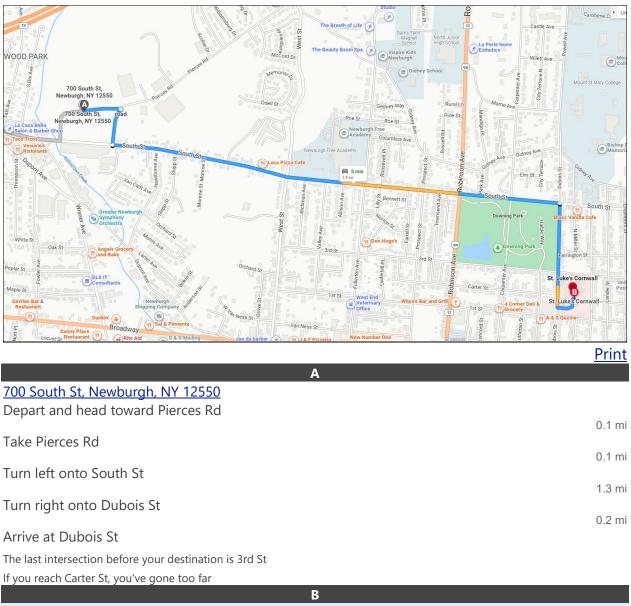
Employees shall report all incidents and injuries to their supervisor as soon as possible, including those involving employees operating vehicles and other equipment. All reporting procedures contained in LaBella Safety Policy 1.22 must be followed.

During emergencies employees should seek medical care immediately. When contacting their Supervisor/Safety Manager/HR, employees should discuss medical care options. If an employee is asked by medical personnel for a worker's compensation number they should tell them that LaBella should be billed directly.

When emergency medical care is not imminent, employees shall immediately report events to their immediate Supervisor, the Safety Manager and Human Resources, and participate in the investigation process as well as the corrective action process, as needed. The attached Accident /Incident/ Near Miss /Hazard Report Form must be submitted online or by e-mail to the Supervisor, Safety Manager and HR as soon as possible but no later than 24 hours after the event.

#### Hospital Route

#### Hospital Directions:



Montefiore St. Luke's Cornwall 70 Dubois St, Newburgh, NY 12550

#### 7.0 Potential Health and Safety Hazards and Controls

This section lists potential health and safety hazards that project personnel may encounter at the project site and actions to be implemented by approved personnel to control and reduce the associated risk to health and safety. This is not intended to be a complete listing of any and all potential health and safety hazards. New or different hazards may be encountered as site environmental and site work conditions change. The suggested actions to be taken under this plan are not to be substituted for good judgment on the part of project personnel. At all times, the Site Safety Officer has responsibility for site safety and their instructions must be followed.

	Phy	rsical Hazards
Work Action or Condition	Potential Safety Hazard	Controls (including PPE)
<b>Cold Weather</b>	Frost nip, Frost bite, Hypothermia	Engineering: •Basic wind block • Heated shelter • Barriers or insulation placed on metal surfaces to reduce heat loss from extremities Administrative: It is recommended that multiple vehicles be utilized during periods of extreme cold unless a warm shelter is within reasonable proximity to the work site. Number of vehicles depends on number of employees. Warm liquids should be considered to combat dehydration and to manage core temperatures. Note that caffeinated beverages will lessen circulation and are discouraged. Adequate Breaks - Break periods will be at least ten (10) minutes long. While on break personnel should remove outer layers of clothing to ensure adequate warming of the core and extremities. Individuals should assess their physical condition during breaks. Do not return to work in the cold until adequately warmed. If engineering controls, such as shelters are used, the ambient temperature/wind chill where the work is taking place will be used to determine the work / warm-up schedule Personal Protective Equipment: The outer layer of clothing must be fire retardant. • The outer most layers should consist of winter clothing (i.e. bibs, bomber or parka, head sock, winter / arctic boots). • Under layers (insulation) should consist of one or more thin garments. Outer winter layers should be removed prior to insulation layers becoming wet with perspiration. • Wet clothing should not be worn. A best practice is to bring extra insulating clothing and change clothes if they become wet.

<ul> <li>PPE that is in direct contact with the skin be changed if it becomes wet.</li> <li>Exposed skin shall be avoided in extreme temperatures to minimize the risk of frostbite.</li> <li>Hand / foot warmers are available on all</li> <li>Do not use a tool if you have not been trainspect tool before use and do not use dar</li> </ul>	sites. ained. naged
<ul> <li>temperatures to minimize the risk of frostbite.</li> <li>Hand / foot warmers are available on all</li> <li>Do not use a tool if you have not been trainspect tool before use and do not use dar</li> </ul>	sites. ained. naged
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Do not use a tool if you have not been transformed by the second se	ained. naged
	0
	)W
tools.	SW .
Maintain tools in good condition and follomanufacturers' instructions.	
Wear gloves, safety glasses and and	
appropriate PPE / apparel, avoiding loose	
Hand Tools Physical injury clothing; secure long hair.	
When using a cutting tool hold its handly	
<ul> <li>and cut away from your body, never towar</li> <li>If working on a ladder or scaffold raise ar</li> </ul>	
lower tools using a bucket and hand line; r	
carry tools in a way that prevents using bo	
hands on a ladder (maintain three poits of	
contact)	
Working near heavy equipment presents s by and caught-in or in-between risks. Heav	
equipment can also rollaway or obstruct	у
roadways, limiting visibility. The following h	nazard
control measures will be applied:	
Maintain 360 degrees of awareness of yo	ur
<ul> <li>surroundings.</li> <li>Meet the Operator, discuss work operation</li> </ul>	ns
and stay in line of sight	115,
Struck by, Caught in between, • Wear hi visibility clothing (outer layer), ha	rd hat,
Causing an safety glasses, work boots.	
• Stand In safe zone away from blind areas	
Equipment - Working NearObstruction off existing roadway, Dellaway, andNever walk in back of or to the side of hea equipment without the operator's knowled	
Rollaway, and Have an escape plan	ge.
hearing damage. • Stay out of the swing zone of heavy equi	oment
such as excavators or traditional auger rigs	
swing zone is defined as an entire 360 deg	
circle equipment may move within as mea from a central location point.	sured
• Only approach drill rig after auger has sto	pped
rotating and the operator has given the OK	
you to approach to collect a sample.	
Wear hearing protection when working n heavy or moving equipment.	əar
Uneven or Wet	d
<b>Terrain (Slopes,</b> Slip, Trip, Fall conditions: steel toe or composite boots for	

Leaves, Holes, etc.)	<ul> <li>construction sites, skid-resistant, hiking boots for other field work if indicated.</li> <li>Use walking stick or other object for additional support/balance and to check for animal burrows/holes.</li> </ul>
	<ul> <li>Watch for trip hazards such as uneven terrain, holes, ditches, puddles (if raining) stretched wires or ropes, or other materials or pieces of equipment in path.</li> </ul>

	Biological and	l Environmental Hazards
Work Action or Condition	Potential Safety Hazard	Controls (including PPE)
Hazardous Animals	Injury from Hazardous Animals	<ul> <li>Hazardous animals and insects may be encountered on rural sites. The following hazard control measures will be applied:</li> <li>Apply bug repellant spray or lotion to exposed skin. If you have been prescribed medication for stings bring it with you.</li> <li>Be cautious of walking path and foot placement to avoid places where snakes/spiders my be, (e.g., stepping over logs).</li> <li>Stay on trails away from high grassy areas/bushes. Tuck pants into boots, wear tall boots if going through tall grass/bush.</li> <li>For Ticks: Conduct daily tick check, wear long pants/long-sleeved shirts/hates/socks that are light in color, put hair up, carry tick removal kit.</li> <li>For Spiders: Don't put unprotected hands inside items that might have spiders and be careful moving undisturbed piles of materials.</li> <li>Bears: make noise and use bear spray.</li> <li>For Snakes: Stay away - striking distance is 1/2 to 2/3 their body length.</li> </ul>
Hazardous Plants	Injury from Hazardous Plants	<ul> <li>Hazardous plant may be encountered on rural sites. The following hazard control measures will be applied:</li> <li>Create a narrow path or route when possible.</li> <li>Wear appropriate PPE for the vegetation (i.e. leather gloves, Carhart coveralls, and face shield for vegetation that could cause cuts/punctures and/or is higher than waist level)</li> <li>Become familiar with and avoid poisonous plants, see Safety Manual section '3.05 Plants'</li> </ul>

|--|

	Ergonomic Hazards			
Work Action or ConditionPotential Safety HazardLifting Heavy ObjectsInjury from Improper Lifting/Lifting weights that are too heavy		Controls (including PPE)		
		<ul> <li>When lifting heavy objects, keep the load close to the body and use the leg muscles instead of the back muscles to perform lifting tasks.</li> <li>Do not attempt to lift large, heavy (especially over 50-lbs), or awkwardly shaped objects without assistance from another employee or from a manual lifting devise.</li> </ul>		
Noise (Loud, Sustained)	Hearing Damage	<ul> <li>Ear protection will be worn at all times when personnel are within 20-feet of operating equipment or when noise level becomes consistently loud enough to have to raise voice to communicate with someone.</li> <li>Hearing protection will also be worn in the vicinity of generators, concrete cutters, and any other high noise emitting equipment.</li> </ul>		

Chemical Hazards (General)			
Work Action or ConditionPotential SafetyHazard		Controls (including PPE)	
Chemical Exposure - Heavy Metals	Contaminants identified in testing locations at the Site include low- level heavy metals, primarily associated with Site contamination. Heavy metal- impacted media including fill material may be	The presence of heavy metals in site media may be difficult to ascertain in the field. Heavy metal concentrations at this site are not anticipated to exceed PELs. The following hazard control measures will be applied, however: • Workers shall wear appropriate PPE and follow listed decontamination procedures to prevent exposures. Refer to the relevant sections of this HASP for more detail regarding PPE and decontamination procedures.	

	· ·	1
	encountered	
	during subsurface	
	activities at the	
	project work site.	
	Contaminants	
	identified in testing	
	locations at the	
	Site include	
	organochlorine	
	pesticides.	
	Pesticide-	
	impacted media	
	may be	
	encountered	
	during subsurface	
	activities at the	
	project work site.	
	Exposure to high	
	concentrations of	
	organochlorine	
	pesticides over a	
	short period may	The presence of pesticides in site media may be
	produce convulsions,	difficult to ascertain in the field. Pesticide
	headache,	concentrations at this site are not anticipated to
Chemical	dizziness, nausea,	exceed PELs. The following hazard control measures will be applied, however:
Exposure -	vomiting, tremors,	Workers should be wearing appropriate PPE
Pesticides	confusion, muscle	and following listed decontamination
	weakness, slurred	procedures to prevent exposures. Refer to the
	speech, salivation	relevant sections of this HASP for more detail
	and sweating.	regarding PPE and decontamination procedures.
	Long-term	regarding in E and decontarnination procedures.
	exposure to	
	organochlorine	
	pesticides may	
	damage the liver,	
	kidney, central	
	nervous system,	
	thyroid and	
	bladder. There is	
	some evidence	
	indicating that	
	organochlorine	
	pesticides may	
	also cause cancer	
	in humans.	
	Relevant Safety	
	Data Sheets are	

	had uded as	
	included as	
Chemical Exposure - PFAS	Appendix 1. Contaminants identified in testing locations at the Site include PFAS. PFAS-impacted media may be encountered during subsurface activities at the project work site. Research is still ongoing regarding the health effects of PFAS, but studies have shown that exposures to certain levels of PFAS can increase one's risk of certain cancers and create reproductive, immunulogical or developmental effects.	The presence of PFAS in site media may be difficult to ascertain in the field. PFAS concentrations at this site are not anticipated to exceed PELs. The following hazard control measures will be applied, however: • Workers should be wearing appropriate PPE and following listed decontamination procedures to prevent exposures. Refer to the relevant sections of this HASP for more detail regarding PPE and decontamination procedures.
Chemical Exposure - Polychlorinated Biphenyls	Contaminants identified in testing locations at the Site include PCBs. PCB-impacted media may be encountered during subsurface activities at the project work site. Potential human health effects of PCB exposure include cancer as well as neurological, immunological and reproductive effects. Relevant Safety Data	The presence of PCBs in site media may be difficult to ascertain in the field. PCB concentrations at this site are not anticipated to exceed PELs. The following hazard control measures will be applied, however: • Workers should be wearing appropriate PPE and following listed decontamination procedures to prevent exposures. Refer to the relevant sections of this HASP for more detail regarding PPE and decontamination procedures.

		1
	Sheets are included as Appendix 1.	
Chemical Exposure - Semi- Volatile Organic Compounds (SVOC)	Contaminants identified in testing locations at the Site include SVOCs. SVOC- impacted media including fill material may be encountered during subsurface activities at the project work site.	The presence of SVOCs in site media may be detected by their odor and monitoring instrumentation. SVOC concentrations at this Site are not anticipated to exceed PELs. The following hazard control measures will be applied, however: • Workers should be wearing appropriate PPE and following listed decontamination procedures to prevent exposures. Refer to the relevant sections of this HASP for more detail regarding PPE and decontamination procedures.
Chemical Exposure - Volatile Organic Compounds (VOC)	Contaminants identified in testing locations at the Site include various volatile organic compounds (VOCs), primarily VOCs associated with Site contamination. Volatile organic vapors may be encountered during subsurface activities at the project work site. Inhalation of high concentrations of volatile organic vapors can cause headache, stupor, drowsiness, confusion and other health effects. Skin contact can cause irritation, chemical burn, or dermatitis. Relevant Safety Data Sheets are included as Appendix 1.	Volatile Organic Compound (VOC) gases may be emitted from a number of materials and products. The presence of organic vapors may be detected by their odor and by monitoring instrumentation and can lead to physical harm. VOC concentrations at this Site are not anticipated to exceed PELs. The following hazard control measures will be applied, however: • Workers should be wearing appropriate PPE, following listed decontamination procedures and be periodically screening the work zone to prevent against and evaluate for unexpected exposures. Refer to the relevant sections of this HASP for more detail regarding PPE, decontamination procedures and work zone screening.

Landfill Work	Exposure to explosive and toxic landfill gases, some of which are flammable	Landfill work presents unique challenges related to air quality. The following hazard control measures will be applied: • Adequate outdoor ventilation is expected to minimize respiratory exposure, however explosive gas issues may arise. No smoking is permitted. • Reduced sparking tools should be used when hammering or digging any test holes. • Work should proceed slowly to minimize heat content and reduce friction that could generate sparks. • Periodic monitoring performed for explosive gases (LEL and H2S) with a 4-gas meter. Methane is colorless and odorless. • If action levels are reached activity should cease and personnel should immediately evacuate the site. These action levels are: >10% LEL for combustible gases, 1 ppm for hydrogen sulfide, LEL of 5% for methane, <19.5% or >23% (5,000 ppm) for oxygen. When work ceases employees will be directed away from the operations and the situation assessed with the Health and Safety Officer.
Sample Collection - Soil or Groundwater	Exposure to contaminants. Hand injury from cutting, crushing, tool or glass breakage. Back strain from lifting cooler.	<ul> <li>When collecting samples, workers will utilize nitrile gloves, safety glasses or goggles. If material being sampled potentially contains fill or other sharp material, use a stainless steel spoon (or similar) as a tool to collect the sample. Any such tools should be dedicated or properly decontaminated between samples.</li> <li>When lifting sample coolers, workers will use proper lifting techniques and get assistance when possible, especially for containers heavier than 50 lbs.</li> </ul>
Lead	Injury, Illness	Lead exposure, which occurs most commonly by breathing in particles, can result in long term physical illness and disability (See 4.04 LEAD SAFETY POLICY in Labella's Safety Manual for information on Exposure Controls).

Individual Contaminant Hazards			
Chemical OSHA Permissible Exposure Limit (PEL)/ NIOSH Recommended Exposure Limit (REL) or Immediately dangerous to life or health air concentration values (IDLH)		Routes of Exposure	Symptoms of Overexposure
Chlorobenzene (VOC)	TWA 75 ppm (350 mg/m3) NIOSH REL/IDLH: REL: TWA 75 ppm (350 mg/m3) IDLH: 1000 ppm	The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion.	irritation eyes, skin, nose; drowsiness, incoordination; central nervous system depression; In Animals: liver, lung, kidney injury
1,2- Dichloroethylene (VOC)	TWA 200 ppm (790 mg/m3) NIOSH REL/IDLH: TWA 200 ppm (790 mg/m3)	The substance can be absorbed into the body by inhalation of its vapour and by ingestion.	irritation eyes, respiratory system; central nervous system depression
Tetrachloroethane (VOC)	REL: TWA 10 ppm (60 mg/m3) ST 20 ppm (120 mg/m3)	inhalation, skin absorption, ingestion, skin and/or eye contact	nausea, vomiting, abdominal pain; tremor fingers
Toluene (VOC)	TWA 200 ppm NIOSH REL/IDLH: REL: TWA 100 ppm (375 mg/m3) IDLH: 500 ppm	The substance can be absorbed into the body by inhalation, through the skin and by ingestion.	irritation eyes, nose, throat; resp sensitization, cough, pulmonary secretions, chest pain, dyspnea (breathing difficulty); asthma
Trichloroethylene (VOC)	TWA: 50 ppm 270 mg/m3 Ceiling: 200 ppm STEL: 200 ppm NIOSH REL/IDLH: IDLH: 1000 ppm	The substance can be absorbed into the body by inhalation and by ingestion.	dizziness, headaches, sleepiness, confusion, nausea, unconsciousness

Cadmium (Metal) TWA 0.005 mg/m3 NIOSH REL/IDLH: TWA 0.5 mg/m3		inhalation, ingestion	pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia
OSHA PEL TWA 0.1 mg/m3 NIOSH REL/IDLH: REL: Hg Vapor: TWA 0.05 mg/m3 [skin] Other: C 0.1 mg/m3 [skin]IDLH: 10 mg/m3IDLH: 10 mg/m3IDLH: 10 mg/m3IDLH: 10 mg/m3IDLH: 10 mg/m3IDLH: 10 mg/m3IDLH: 10 mg/m3		inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude
		inhalation, ingestion, skin and/or eye contact	lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension

#### 8.0 Personal Protective Equipment (PPE)

All site workers will have appropriate training as identified in Section 7.0. Training includes the identification of PPE necessary for various tasks; how to don, doff, adjust, and wear PPE; limitations of PPE; and proper care, inspection, testing, maintenance, useful life, storage, and disposal of the PPE. PPE will be inspected on a regular basis.

Modified Level D: Assigned protection includes:	<ul> <li>Street clothes</li> <li>Safety glasses</li> <li>Safety toed boots</li> <li>Hard hat</li> <li>An ANSI Level III safety vest</li> <li>Nitrile glove if potentially contacting any contaminated materials</li> <li>Disposable N95 masks will be provided for use if needed</li> </ul>
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#### 9.0 Employee Training

All workers and other personnel shall receive appropriate training prior to engaging in site activities. All workers must recognize and understand the potential hazards to health and safety that are associated with the proposed scope of work and must be thoroughly familiar with programs and procedures contained in this Safety Plan.

The following training levels were determined to be needed:

• 40-Hour HAZWOPER and up-to-date refreshers

#### 10.0 Exposure Monitoring

CAMP will be performed. See Work Plan.

#### 11.0 Site Control

Project work zones will be subdivided into exclusion zone and contaminant reduction zone if warranted by site conditions.

The exclusion zone is where contamination is present or may be present. The contamination reduction zone is located immediately outside of the exclusion zone and is utilized for decontamination. All personnel must enter and exit the exclusion zone through the contaminant reduction zone.

All equipment and PPE in the exclusion zone must be decontaminated or properly discarded upon exit. Because of the nature of the site work, the exclusion and contaminant reduction zones may change. Plastic bags containing used PPE will be placed in designated trash receptacles.

#### 12.0 Recordkeeping

An electronic or hardcopy version of this HASP will be present at the Site during all field work activities. Copies of field logs, including daily pre-job safety meeting logs, will be filed by LaBella and available for the duration of the project.

Employees will be able to provide physical or electronic copies of required training certificates.

Incident reporting will be completed in accordance with LaBella policies.

### 6.08 PRE'JOB SAFETY TAILGATE/TOOLBOX MEETING FORM

Date		Time			
Location or Address		Temperature			
Project Number		Humidity			
Conducted by		Conditions			
	eminded that COVID is still prevalent and that app be taking to prevent infection of themselves and o		Yes 🗌	No	

9	11	If 911 is unavailable at this location, please state the procedure for reporting emergencies					
List	List Safety Topic of Discussion and/or Any Specific Hazards for the Work Being Performed Today						
1							
2							
3							
4							
5							
6							
7							
List	: Contr	ol Measures for Each Specific Hazard Listed Above					
1							
2							
3							
4							
5							
6							
7							

# PLEASE SIGN THE BACK OF THIS SHEET

The presenter and all attendees shall print and sign in the appropriate areas on the back of this sheet

#### By signing, you declare that you understand the information presented in today's meeting, and that you have had the opportunity to ask questions and to clarify any uncertainty regarding such information.

Name	Signature	Company

All Visitors and Contractors Must Print Their Company Name

# PART A – INCIDENT/LOSS MANAGEMENT REPORTING SCHEDULE

Event	Form(s) Required	Action
Property damage to company property ( <u>including Fleet</u> <u>vehicles</u> ) OR Damage to non-company property by company employee	All cases: LaBella's Online Incident/Near-Miss/ Hazard Reporting Form ("Online Reporting Form") <b>or</b> Part B- Incident/Near-Miss Hazard Report ("Part B: Employee Rpt.") from the Safety Manual 6.01 Incident/Near Miss/Hazard Report Package. Include photos. Losses greater than \$5,000: Online Reporting Form or Part B: Employee Rpt. Part C: Supervisor Invest/Analysis Report Part D: Witness Statement Form Photos, Diagrams, Maps, etc. **In addition to insurance forms	Immediate verbal notification to Supervisor and Online Reporting Form within 24 hours Send Parts B, C and D to Safety Manager as soon as possible but within 2-4 business days.
Near Miss Incidents:	All cases: Online Reporting Form or Part B: Employee Report	Same-day verbal notification to Supervisor
Low* potential for significant injury or property damage	Online Reporting Form or Part B: Employee Rpt.	Send to Safety Manager and HR within 24 hours.
Moderate <sup>*</sup> or High <sup>*</sup> potential for significant injury or property damage	Online Reporting Form/Part B: Employee Rpt. Part C: Supervisor Invest. & Analysis Report Part D: Witness Statement Form Photos, Diagrams, Maps, etc.	Send Parts C and D to Safety Manager as soon as possible but within 2-4 business days.
<sup>*</sup> Category to be determined by Safety Manager		
Employee Injury or Illness:	All cases: Online Reporting Form or Part B – Employee Report	Immediate verbal notification to Supervisor and/or Field Supervisor (in all cases).
Minor injury (first aid treatment/non-OSHA recordable)	Online Reporting Form or Part B: Employee Rpt.	Send to Safety Manager and HR within 24 hours.
Serious Injury (employee received medical treatment/lost days away from work, or required job restriction or transfer)	Online Reporting Form or Part B: Employee Rpt. Part C: Supervisor Invest. & Analysis Report Part D: Witness Statement Form Photos, Diagrams, Maps, etc.	Send Parts C and D to Safety Manager as soon as possible but within 2-4 business days.
Catastrophes (examples: fatality, multiple persons injured)	Above documentation plus additional documentation as requested Health and Safety Manager or Senior Management **In addition to insurance forms	IMMEDIATELY call Safety Manager and Vice President of Operations (24/7).
Incidents Involving Personnel Other than LaBella (example: subcontractors)	Part C: Supervisor Invest. & Analysis Report Part D: Witness Statement Form Photos, Diagrams, Maps, etc.	Same verbal reporting requirements as employees.

# PART B - INCIDENT/ NEAR MISS / HAZARD REPORT

Completed by Employee with Supervisor Complete all fields. Be as specific as possible and include drawings, photos, additional narrative, as needed.					
Person Submitting Form:	Name of Affected Employee:		Employee's Supervisor:		
Employee's Division Director:	Employee's Home Office L	Employee's Home Office Location:			
<ul> <li>-An incident is an unwanted event that causes injury or illness to the body and/or involves damage to property, equipment, or th environment.</li> <li>-A near-miss is an incident in which no property was damaged and no personal injury was sustained, but where given a slight shift time or position. damage or injury easily could have occurred.</li> <li>-A hazard is an object or situation that has the potential to harm people or cause damage to property or the environment.</li> </ul>					
Technology page of the intranet	immediately for security purp		•		
Date of Event	Time of Event:	Type of Incident: Incident INear Miss IHaza	rd Project Number:		
Address of Incident:	Additional information Reg	garding Incident Location:			
immediate action taken to protect inte	ernal/internal staff)	t led up to the event and site conditions, v			
Incident involved the following ( Machines Deguipment (	,	nicles If Yes, list license Plate Nun /ironment 🔲 Chemicals 🖵 Elect			
		they contributed to/resulted in inju			
Did property or equipment damage occur:  Yes  No Approximate estimated value of damage:					
Names of all involved persons:		Witness Statements Attached (1 for each witness)(see Safety Manual 1.22):			
Did this Incident involve an inju Injured Employee Name:	ry? D Yes D No If No SSN: (last 4 digits)	- sign at bottom and provide to Su Date of Birth:	pervisor, Safety Manager and HR. Gender:		
JOD TILLE.	mployee type: ■ Full time ■ Part Time ■ On-Call/temporary	Time Employee Began Work & Time of Injury:	Phone Number:		
Type of Injury (e.g. abrasion, bruise, burn, sprain, cut, etc):		Was PPE being used & what type:			
Was medical treatment provided?		AN AA	Part of body affected: Shade all that apply or list:		
tr	employee still being eated? Yes 🛛 No				
Has employee returned to W work?	/as employee assigned: Restricted duty				
Yes No	Job transfer				
Employee Name (print):		Signature:	Date:		
Supervisor Name (print):		Signature:	Date:		

## PART C - SUPERVISOR INVESTIGATION & ANALYSIS REPORT

Completed by Supervisor with Input by Safety Manager and Others as Needed				
Date of Event	Time of Event:	Type of Event: Incident Near Miss I Hazard	Date of this Report:	
Event Location:	Project Number:	Supervisor:	Title:	
Description of Incident:				
Incident involved the following (	check all that apply): 🛛 🖬 Vehicl	les If Yes, list license Plate N	umbers:	
	🗖 Tools 🔲 Property 🖵 Enviro	nment 🛛 Chemicals 🖵 Ele	ctronic Equipment 🛛 🛛 Wildlife	
EMPLOYEE & INJURY INFORMA				
Involved Employee:	Employee Age:	Employee Gender:	Date of Hire:	
Was employee injured:	If Yes, describe injury:			
🗖 Yes 🗖 No				
Date last worked:	Date returned to work:	Was employee assigned:		
		Restricted duty  Job t	ransfer 🛛 Days away from work	
Hospital/Clinic Name:	Doctor name:	Type of Injury:		
INVOLVED PARTIES and WIT	NESSES			
Names of all involved persons:	Witnesses (name and contac	ct information): W/itness Sta	atements Attached? 🗖 Yes 📮 No	
		Withess Ste		
PROPERTY DAMAGE				
Did property damage occur?	If Yes, what is nature of dam	age and what inflicted the dan	nage:	
🖬 Yes 🖬 No				
Cost to repair damage: Repercussions from damage:				
INCIDENT DESCRIPTION				
Describe what happened. (Invest happened, what happened, and I			ed, when and where the incident	
What PPE was being used at the time of the event and was it appropriate?		propriate?		
Is there a task that applies to the incident occurred?	e <b>task</b> being performed when the	e injury or Ves Vo		
I <u>f Yes, review the THA</u> , answer the report. If no, please explain why th				
Were hazards sufficiently identifi	ied? If not, please explain.	🛛 Yes 🗖 No		
Were identified controls adequa	te and implemented? If not, plea	se explain. 🛛 Yes 🗖 No		
Were the identified controls not i	mplemented? If not, please expl	ain. 🖸 Yes 🖬 No		

# **PART C - SUPERVISOR INVESTIGATION & ANALYSIS REPORT**

Root Cause (What was th	he root cause of the	, , ,					
Jnsafe Acts	Ur	safe Conditions		Manag	ement	System Defici	encies
Improper Work Technique		Poor Workstation Desig	gn or Layout			ten Procedures c	
Improper PPE, Not Used or	r Used Incorrectly 🏼			🖵 Safet	□ Safety Rules Not Enforced		
Safety Rule Violation		Congested Work Area			Hazards Not Identified		
Operating Without Authoriz	zation 🛛	Hazardous Substances			PPE Unavailable		
Failure to Warn or Secure		Inadequate Ventilation		🗖 Insuf	Insufficient Worker Training		
Operating at Improper Spe	eds 🛛	Improper Material Stora	age	🗖 Insuf	Insufficient Supervisor Training		
By-Passing Safety Devices	; <b>D</b>	Improper Tool or Equip	ment	🗖 Impro	Improper Maintenance		
Guards Not Used		Insufficient Job Knowle	dge	🗖 Inade	Inadequate Supervision		
Improper Loading or Place	ement 🛛	Slippery Conditions		🗖 Insuf	Insufficient Job Planning		
Improper Lifting		Poor Housekeeping		🗖 Inade	Inadequate Hiring Practices		
Servicing or Adjusting Mac	chinery in Motion	Excessive Noise		🖵 Poor	Proces	s Design	
🛾 Horseplay		Inadequate Guarding o	f Hazards	🗖 Inade	quate `	Workplace Inspe	ctions
Drug or Alcohol Use		Defective Tools/Equip	ment	🖵 Inade	<ul> <li>Inadequate Equipment</li> </ul>		
Unsafe Act(s) of Others		Insufficient Lighting		🖵 Unsa	e Desi	gn or Constructic	'n
Unnecessary Haste		Inadequate Fall Protect	ion	🖵 Unre	alistic S	cheduling	
Other:		Other:		🖵 Othe	:		
Contributing Cause(s)	(Conditions that ma	de the incident more	likelv)	I			
Actions to Prevent Re	<b>currence</b> (Be specif	ic as to what would pre	vent injury,	incident or damage	from re	ecurrence) (use e	extra page if needec
	<b>FRACKING (All Bl</b> orr will be taken to		d In and II		<b>fiable</b> Actu		extra page if needec Follow-up Date
CORRECTIVE ACTION 1 List action(s) that have o	<b>FRACKING (All Bl</b> orr will be taken to	ocks Must be Filled	d In and II	nformation Ver	<b>fiable</b> Actu	<b>-)</b> ual Completion	
CORRECTIVE ACTION 1 List action(s) that have o	<b>FRACKING (All Bl</b> orr will be taken to	ocks Must be Filled	d In and II	nformation Ver	<b>fiable</b> Actu	<b>-)</b> ual Completion	
CORRECTIVE ACTION 1 List action(s) that have o prevent a recu	FRACKING (All Bld r will be taken to Irrence.	ocks Must be Filled	d In and II	nformation Ver	<b>fiable</b> Actu	<b>-)</b> ual Completion	
CORRECTIVE ACTION 1 List action(s) that have o	FRACKING (All Bld r will be taken to Irrence.	ocks Must be Filled	d In and II	nformation Ver	<b>fiable</b> Actu	<b>-)</b> ual Completion	
CORRECTIVE ACTION T List action(s) that have o prevent a recu	FRACKING (All Blo r will be taken to irrence.	ocks Must be Filled	<b>d In and I</b>	nformation Ver	<b>fiable</b> Actu	e) ual Completion Date	
CORRECTIVE ACTION T List action(s) that have o prevent a recu INVESTIGATOR SIGNATU Signature:	JRES:	ocks Must be Filled	d In and Ii	nformation Ver	<b>fiable</b> Actu	e) ual Completion Date	
CORRECTIVE ACTION T List action(s) that have o prevent a recu INVESTIGATOR SIGNATU Signature: Signature:	TRACKING (All Bld r will be taken to irrence. JRES: Name; Name;	ocks Must be Filled	Title;	nformation Ver	<b>fiable</b> Actu	e) ual Completion Date	

## **PART D – WITNESS STATEMENT FORM**

Date of Incident:	Date of this Statement:
Name of Witness:	
Name of Interviewer:	
Instructions: Witness statements should If the interviewer writes the statement for completely before signing this form. Dele changes must be initialed by the witness.	be fact based and when possible written by the witness. the witness, the witness must review the statement ations must be lined out and initialed by the witness. All
Statement:	
Witness Signature & Date:	
Interviewer Signature & Date:	
	orm, the interviewer should print "refused to sign" and the date ne Witness Signature line.