TERRADYN CONSULTANTS, LLC

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October 2, 2023 Project #23-003

Werner Gilliam, Director of Planning & Development
Town of Kennebunkport
6 Elm Street
Kennebunkport, ME 04046

SUBJECT: PRELIMINARY SUBDIVISION APPLICATION
WILDES DISTRICT SUBDIVISION

Dear Werner:

On behalf of Beachwood Development Fund LP, attached is a Preliminary Subdivision Plan application for a proposed 3-lot single-family residential subdivision located on Wildes District Road in Kennebunkport. We met with the planning board for a pre-application sketch plan review on June 7, 2023 and have further developed the plan in accordance with the requirement of the Kennebunkport Subdivision Ordinance. The preliminary subdivision application form is included in Attachment 1, and the current deed for the property is provided in Attachment 2. The applicant, Beachwood Development Fund LP has a purchase and sale agreement on the parcel which is also included in Attachment 2.

EXISTING PROJECT SITE

The project site is approximately 4.14 acres in size and is identified as lot 9-10-23 on Kennebunkport Tax Map 23-3. The site is located in the Village Residential Zone (VR).

The site is largely undeveloped woodland with pockets of freshwater wetland. Wetlands were delineated onsite by Longview Partners on October 3, 2022. An existing access drive and CMP pole line with overhead wires exist on the site as well.

Longview identified one potential vernal pool in the southwestern corner of the parcel. The pool was not studied in the official identification period as defined by MDEP (Maine Department of Environmental Protection) and, as such, is conservatively considered as a significant vernal pool until otherwise determined. More information on the vernal pool is provided in Attachment 5.

The net residential area of the parcel was calculated to be 2.81 acres. The minimum lot size within the VR district 40,000 sf, based on this calculation the site can support up to 3 lots.

The project site is not located within a mapped significant sand and gravel aquifer or in an area of flood hazard, according to the Federal Insurance Rate Map FM2301700003B. The following existing conditions figures with the project site identified are provided in Attachment 3.

Wildes District Subdivision Existing Conditions Figures	
Figure 1	USGS Topo Map
Figure 2	Aerial Photo
Figure 3	NRCS Medium Intensity Soil Survey
Figure 4	FEMA Flood Insurance Rate Map
Figure 5	Significant Sand & Gravel Aquifer Map

PROPOSED PROJECT

The applicant is proposing to develop an three-lot single-family residential subdivision on the site. The proposed lots and infrastructure will extend from Wildes District Road, along the eastern portion of the site to limit potential impact to the wetland located near the beginning of the road. Proposed lots are all approximately 40,000 sf in size and 27,357 sf will be preserved as open space. The proposed lots will be accessed off Wildes District Road, via a new 588 linear-foot road, designed to meet the town's minor street standard within a growth designated area, with 10' paved lanes and slipform concrete curb on both sides.

Lots will connect to the public sewer system located within Wildes District Road, and will be served by an extension of the Kennebunk, Kennebunkport, and Wells Water District's (KKWWD) water main in Wildes District Road. Electric and telecommunications services will be installed underground from Wildes District Road. A streetlight will be located near the proposed hammerhead, a catalog cutsheet of the proposed streetlight is provided in Attachment 11.

A hydrant is located approximately 200' to the southwest along Wildes District Road from the site entrance, combined with the road length of 588 feet for a total of 788 feet from the hydrant to the end of the road. The house within Lot 3 is expected to be constructed within 200' of the end of the proposed road, the total length required to reach Lot 3 is less than 1,000'. An additional hydrant within the subdivision is not expected to be required.

The project was designed to meet the stormwater performance standards of the Town of Kennebunkport Subdivision Regulations. Stormwater runoff from the roadway will be managed with a closed storm drain system. Stormwater runoff from the proposed roadway, Lot 1, and Lot 2 will drain to an existing manmade pond off site. The storage in the existing pond will help attenuate peak flows from the roadway and Lot 1, and 2 developed areas so peak discharge rates will be limited to pre-development levels. Lot 3 will discharge to an existing culvert leaving the site to the south. Peak rates of stormwater runoff from the site will be limited to pre-development levels. More information on stormwater runoff is provided in the Stormwater Management Report located in Attachment 6.

WAIVERS

The project will require the following two waivers from the Design Guidelines of the Kennebunkport Subdivision Regulations in accordance with §415-14.1.

§415-12.2.B(3)(b)[4]
The applicant requests that the Planning Board waive the requirement that road side slopes be no steeper than 3' horizontal to 1' vertical (3:1). The proposed design includes 2:1 road side slopes in areas where the proposed road crosses wetland areas in order to minimize the area of impact.

§415-12.2.B(2)(j)
The applicant requests that the Planning Board waive the requirement that sidewalks be installed along the proposed road. The project site is located within a growth area, however there are no sidewalks on Wildes District Road within the vicinity of the site. Due to the minor number of lots created as a result of this project, pedestrians are expected to be able to safely walk along the side of the proposed road.

§415-7.2 (D)(10)
The applicant requests the Planning Board waive the requirement for a high intensity soil survey. The project will utilize a connection to the public sewer system and will not require subsurface disposal.

None of the waivers will have the effect of nullifying the intent and purpose of the Comprehensive Plan and subsequent amendments or revisions, Chapter 240, Land Use or the Subdivision Regulations. The criteria of the subdivision statute will be met by the proposed subdivision, as designed.

CLOSURE

In addition to the information provided above, the materials listed below are attached to meet the submission requirements of the Kennebunkport Subdivision Regulations. We request to be added to the Planning Board's November 15th meeting agenda to present this information to the Board and begin review of the project. If you have any questions or require additional information, please contact me at 207-632-9010 or mtw@terradynconsultants.com.

Sincerely,
TERRADYN CONSULTANTS, LLC

Michael Tadema-Wielandt, P.E.
Vice President

cc. Geoff Bowley, Beachwood Development Fund LP

Attachments:
1 – Application Forms & Agent Authorization Letter
2 – Current Property Deed, Purchase & Sale Agreement
3 – Existing Conditions Figures
4 – KKW Correspondence
5 – Kennebunkport Sewer Correspondence
6 – Stormwater Management Report
7 – Wetland & Vernal Pool Delineation
8 – Traffic Generation
9 – Financial Capacity
10 – Correspondence with State Agencies
11 – Street Light Specification

Attachment 1

Application Form & Agent Authorization Letter

APPLICATION FOR SUBDIVISION
KENNEBUNKPORT PLANNING BOARD

Preliminary Plan Application ☑ **Final Plan Application** ☐

PROPOSED SUBDIVISION NAME: Wildes District Subdivision

APPLICANT INFORMATION

Property Owner: Michael D. Prendergast
Address: 789 Ridgefield Road
Wilton, CT 06897
Phone: _____ Email: _____

Applicant/
Authorized Agent
Name: Beachwood Development Fund LP
Address: P.O. Box 261
Kennebunk, ME 04043
Phone: 207-958-3646 Email: geoff@bowleybuilders.com

**** Please be sure to include a Letter of Authority if you are the Agent****

If applicant is a corporation, check if licensed in Maine: Yes ☐ No ☑ and attach a copy of State's "Certificate of Good Standing".

Land surveyor, engineer, architect or others preparing plan: _____
Michael Tadema-Wielandt, P.E.
Address: 565 Congress Street Suite 201

Phone: 207-632-9010 Email: mtw@terradynconsultants.com

Please provide proof of the applicant(s) legal interest in the property to be developed? Please provide one of the following:

- A copy of the recorded Deed.
- Executed Purchase and Sales Agreement.

LAND INFORMATION

Location of Property: Wildes District Road
street address

Assessor's Tax Maps: Map: 23-003 Block: _____ Lot(s) 9-10-23
Registry of Deeds: Book: 16177 Page: 988

Zoning District? Village Residential District

Resource Protection ☐ Shoreland Zone ☐

Is any portion of the property withing two hundred fifty (250) feet of the high water mark of a pond, river or saltwater body? Yes ☐ No ☐

Total acreage of parcel: 4.1
Acreage to be developed: 1.95

Has this land been part of a prior approved subdivision? Yes ☐ No ☑
Or part of other divisions within the past 5 years? Yes ☐ No ☑

Identify existing uses of land (farmland, woodlot, etc.): Forsted Undeveloped

Does the parcel include any water bodies? Yes ☐ No ☑

Is any portion of the property within a special flood hazard area as identified by the Federal Emergency Management Agency (FEMA)? Yes ☐ No ☑

List the names and addresses of abutting property owners within 200' on a separate sheet and attach to this application.

GENERAL INFORMATION

Proposed name of development: Wildes District Subdivision

Number of lots or units: 3

Anticipated date for construction: Spring 2024

Anticipated date of completion: Fall 2024

Does this development require extension of public infrastructure: Yes ☑ No ☐

If yes, what?

- ☐ Roads
- ☑ Water Lines
- ☐ Other
- ☐ Fire Protect
- ☐ Storm Drainage
- ☑ Sewer Lines
- ☐ Sidewalks

Estimated cost for infrastructure improvements: $ 250,000

Identify method for water supply to the proposed development:

- ☐ Individual Wells
- ☑ Public Water Supply
- ☐ Central Well w/Distribution
- ☐ Other (please state alternative)

Identify method of sewage disposal to the proposed development:

- ☐ Individual Septic Tanks
- ☐ Central On-site Disposal w/Distribution Lines
- ☑ Connection to Public Sewer
- ☐ Other (please state alternative)

Identify method of fire protection for the proposed development:

- ☑ Hydrants connected to the public water system
- ☐ Dry hydrants located on existing pond or water body
- ☐ Existing fire pond
- ☐ Individual Fire Suppression System
- ☐ Other (please state alternative)

Does the applicant propose to dedicate to the public any streets, recreation or common lands?

If any:

Streets	Yes ☐	No ☑	Estimated Length _____
Recreation Area	Yes ☐	No ☑	Estimated Acreage _____
Common Land(s)	Yes ☐	No ☑	Estimated Acreage _____

Does the applicant intend to request waivers of any of the subdivision submission requirements? If yes, list them and state reasons for the request:

Waive road side slope maximum from 3:1 down to 2:1 within wetland crossing areas to reduce the area of impact

Waive the requirement for a high intensity soil survey, subdivison will connect to the public sewer system

Waive the requirement for sidewalks along the proposed road. There are no sidewalks along Wildes District Road in the vicinity of the parcel, the minor amount of lots created should allow for pedestrian safety along the road.

To the best of my knowledge, all the above stated information submitted in this application is true and correct.

Signature Michael E Wielandt Date 10/2/2023

Printed name Michael Tadema-Wielandt, P.E.

For Office Use Only

Date Received: _____

Application Fee: _____
Lot/Dwelling Fee: _____
Legal Notice Posting Fee: _____
Postage Fee: _____
Paid by (payment type/name): _____
Escrow Funds: _____
Escrow Funds Lot/Dwelling: _____

September 14, 2023

Michael Tadema-Wielandt, P.E.
Terradyn Consultants, LLC
565 Congress Street, Suite 201
Portland, ME 04101

Agent Authorization for Local, State and Federal Permitting
Wildes District Subdivision, Kennebunkport, Maine

Dear Mike,

On behalf of Beachwood Development Fund LP, I hereby authorize Terradyn Consultants, LLC to act on my behalf as my agent in the processing of the required local, state, and federal permit applications related to the proposed subdivision of Wildes District in Kennebunkport and to furnish, upon request, supplemental information in support of these applications.

Sincerely,

Geoff Bowley
Beachwood Development Fund LP

Parcel Number	GIS Number	Cama Number	Property Address	Owner Name	Co-Owner Name	Owner Address	Owner Address 2	Owner City	Owner State	Owner Zip
8-3-18A	101702	8-3-18A	14 ROCKY PASTURE LANE	CAIN, RONALD B, JR & TERESA L		14 ROCKY PASTURE LANE		KENNEBUNKPORT	ME	04046
8-3-18B	103922	8-3-18B	WILDES DISTRICT ROAD	WEST, JOSHUA & STACY		80 WEST LANE		ARUNDEL	ME	04046
8-3-18C	104042	8-3-18C	WILDES DISTRICT ROAD	WEST, JOSHUA & STACY		80 WEST LANE		ARUNDEL	ME	04046
8-3-27	272	8-3-27	39 ROCKY PASTURE LANE	RPF, LLC		9100 WILSHIRE BLVD, 1000 W		BEVERLY HILLS	CA	90212
8-3-27C	275	8-3-27C	WILDES DISTRICT ROAD	JOHN D ZIMMERMANN REALTY TRUST		PO BOX 1049		KENNEBUNKPORT	ME	04046
8-3-27D	276	8-3-27D	7 ROCKY PASTURE LANE	SCHOFIELD, BETTE		PO BOX 1049		KENNEBUNKPORT	ME	04046
9-10-11	514	9-10-11	11 DAISY LANE	JODOIN, RICHARD W & JANET S		PO BOX 2551		KENNEBUNKPORT	ME	04046
9-10-16	516	9-10-16	WILDES DISTRICT ROAD	THIBODEAU, ROBERT		PO BOX 1805		KENNEBUNKPORT	ME	04046
9-10-19	518	9-10-19	49 WILDES DISTRICT ROAD	THIBODEAU, MARGUERITE E		PO BOX 1805		KENNEBUNKPORT	ME	04046
9-10-20	519	9-10-20	47 WILDES DISTRICT ROAD	BEES KNEES KENNEBUNKPORT, LLC		C/O JAMES P. VESENKA	47 WILDES DISTRICT ROAD	KENNEBUNKPORT	ME	04046
9-10-22	520	9-10-22	33 WILDES DISTRICT ROAD	GUAY, KATHRYN ANN		33 WILDES DISTRICT ROAD		KENNEBUNKPORT	ME	04046
9-10-22A	521	9-10-22A	35 WILDES DISTRICT ROAD	PRENDERGAST, MICHAEL D JR & KATHRYN L		158 GREENS FARMS ROAD		WESTPORT	CT	06880
9-10-22A	521	9-10-22A	35 WILDES DISTRICT ROAD	PRENDERGAST, MICHAEL D JR & KATHRYN L		944 PEQUOT AVE		SOUTHPORT	CT	06890
9-10-22A	521	9-10-22A	35 WILDES DISTRICT ROAD	PRENDERGAST, MICHAEL D JR & KATHRYN L		158 GREENS FARMS ROAD		WESTPORT	CT	06880
9-10-22A	521	9-10-22A	35 WILDES DISTRICT ROAD	PRENDERGAST, MICHAEL D JR & KATHRYN L		944 PEQUOT AVE		SOUTHPORT	CT	06890
9-10-7	512	9-10-7	1 CRESTVIEW LANE	GRIGGS, DONALD G		11 FORESTER AVENUE		WARWICK	NY	10990
9-10-9	513	9-10-9	6 DAISY LANE	RAYWORTH, DOUGLAS W & LINDA L		3 REGAN CIRCLE		WEST BOYLSTON	MA	01583
9-4-22	416	9-4-22	2 WOODLAWN AVENUE	FYUGO 1ST FAMILY TRUST		2 WOODLAWN AVENUE		KENNEBUNKPORT	ME	04046
9-4-23	417	9-4-23	34 WILDES DISTRICT ROAD	MAGRI, ALICIA F		34 WILDES DISTRICT ROAD		KENNEBUNKPORT	ME	04046
9-4-24	418	9-4-24	42 WILDES DISTRICT ROAD	PAQUETTE, MARK R & CYNTHIA S		PO BOX 1418		KENNEBUNKPORT	ME	04046
9-4-25	419	9-4-25	46 WILDES DISTRICT ROAD	PERKINS, DONALD F & JEAN M		PO BOX 2656		KENNEBUNKPORT	ME	04046-2656
9-4-26	420	9-4-26	50 WILDES DISTRICT ROAD	AMES, TIMOTHY S		50 WILDES DISTRICT ROAD		KENNEBUNKPORT	ME	04046
9-4-60	451	9-4-60	1 WAKEFIELD PASTURE ROAD	BOWEN, ROBERT M & ANNE L		26 JOHN CARVER RD		READING	MA	01867
9-4-76	3424	9-4-76	2 WAKEFIELD PASTURE ROAD	BILLINGS, MARILYN		2 WAKEFIELD PASTURE ROAD		KENNEBUNKPORT	ME	04046

Attachment 2

Current Property Deed & Purchase and Sale Agreement

Doc# 2011042403
Bk 16177 Pg 988 - 989
Received York SS
10/07/2011 9:36AM
Debra L. Anderson
Register of Deeds

WARRANTY DEED
Maine Statutory Short Form

KNOW ALL MEN BY THESE PRESENTS,

THAT **WESLEY H. PHILLIPS**, of the Town of Kennebunkport, County of York, State of Maine,

for consideration paid,

grant to **MICHAEL D. PRENDERGAST** of Wilton, State of Connecticut, whose mailing address is 789 Ridgefield Road, Wilton, CT 06897 with **warranty covenants**, the land in Kennebunkport, County of York, State of Maine, described as follows:

A certain lot or parcel of land situated on the southeasterly side of the Wildes district Road in the Town of Kennebunkport, County of York and State of Maine, bounded and described as follows:

Beginning on the southeasterly sideline of the Wildes District Road at the northerly corner of land conveyed by Marjorie M. Ellis to Wesley H. Phillips, et al. by deed dated August 21, 1974 and recorded in York County Registry of Deeds in Book 2050, Page 64;

Thence northeasterly by the Wildes District Road one hundred twenty four (124) feet, more or less, to the northwesterly corner of land conveyed by William H. Sawyer to William H. Rankin by deed dated December 21, 1883 and recorded in said Registry of Deeds in Book 396, Page 163;

Thence southerly by said Rankin land six hundred ninety five (695) feet, more or less, to an angle in the northerly sideline of land conveyed by Marjorie M. Ellis, et al. to Anthony L. Gelardi, et al. by deed dated December 5, 1975 and recorded in said Registry of Deeds in Book 2107, Page 589;

Thence South 83° 23' 30" West by said Gelardi land two hundred ninety five and thirty three hundredths (295.33) feet to an iron pipe;

Thence North 39° 35' 30" West by said Gelardi land two hundred seventy five and forty hundredths (275.40) feet to an iron pope;

Thence North 8° 32' 30" West by said Gelardi land one hundred ninety three and forty four hundredths (193.44) feet to an iron pipe at an angle in the westerly sideline of said Phillips land;

Thence South 32° 57' East by said Phillips land two hundred sixteen and seventy eight hundredths (216.78) feet to a pipe;

Thence North 56° 26' 30" East by said Phillips land one hundred forty four and fifteen hundredths (144.15) feet to an iron rod;

Thence North 57° 49' 30" East by said Phillips land one hundred thirty and seventy eight hundredths (130.78) feet to an iron rod;

Thence North 23° 7' 30" East by said Phillips land one hundred thirty and fifty five hundredths (130.55) feet to an iron rod;

Thence North 11° East by said Phillips land one hundred and thirty eight hundredths (100.38) feet to a drill hole in ledge;

Thence North 15° East by said Phillips land one hundred eight and sixteen hundredths (108.16) feet to the point of beginning.

Maine R.E. Transfer Tax Paid

The above described courses are magnetic as of the year 1974.

This conveyance is made subject to the rights and privileges conveyed by Anna Mosser Roberts to Central Maine Power Company and New England Telephone and Telegraph Company by deed dated October 2, 1959 and recorded in said Registry of deeds in Book 1408, Page 147.

Being the same premises conveyed to Wesley H. Phillips by deed of the estate of Marjorie M. Ellis dated February 4, 1982 and recorded in the York County Registry of Deeds in Book 2959, Page 124.

IN WITNESS WHEREOF, I, the said **Wesley H. Phillips**, have hereunto set my hand and seal, this 6th day of October, 2011.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

_____ Wesley H. Phillips

STATE OF MAINE
YORK, ss. October 6th, 2011

Then personally appeared the above named **Wesley H. Phillips** and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Bryce W. Ingraham, Attorney at Law

RETURN RECORDED DOCUMENT TO:

End of Document

Ingraham Title, 338 Main St, Saco 04072

PURCHASE AND SALE AGREEMENT - LAND ONLY

("days" means business days unless otherwise noted, see paragraph 20)

July 26 8.14.22, 2022 SSB
Offer Date

_____, _____ Effective Date
Effective Date is defined in Paragraph 20 of this Agreement.

1. PARTIES: This Agreement is made between **Beachwood Development Fund, LP or assigns** ("Buyer") and **Michael D. Prendergast** ("Seller").

2. DESCRIPTION: Subject to the terms and conditions hereinafter set forth, Seller agrees to sell and Buyer agrees to buy [X] all [ ] part of (if "part of" see para. 22 for explanation) the property situated in municipality of **Kennebunkport**, County of **York**, State of Maine, located at **0 Wildes District Rd** and described in deed(s) recorded at said County's Registry of Deeds Book(s) **16177**, Page(s) **988**.

3. PURCHASE PRICE/EARNEST MONEY: For such Deed and conveyance Buyer agrees to pay the total purchase price of $**900,000.00**. Buyer [ ] has delivered; or [X] will deliver to the Agency within **3** days of the Effective Date, a deposit of earnest money in the amount $**50,000.00**. Buyer agrees that an additional deposit of earnest money in the amount of $**n/a** will be delivered **n/a**. If Buyer fails to deliver the initial or additional deposit in compliance with the above terms Seller may terminate this Agreement. This right to terminate ends once Buyer has delivered said deposit (s). The remainder of the purchase price shall be paid by wire, certified, cashier's or trust account check upon delivery of the Deed.

This Purchase and Sale Agreement is subject to the following conditions:

8.17.22 SSB.

4. ESCROW AGENT/ACCEPTANCE: **Legacy Properties Sotheby's International Realty** ("Agency") shall hold said earnest money and act as escrow agent until closing; this offer shall be valid until **July 29, 2022** (date) **5** [ ] AM [X] PM; and, in the event of non-acceptance, this earnest money shall be returned promptly to Buyer.

5. TITLE AND CLOSING: A deed, conveying good and merchantable title in accordance with the Standards of Title adopted by the Maine Bar Association shall be delivered to Buyer and this transaction shall be closed and Buyer shall pay the balance due and execute all necessary papers on **TBD** (closing date) or before, if agreed in writing by both parties. If Seller is unable to convey in accordance with the provisions of this paragraph, then Seller shall have a reasonable time period, not to exceed 30 calendar days, from the time Seller is notified of the defect, unless otherwise agreed to in writing by both Buyer and Seller, to remedy the title. Seller hereby agrees to make a good-faith effort to cure any title defect during such period. If, at the later of the closing date set forth above or the expiration of such reasonable time period, Seller is unable to remedy the title, Buyer may close and accept the deed with the title defect or may terminate this Agreement in which case the parties shall be relieved of any further obligations hereunder and any earnest money shall be returned to the Buyer.

6. DEED: The property shall be conveyed by a **Warranty** deed, and shall be free and clear of all encumbrances except covenants, conditions, easements and restrictions of record which do not materially and adversely affect the continued current use of the property.

7. POSSESSION: Possession of premises shall be given to Buyer immediately at closing unless otherwise agreed in writing.

8. RISK OF LOSS: Until the closing, the risk of loss or damage to said premises by fire or otherwise, is assumed by Seller. Buyer shall have the right to view the property within 24 hours prior to closing for the purpose of determining that the premises are in substantially the same condition as on the date of this Agreement.

9. PRORATIONS: The following items, where applicable, shall be prorated as of the date of closing: rent, association fees, (other) **n/a**. Real estate taxes shall be prorated as of the date of closing (based on municipality's fiscal year). Seller is responsible for any unpaid taxes for prior years. If the amount of said taxes is not known at the time of closing, they shall be apportioned on the basis of the taxes assessed for the preceding year with a reapportionment as soon as the new tax rate and valuation can be ascertained, which latter provision shall survive closing. Buyer and Seller will each pay their transfer tax as required by State of Maine.

10. DUE DILIGENCE: Buyer is encouraged to seek information from professionals regarding any specific issue or concern. Neither Seller nor Licensee makes any warranties regarding the condition, permitted use or value of Sellers' real property. This Agreement is subject to the following contingencies, with results being satisfactory to Buyer:

 Buyer(s) Initials DS _____ _____ Seller(s) Initials DS MDP _____ _____

CONTINGENCY	YES	NO	FULL RESOLUTION	OBTAINED BY	TO BE PAID FOR BY
1. SURVEY Purpose:	☐	☐	within ____ days		
2. SOILS TEST Purpose:	☐	☐	within ____ days		
3. SEPTIC SYSTEM DESIGN Purpose:	☐	☐	within ____ days		
4. LOCAL PERMITS Purpose:	☐	☐	within ____ days		
5. HAZARDOUS WASTE REPORTS Purpose:	☐	☐	within ____ days		
6. UTILITIES Purpose:	☐	☐	within ____ days		
7. WATER Purpose:	☐	☐	within ____ days		
8. SUB-DIVISION APPROVAL Purpose:	☐	☐	within ____ days		
9. DEP/LUPC/ACOE APPROVALS Purpose:	☐	☐	within ____ days		
10. ZONING VARIANCE Purpose:	☐	☐	within ____ days		
11. HABITAT REVIEW/ WATERFOWL Purpose:	☐	☐	within ____ days		
12. REGISTERED FARMLAND Purpose:	☐	☐	within ____ days		
13. MDOT DRIVEWAY/ ENTRANCE PERMIT Purpose:	☐	☐	within ____ days		
14. DEED RESTRICTION Purpose:	☐	☐	within ____ days		
15. TAX STATUS* Purpose:	☐	☐	within ____ days		
16. BUILD PACKAGE Purpose:	☐	☐	within ____ days		
17. OTHER Purpose:	☐	☐	within ____ days		

* If the land is enrolled in the Maine Tree Growth Tax program, Seller agrees to provide Buyer with the current Forest Management and Harvest Plan within _____ days. ☐ Yes ☒ No

Further specifications regarding any of the above:

Unless otherwise specified above, all of the above will be obtained and paid for by Buyer. Seller agrees to cooperate with Buyer and shall give Buyer and Buyer's agents and consultants reasonable access to the property in order to undertake the above investigations. Buyer agrees to take reasonable steps to return the property to its pre-inspection condition. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer in Buyer's sole discretion, Buyer will declare the Agreement null and void by notifying Seller in writing within the specified number of days, and any earnest money shall be returned to Buyer. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer, and Buyer wishes to pursue remedies other than voiding the Agreement, Buyer must do so to full resolution within the time period set forth above; otherwise this contingency is waived. If Buyer does not notify Seller that an investigation is unsatisfactory within the time period set forth above, or if any investigation under this paragraph is not performed or completed during the period specified in this paragraph, this contingency and the right to conduct an investigation are waived by Buyer. In the absence of inspection(s) mentioned above, Buyer is relying completely upon Buyer's own opinion as to the condition of the p

DS DS

11. FINANCING: Buyer's obligation to close:

Not Subject to Financing

☐ is not subject to a financing contingency. Buyer has provided Seller with acceptable proof of the funds.

☐ is not subject to a financing contingency. Buyer shall provide proof of the funds acceptable to Seller within 5 days. If such proof is unacceptable to Seller, Seller may terminate this Agreement no later than 1 days from receipt. If proof of funds is not provided within such time period, Seller may terminate this Agreement which right shall end once such proof is received, however Seller retains the agreed upon time period to terminate if such proof is unacceptable. If Seller terminates in either case, the earnest money shall be returned to Buyer.

☐ Buyer's ability to purchase ☐ is ☒ is not subject to the sale of another property. See addendum ☐ Yes ☒ No.

Subject to Financing

☐ ~~Buyer's obligation to close is subject to financing as follows:~~

a. ~~Buyer's obligation to close is subject to Buyer obtaining a _____ loan of _____% of the purchase price, at an interest rate not to exceed _____% and amortized over a period of _____ years. Buyer is under a good faith obligation to seek and obtain financing on these terms. If such financing is not available to Buyer as of the closing date, Buyer is not obligated to close and may terminate this Agreement in which case the earnest money shall be returned to Buyer.~~

b. ~~Buyer to provide Seller with letter from lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested within _____ days from the Effective Date of the Agreement. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.~~

c. ~~Buyer hereby authorizes, instructs and directs its lender to communicate the status of the Buyer's loan application to Seller, Seller's licensee and Buyer's licensee.~~

d. ~~After (b) is met, if the lender notifies Buyer that it is unable or unwilling to provide said financing, Buyer is obligated to provide Seller with written documentation of the loan denial within two days of receipt. After notifying Seller, Buyer shall have _____ days to provide Seller with a letter from another lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.~~

e. ~~Buyer agrees to pay no more than _____ points. Seller agrees to pay up to $_____ toward Buyer's actual pre-paids, points and/or closing costs, but no more than allowable by Buyer's lender.~~

f. ~~Buyer's ability to obtain financing ☐ is ☐ is not subject to the sale of another property. See addendum ☐ Yes ☐ No.~~

g. ~~Buyer may choose to pay cash instead of obtaining financing. If so, Buyer shall notify Seller in writing including providing proof of funds and the Agreement shall no longer be subject to financing, and Seller's right to terminate pursuant to the provisions of this paragraph shall be void and Seller's obligations pursuant to 11c shall remain in full force and effect.~~

12. BROKERAGE DISCLOSURE: Buyer and Seller acknowledge they have been advised of the following relationships:

Heidi Maynard / Corey Tracy (**002283 /**) of **Pack Maynard and Associates Real Estate** (**1837**)
Licensee — MLS ID — Agency — MLS ID

is a ☐ Seller Agent ☒ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

Andi Robinson / M Elaine Prendergast (**019566 /**) of **Legacy Properties Sotheby's International Realty** (**2358**)
Licensee — MLS ID — Agency — MLS ID

is a ☒ Seller Agent ☐ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

If this transaction involves Disclosed Dual Agency, the Buyer and Seller acknowledge the limited fiduciary duties of the agents and hereby consent to this arrangement. In addition, the Buyer and Seller acknowledge prior receipt and signing of a Disclosed Dual Agency Consent Agreement.

13. PROPERTY DISCLOSURE FORM: Buyer acknowledges receipt of Property Disclosure Form.

14. DEFAULT/RETURN OF EARNEST MONEY: Buyer's failure to fulfill any of Buyer's obligations hereunder shall constitute a default and Seller may employ all legal and equitable remedies, including without limitation, termination of this Agreement and forfeiture by Buyer of the earnest money. Seller's failure to fulfill any of Seller's obligations hereunder shall constitute a default and Buyer may employ all legal and equitable remedies, including without limitation, termination of this Agreement and return to Buyer of the earnest money. Agency acting as escrow agent has the option to require written releases from both parties prior to disbursing the earnest money to either Buyer or Seller. In the event that the Agency is made a party to any lawsuit by virtue of acting as escrow agent, Agency shall be entitled to recover reasonable attorney's fees and costs which shall be assessed as court costs in favor of the prevailing party.

15. MEDIATION: Earnest money or other disputes within the jurisdictional limit of small claims court will be handled in that forum. All other disputes or claims arising out of or relating to this Agreement or the property addressed in this Agreement (other than requests for injunctive relief) shall be submitted to mediation in accordance with generally accepted mediation practices. Buyer and Seller are bound to mediate in good faith and to each pay half of the mediation fees. If a party fails to submit a dispute or claim to mediation prior to initiating litigation (other than requests for injunctive relief), then that party will be liable for the other party's legal fees in any subsequent litigation regarding that same matter in which the party who failed to first submit the dispute or claim to mediation loses in that subsequent litigation. This clause shall survive the closing of the transaction.

16. PRIOR STATEMENTS: Any representations, statements and agreements are not valid unless contained herein. This Agreement completely expresses the obligations of the parties and may only be amended in writing, signed by both parties.

 Buyer(s) Initial DS _____ _____ Seller(s) Initial DS MDP _____ _____ _____

17. HEIRS/ASSIGNS: This Agreement shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns of the Seller and the assigns of the Buyer.

18. COUNTERPARTS: This Agreement may be signed on any number of identical counterparts, such as a faxed copy, with the same binding effect as if the signatures were on one instrument. Original, faxed or other electronically transmitted signatures are binding.

19. NOTICE: Any notice, communication or document delivery requirements hereunder may be satisfied by providing the required notice, communication or documentation to or from the parties or their Licensee. Only withdrawals of offers and withdrawals of counteroffers will be effective upon communication, verbally or in writing.

20. EFFECTIVE DATE/BUSINESS DAYS: This Agreement is a binding contract when the last party signing has caused a paper or electronic copy of the fully executed agreement to be delivered to the other party which shall be the Effective Date. Licensee is authorized to fill in the Effective Date on Page 1 hereof. Except as expressly set forth to the contrary, the use of the term "days" in this Agreement, including all addenda made a part hereof, shall mean business days defined as excluding Saturdays, Sundays and any observed Maine State/Federal holidays. Deadlines in this Agreement, including all addenda, expressed as "within x days" shall be counted from the Effective Date, unless another starting date is expressly set forth, beginning with the first day after the Effective Date, or such other established starting date, and ending at 5:00 p.m. Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda, expressed as a specific date shall end at 5:00 p.m. Eastern Time on such date.

21. CONFIDENTIALITY: Buyer and Seller authorize the disclosure of the information herein to the real estate licensees, attorneys, lenders, appraisers, inspectors, investigators and others involved in the transaction necessary for the purpose of closing this transaction. Buyer and Seller authorize the lender and/or closing agent preparing the entire closing disclosure and/or settlement statement to release a copy of the closing disclosure and/or settlement statement to the parties and their licensees prior to, at and after the closing.

22. OTHER CONDITIONS: **This offer is contingent upon the following:**
1. Town approval for a 3 lot subdivision
2. Sellers agent to provide written and binding approval from owner of Rocky Pasture Lane for easement over said road to access subject property.

23. GENERAL PROVISIONS:
a. A copy of this Agreement is to be received by all parties and, by signature, receipt of a copy is hereby acknowledged. If not fully understood, contact an attorney. This is a Maine contract and shall be construed according to the laws of Maine.
b. Seller acknowledges that State of Maine law requires buyers of property owned by non-resident sellers to withhold a prepayment of capital gains tax unless a waiver has been obtained by Seller from the State of Maine Revenue Services.
c. Buyer and Seller acknowledge that under Maine law payment of property taxes is the legal responsibility of the person who owns the property on April 1, even if the property is sold before payment is due. If any part of the taxes is not paid when due, the lien will be filed in the name of the owner as of April 1 which could have a negative impact on their credit rating. Buyer and Seller shall agree at closing on their respective obligations regarding actual payment of taxes after closing. Buyer and Seller should make sure they understand their obligations agreed to at closing and what may happen if taxes are not paid as agreed.
d. Buyer acknowledges that Maine law requires continuing interest in the property and any back up offers to be communicated by the listing agent to the Seller.
e. Whenever this Agreement provides for earnest money to be returned or released, agency acting as escrow agent must comply with Maine Real Estate Commission rules which may require written notices or obtaining written releases from both parties.

24. ADDENDA: ☐ Yes ☒ No Explain: _____

Buyer(s) Initials DS _____ _____ Seller(s) Initials DS MDP _____ _____ _____

25. ELECTRONIC SIGNATURES: Pursuant to the Maine Uniform Electronic Transactions Act and Digital Signature Act, the parties authorize and agree to the use of electronic signatures as a method of signing/initialing this Agreement, including all addenda. The parties hereby agree that either party may sign electronically by utilizing an electronic signature service.

Buyer's Mailing address is _____.

BUYER **Beachwood Development Fund, LP or assigns** DATE 8.14.22 | BUYER DATE

BUYER DATE | BUYER DATE

Seller accepts the offer and agrees to deliver the above-described property at the price and upon the terms and conditions set forth and agrees to pay agency a commission for services as specified in the listing agreement.

DocuSigned by:
Michael D. Prendergast 8/17/2022
840707D87EC94D3...

t DATE | SELLER DATE

SELLER DATE | SELLER DATE

COUNTER-OFFER

Seller agrees to sell on the terms and conditions as detailed herein with the following changes and/or conditions:

The parties acknowledge that until signed by Buyer, Seller's signature constitutes only an offer to sell on the above terms and the offer will expire unless accepted by Buyer's signature with communication of such signature to Seller by (date) _____ (time) _____ ☐ AM ☐ PM.

SELLER DATE | SELLER DATE

SELLER DATE | SELLER DATE

The Buyer hereby accepts the counter offer set forth above.

BUYER DATE | BUYER DATE

BUYER DATE | BUYER DATE

EXTENSION

The closing date of this Agreement is extended until _____ DATE.

SELLER DATE | SELLER DATE

SELLER DATE | SELLER DATE

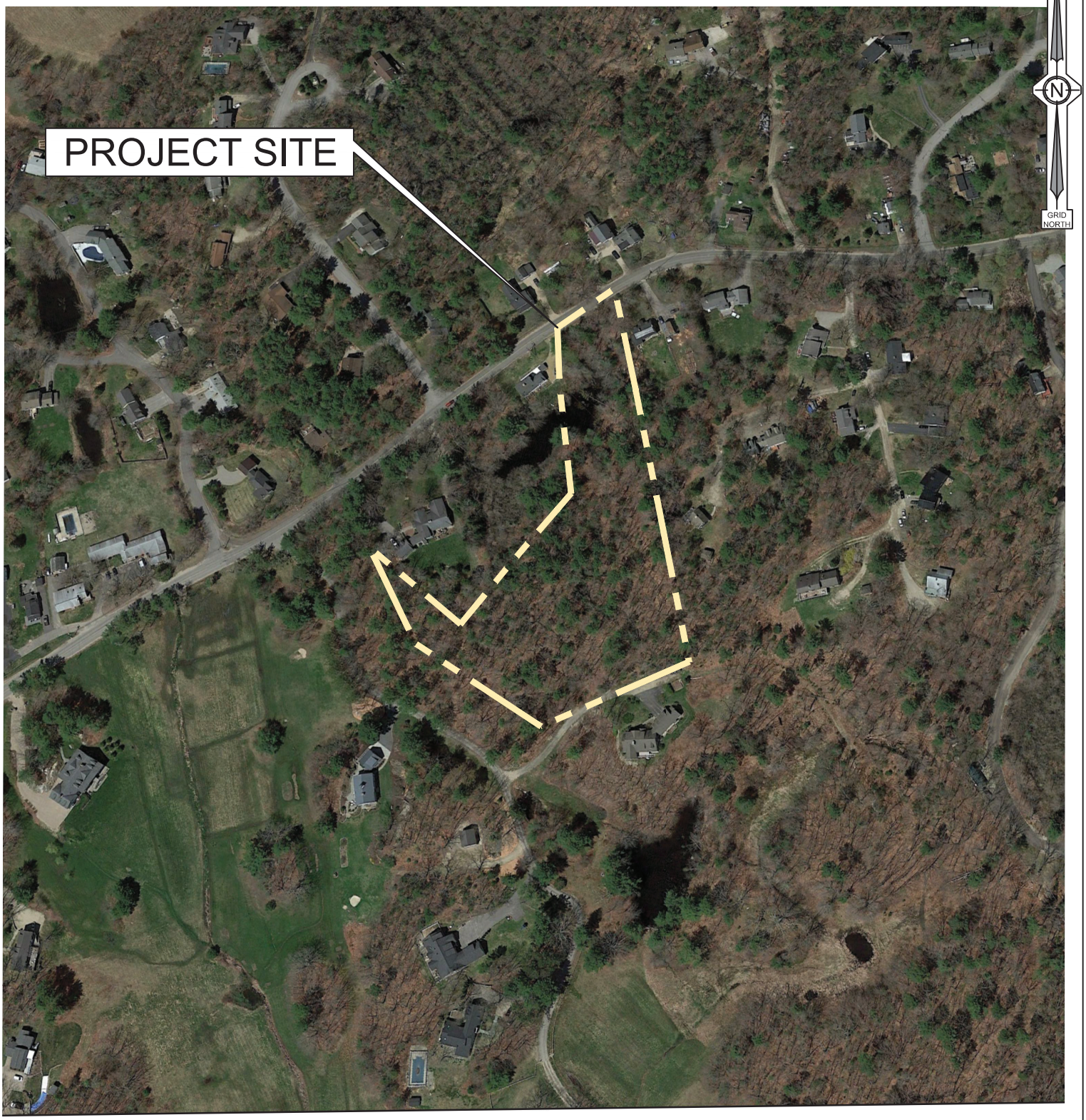
BUYER DATE | BUYER DATE

BUYER DATE | BUYER DATE

Attachment 3

Existing Conditions Figures

USGS QUADRANGLE MAP	TERRADYN CONSULTANTS, LLC	PINELAND 41 CAMPUS DRIVE, SUITE 101 NEW GLOUCESTER, ME 04260 PORTLAND 565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101	PROJECT NO. 23-003	SHEET 1
PROJECT: PROPOSED SUBDIVISION WILDES DISTRICT RD KENNEBUNKPORT			DATE 09/07/2023	OF 5
PREPARED FOR: BEACHWOOD DEVELOPMENT FUND 86 YORK STREET #3 KENNEBUNK MAINE 04043	207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com		SCALE 1"=2,000'	



AERIAL IMAGE

PROJECT:
PROPOSED SUBDIVISION
WILDES DISTRICT RD KENNEBUNKPORT

PREPARED FOR:
BEACHWOOD DEVELOPMENT FUND
86 YORK STREET #3
KENNEBUNK MAINE 04043

TERRADYN CONSULTANTS, LLC

PINELAND
41 CAMPUS DRIVE, SUITE 101
NEW GLOUCESTER, ME 04260

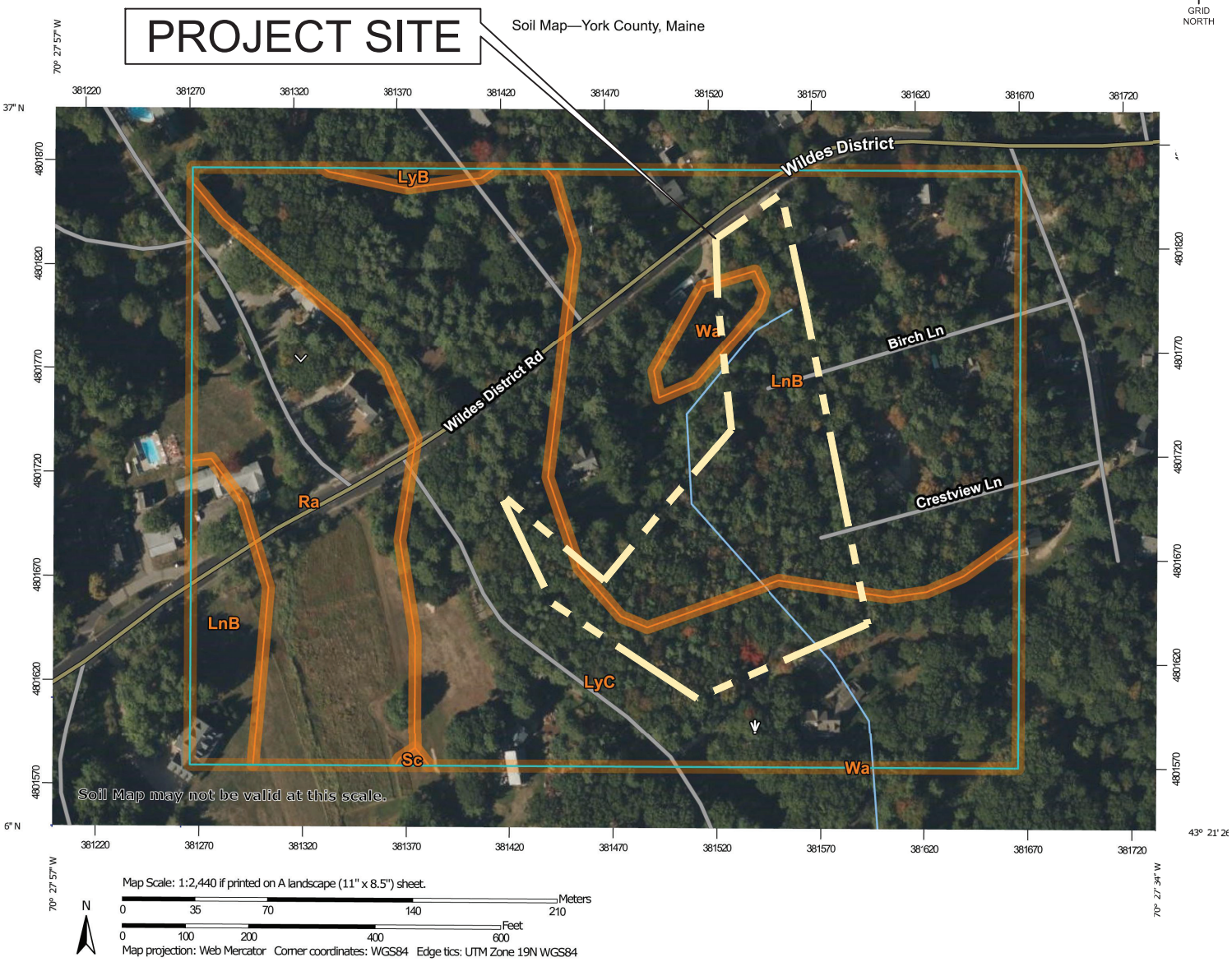
PORTLAND
565 CONGRESS STREET, SUITE 201
PORTLAND, ME 04101

207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com

PROJECT NO.	SHEET
23-003	2
DATE	OF
09/07/2023	5
SCALE	
1"=1,000'	

PROJECT SITE

Soil Map—York County, Maine

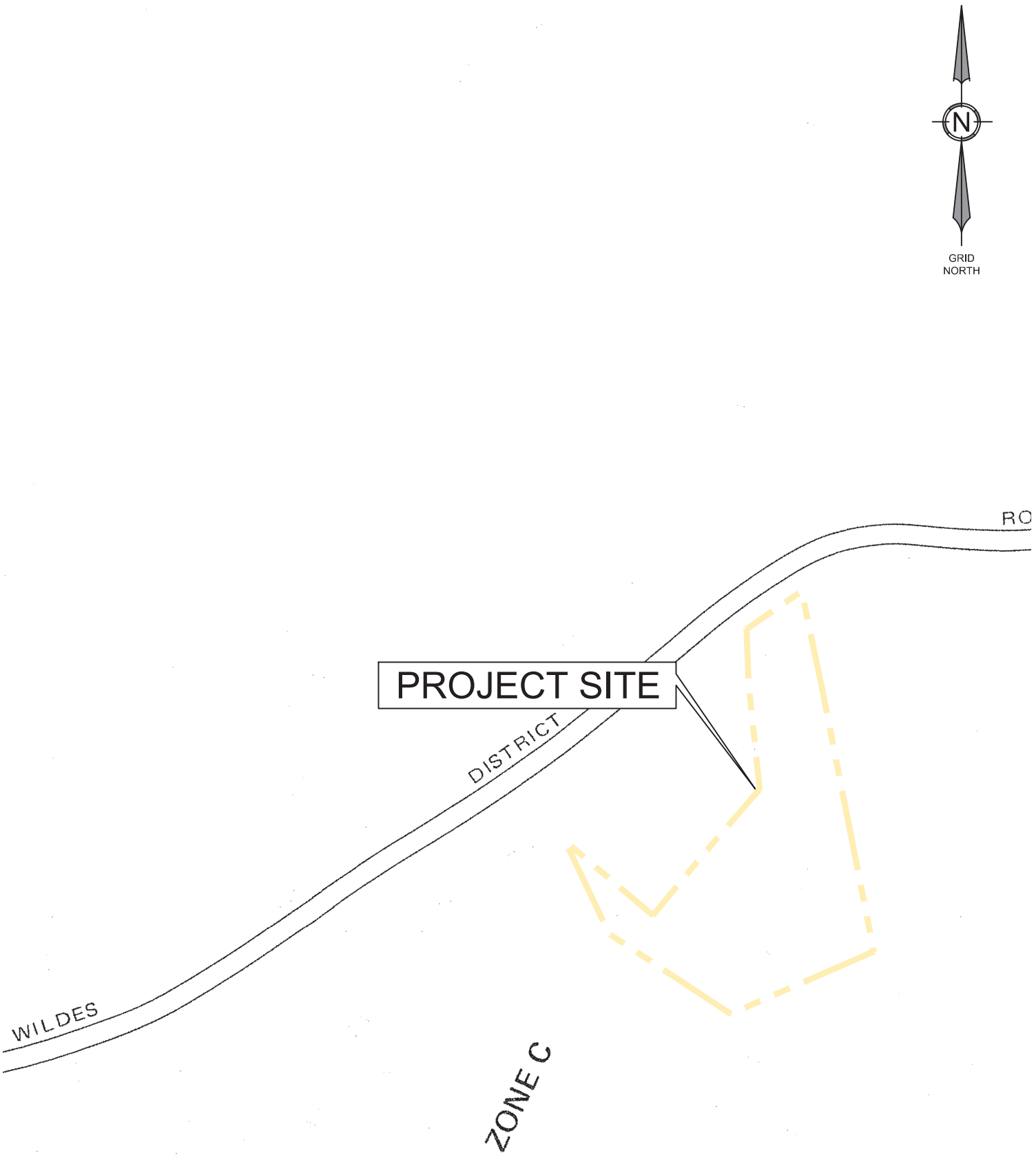


USDA **Natural Resources Conservation Service**

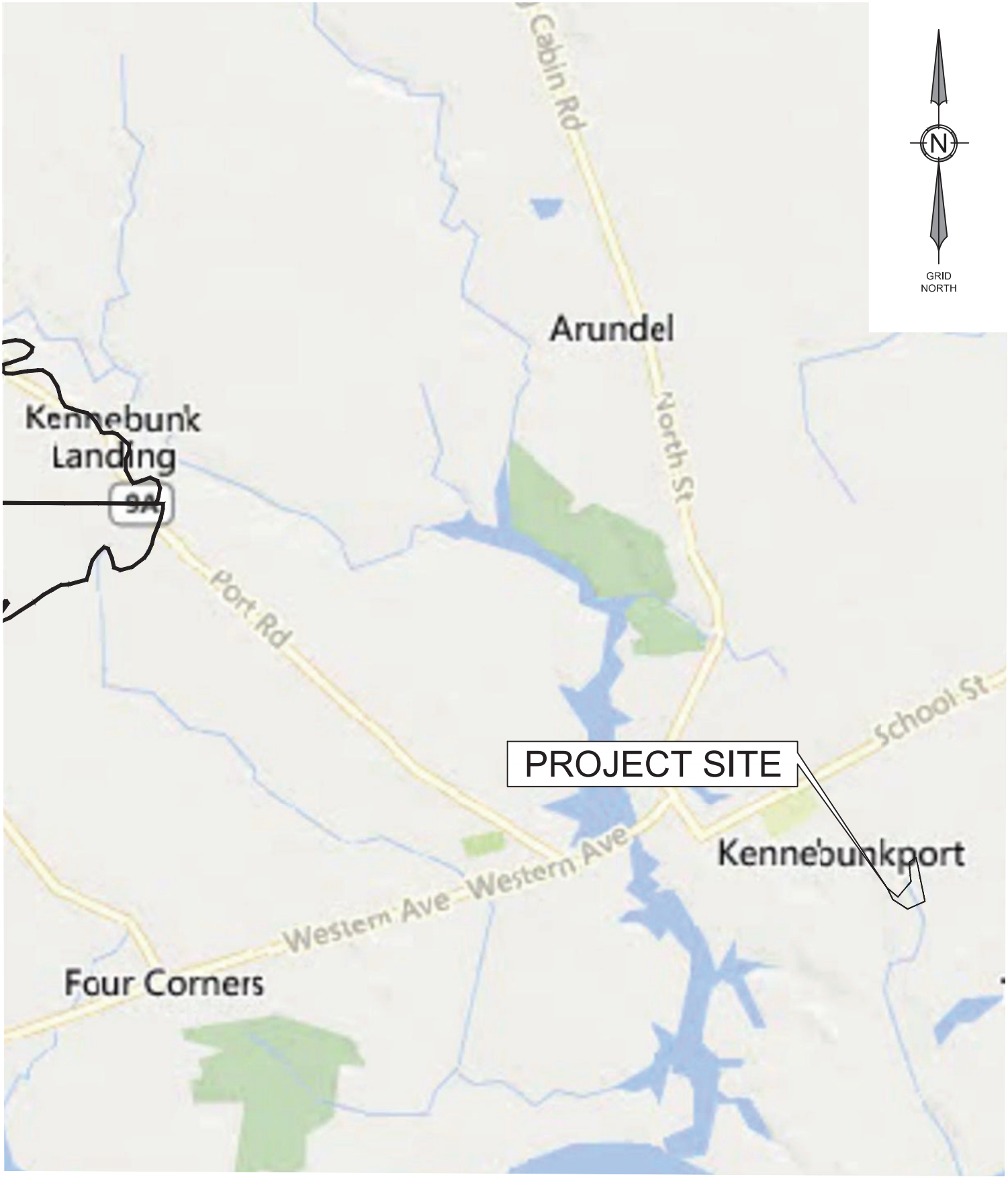
Web Soil Survey
National Cooperative Soil Survey

6/9/2023
Page 1 of 3

MEDIUM INTENSITY SOIL SURVEY	TERRADYN CONSULTANTS, LLC PINELAND 41 CAMPUS DRIVE, SUITE 101 NEW GLOUCESTER, ME 04260 PORTLAND 565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101 207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com	PROJECT NO. 23-003	SHEET 3
PROJECT: PROPOSED SUBDIVISION WILDES DISTRICT RD KENNEBUNKPORT		DATE 05/09/2023	OF 5
PREPARED FOR: BEACHWOOD DEVELOPMENT FUND 86 YORK STREET #3 KENNEBUNK MAINE 04043		SCALE 1"=250'	



FLOOD INSURANCE RATE MAP	TERRADYN CONSULTANTS, LLC	PINELAND 41 CAMPUS DRIVE, SUITE 101 NEW GLOUCESTER, ME 04260 PORTLAND 565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101	PROJECT NO. 23-022	SHEET 4
PROJECT: PROPOSED SUBDIVISION WILDES DISTRICT RD KENNEBUNKPORT			DATE 9/27/2023	OF 5
PREPARED FOR: BEACHWOOD DEVELOPMENT FUND 86 YORK STREET #3 KENNEBUNK MAINE 04043	207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com		SCALE 1"=250'	



MAINE SIGNIFICANT AQUIFERS	TERRADYN CONSULTANTS, LLC	PINELAND 41 CAMPUS DRIVE, SUITE 101 NEW GLOUCESTER, ME 04260 PORTLAND 565 CONGRESS STREET, SUITE 201 PORTLAND, ME 04101	PROJECT NO. 23-003	SHEET 5
PROJECT: PROPOSED SUBDIVISION WILDES DISTRICT RD KENNEBUNKPORT			DATE 9/28/2023	OF 5
PREPARED FOR: BEACHWOOD DEVELOPMENT FUND 86 YORK STREET #3 KENNEBUNK MAINE 04043	207.926.5111 • info@terradynconsultants.com • www.terradynconsultants.com		SCALE 1"=2,000'	

Attachment 4

KKW Correspondence

Kennebunk, Kennebunkport & Wells Water District

Proudly serving since 1921

Trustees:
Thomas P. Oliver (Wells)
June Huston (Kennebunk)
James E. Burrows (Kennebunkport)
Frederick A. Lynk (Ogunquit)

Scott J. Minor, Superintendent
Wayne A. Brockway, Treasurer

September 13, 2023

Matthew Pelletier, P.E., Design Engineer
Terradyn Consultants, LLC
565 Congress St, Suite 201
Portland, ME 04101

Subject: Wildes District Rd Subdivision, Kennebunkport – 3 Lot Subdivision – Availability of Water

Dear Mr. Pelletier:

The purpose of this letter is to inform you that near the above location an adequate domestic water supply is available from the District's 12-inch water main along Wildes District Road. Water pressure in this area will typically be above 60 psi. For fire suppression purposes approximately 1,000 gallons per minute at 20 psi residual pressure is available near this location. This figure is an *estimate* for planning purposes only. *An actual field test should be performed by the owner's agent prior to designing any fire suppression system.* If a fire suppression system is required in the future, please contact the District for additional information.

Preliminary plans for the subdivision have been provided. They will be reviewed by the District under separate correspondence. Once the overall project water system is reviewed and approved by the District, the owner will be allowed to request a water main extension pursuant to the District's rules and regulations in effect at that time.

A GIS map of the existing water distribution system in the area of this project is attached for your reference.

If you need any additional information, feel free to contact me.

Sincerely,

Jamie C. Paschal

Jamie Paschal, P.E.
District Engineer

92 Main Street, P.O. Box 88, Kennebunk, ME 04043
Phone 207-985-3385, Fax 207-985-3102
Visit us at www.kkw.org

Attachment 5

Kennebunkport Sewer Correspondence

TOWN OF KENNEBUNKPORT, MAINE

– INCORPORATED 1653 –

September 28, 2023

Matthew Pelletier, P.E.
Design Engineer
TERRADYN CONSULTANTS, LLC

Pineland
Cumberland Hall
41 Campus Drive, Suite 101
New Gloucester, ME 04260
Portland
565 Congress Street, Suite 201
Portland, ME 04101

RE: Request for Ability to Serve Residential Subdivision, Wildes District Road Kennebunkport, Maine MBL 9-10-23

Dear Matthew,

I have reviewed the plan and profile for the proposed subdivision. The plan contained three proposed individual lots served by one gravity main. There is no proposed Town-owned infrastructure. The sewer lateral will remain privately owned and maintained.

At this time, there is capacity in the collection system and at the treatment plant to handle the flows from the three proposed house lots. Final sewer lateral and connections are the responsibility of the developer and property owners.

Please keep me informed as to the status of the project and any potential changes.

Respectfully,

Director, Public Works
207-967-5728
csimeoni@kennebunkportme.gov

Attachment 6

Stormwater Management Report

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

WILDES DISTRICT ROAD

WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

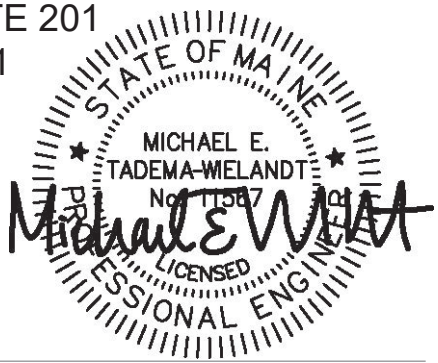
STORMWATER MANAGEMENT REPORT

PREPARED FOR:

BEACHWOOD DEVELOPMENT FUND, LLC
92 YORK STREET
KENNEBUNK, MAINE 04043

PREPARED BY:

TERRADYN CONSULTANTS LLC
565 CONGRESS STREET, SUITE 201
PORTLAND, MAINE 04101



OCTOBER 2023

Introduction

The following Stormwater Management Plan has been prepared for the Wildes District Road Subdivision identified as lot 10-23 on Kennebunkport Tax Map 9 to evaluate stormwater runoff and erosion control for the proposed 3-lot subdivision.

Site Calculations

Below is a summary of existing and proposed impervious and developed areas on the project site.

	Area (Acres)
Total Lot Area	**4.14 Ac**
Existing Impervious Area	0.00 Ac
Existing Developed Area	0.00 Ac
Proposed New Impervious (Road Only)	0.32 Ac
Proposed New Developed (Road Only)	0.74 Ac
Proposed New Lot Impervious	0.28 Ac
Proposed New Lot Developed	1.21 Ac
Proposed Open Space	0.63 Ac
Wetland Impacts	0.04 Ac

Existing Conditions

The project site is approximately 4.14 acres in size and is depicted on the Town of Kennebunkport Tax Map 9 as lot 10-23, off Wildes District Road in the Village Residential Zone. The site is undeveloped woodland with an existing earthen driveway and curb cut to access the site. There is a CMP utility corridor running along the eastern edge of the property line. Rocky Pasture Lane, a private way, runs along the western edge of the property and a manmade pond sits on the northern edge where part of the stormwater runoff discharges. Runoff eventually makes its way through a drainage channel running down the middle of the site and discharges south. There is a primitive weir control structure made from cinder blocks that is used to attenuate flow through the drainage channel.

There are approximately 0.48 acres of wetlands in separate pockets throughout the site, including a vernal pool delineated by Longview Partners in 2022 in the southwest corner of the property. The pool was not studied in the official identification period as defined by MDEP (Maine Department of Environmental Protection) and, as such, is conservatively considered as a significant vernal pool. More information on the vernal pool is provided in the preliminary subdivision application.

A review of the medium density soil conditions was conducted. The site is comprised of the following soil types.

Name	HSG
Lyman-Loam	D
Lyman-Rock	D
Waskish Peat	D

Existing Conditions Figures are provided in the preliminary subdivision application.

Proposed Project

The applicant is proposing to develop a three-lot subdivision, including a 590 linear-foot road, stormwater management infrastructure, and underground utilities.

The proposed lots and infrastructure are located in the eastern part of the site, away from wetlands and potentially significant vernal pool. The proposed lots are roughly an acre in size and 0.63 acres will be preserved as open space. Lots will be served by town water and sewer. Electric and telecommunications services will be installed below ground.

Stormwater runoff from the roadway will be collected in a closed storm drain system. Stormwater runoff from the proposed roadway, Lot 1, and Lot 2 will drain to the existing manmade pond off site. The storage in the existing pond will help attenuate peak flows from the roadway and Lot 1 and 2 developed areas so peak discharge rates will be limited to pre-development levels. Lot 3 will discharge to an existing culvert leaving the site to the south.

Construction of the road will result in approximately 974 square feet of wetland impact, and an additional 553 square feet of impacts on Lot 3 developed areas. There will be no impact to the identified potential Vernal Pool.

Applicable Design Standards

The Town of Kennebunkport Subdivision Ordinance Article 415-11.15:
Adequate provision shall be made for the management of the quantity and quality of all stormwater generated within the subdivision, and any drained groundwater through a management system of swales, culverts, under drains, storm drains and best management practices equivalent to those described in the Stormwater Management for Maine: Best Management Practices, published by the Maine Department of Environmental Protection, 1995 (or most recent edition), in conformance with the policies of the Comprehensive Plan and subsequent amendments or revisions.

The project also must meet the Maine DEP Chapter 500 Basic Standard.

Stormwater Quantity Control (Town of Kennebunkport only)

Stormwater Quantity control is required as part of town requirements for this project; the proposed development has been designed to minimize stormwater runoff from the site in excess of the natural pre-development conditions. A hydrologic analysis of pre-development and post-development conditions was conducted based upon the methodology contained in the USDA Soil Conservation Service's Technical Releases No. 20 and 55 (SCS TR-20 and TR-55). For York County, Maine a 24-hour SCS Type III Storm distribution was used for the analysis using the following storm frequencies and rainfall amounts, per Maine DEP Chapter 500:

Storm Event	24-Hour Rainfall
2–Year Storm	3.3 inches
10–Year Storm	4.9 inches
25–Year Storm	6.2 inches

Runoff curve numbers, time of concentration, and travel time data were established based on methods outlined in TR-5.

Individual lot development will be carried out by lot owners, not the applicant. However, the applicant will grade the lots as shown on the project drawings to ensure stormwater is routed as

intended and modeled in the post-development stormwater model. The following amount of developed area on each lot was assumed based on lot size and configuration:

Lot Number	Impervious (SF)	Lawn (SF)
Lot 1	4,000	10,000
Lot 2	4,000	14,369
Lot 3	4,000	16,000

A minimum time of concentration of 5 minutes and a maximum sheet flow distance of 150 linear feet was used in the models.

Pre-Development Conditions

The pre-development HydroCAD model includes six (6) subcatchments and five (5) study points. Stormwater runoff from the site flows partially through the large man-made pond and discharges through a drainage channel, which leads off site. The rest of the stormwater runoff discharges through a series of wetlands and channels that flow in different directions offsite.

Study Point SP1 – Located at the southern site boundary, stormwater runoff flows south to a 15" culvert across an offsite driveway.

Study Point SP2 – Located at the southeast site boundary, runoff flows through a series of channels and wetlands to a 15" culvert across an offsite driveway separate from Study Point 1. Overflow from the pond also discharges to Study Point 2 through a defined drainage channel, which collects stormwater runoff from the northern site boundary.

Study Point SP3 – Located at the western site boundary, adjacent to Rocky Pasture Lane. Runoff flows offsite across the road.

Study Point SP4 – Similar to SP3 Located, SP4 is located at the western site boundary, adjacent to Rocky Pasture Lane. Runoff flows across the road to an offsite field.

Study Point SP5 – Located at the northwestern site boundary, at the corner of Rocky Pasture Lane and Wildes District Road. Runoff flows to Rocky Hill Pasture Lane and then eventually Wildes District Road.

A Pre-Development Watershed Map, showing sub-watershed boundaries, time of concentration flow paths, and Study Points is provided in Appendix 1. The Pre-development HydroCAD model is attached in Appendix 3.

Existing condition peak rates of runoff at the Study Points are as follows:

Pre-Development Peak Rates of Runoff (cfs)			
Study Point	**2-Year**	**10-Year**	**25-Year**
SP1	1.35	2.58	3.42
SP2	1.54	3.13	4.52
SP3	0.55	1.09	1.56
SP4	0.83	1.66	2.37
SP5	2.27	3.94	5.31

The pre-development peak rates of runoff are a baseline used for comparison to the post-development condition.

Post-Development Conditions

The proposed post-development HydroCAD model includes eleven (11) subcatchments and five (5) study points. The study points remain the same from the pre-development model. A Post-development Watershed Map showing sub-watershed boundaries, time of concentration flow paths, and Study Points is provided in Appendix 2. The Post-development HydroCAD model is attached in Appendix 4.

Post-development peak rates of runoff at the Study Points are as follows:

Post-Development Peak Rates of Runoff (cfs)			
Study Points	**2-Year**	**10-Year**	**25-Year**
SP1	1.13	2.05	2.73
SP2	1.52	3.08	4.52
SP3	0.55	1.09	1.56
SP4	0.83	1.66	2.37
SP5	2.27	3.94	5.31

Peak Flow Analysis

The results of the pre-development and post-development models were compared at the defined Study Points described above. The direct comparison of the pre-development and post-development conditions at the Study Points are as follows:

Peak Runoff Flow Rates Comparison						
Study Points	**2-Year**		**10-Year**		**25-Year**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
SP1	1.35	1.13	2.58	2.05	3.42	2.73
SP2	1.54	1.52	3.13	3.08	4.52	4.52
SP3	0.55	0.55	1.09	1.09	1.56	1.56
SP4	0.83	0.83	1.66	1.66	2.37	2.37
SP5	2.27	2.27	3.94	3.94	5.31	5.31

The hydrologic models predict that peak rates of runoff at all study points will remain the same or decrease in the 2, 10 & 25-year design storm events. The reduction in peak flow rates is due to the large pond collecting and attenuating stormwater from Lot 1, Lot 2, and the proposed roadway.

Erosion and Sedimentation Control

The project was designed to meet the Maine DEP Chapter 500 Basic Standard, related to erosion and sedimentation control, inspection and maintenance of stormwater management facilities and housekeeping standards. A site-specific erosion and sedimentation control plan was developed and is located on the project drawings for ease of reference during construction.

Summary

The proposed three-lot subdivision includes construction of a 590-foot-long roadway. Runoff from the road will be collected in a storm drain system and will be discharged in an existing man-made pond. Stormwater runoff from Lot 1 and Lot 2 will also discharge into the onsite pond to help attenuate flows. The proposed lots will be graded by the applicant and developer to

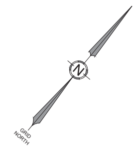
ensure runoff is routed in accordance with the hydraulic model. Pre and post-development hydrologic models were developed to determine the effect of the proposed development on peak runoff rates at the site boundary. Based upon the results of this evaluation, the proposed project meets the applicable performance standards and is not expected to cause flooding, erosion, or other significant adverse effects downstream of the site.

Appendices

1 – Pre-Development Watershed Maps
2 – Post-Development Watershed Maps
3 – Pre-Development HydroCAD Model
4 – Post-Development HydroCAD Model
5 – Stormwater Inspection & Maintenance Manual

APPENDIX 1

PRE DEVELOPMENT WATERSHED MAPS



WATERSHED LEGEND

PRE DEVELOPMENT

- WATERSHED BOUNDARY
- Tc FLOWPATH
- REACH PATH
- SOILS BOUNDARY
- 000 SUBCATCHMENT
- 000 POND
- 000 REACH
- 000 STUDY POINT
- (A) Tc LABEL

NOTES:

- SOILS WITHIN THE WATERSHED AREAS ARE PRIMARILY MAPPED AS LYMAN-ROCK OUTCROP COMPLEX (HSG D), LYMAN LOAM (HSG D) AND WASKISH PEAT (HSG D) BY THE NRCS WEB SOIL SURVEY IN JUNE 2023.

PREDEVELOPMENT WATERSHED AREAS

Watershed	Soil Type	Area (sqft)
1	D	49,893
2	D	189,237
3	D	80,137
4	D	18,330
5	D	26,955
6	D	46,555
	Total Watershed Area =	**411,107**

PREDEVELOPMENT TIME OF CONCENTRATION

Segment ID	Length	Slope
Watershed 1		
A-B	35	0.057
B-C	285	0.021
C-D	100	0.060
Watershed 2		
A-B	150	0.033
B-C	140	0.004
Watershed 3		
A-B	110	0.036
B-C	170	0.012
C-D	115	0.104
D-E	65	0.008
E-F	60	0.150
F-G	50	0.010
Watershed 4		
A-B	70	0.086
B-C	55	0.291
C-D	85	0.024
Watershed 5		
A-B	55	0.055
B-C	120	0.175
Watershed 6		
A-B	40	0.075
B-C	110	0.127
C-D	100	0.090

GRAPHIC SCALE

(IN FEET)
1 INCH = 40 FT.

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED PROFESSIONAL ENGINEER

DATE: 10/2/2023

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting
ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260
PHONE:
(207) 926-5111
WEB SITE:
www.terradynconsultants.com

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
PRE-DEVELOPMENT WATERSHED MAP

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE: 1" = 40'
JOB NO: 23-003
SHEET: WS-1

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APPENDIX 2

POST DEVELOPMENT WATERSHED MAPS

GRID NORTH

WATERSHED LEGEND

POST DEVELOPMENT

- WATERSHED BOUNDARY
- Tc FLOWPATH
- REACH PATH
- SOILS BOUNDARY
- 000 SUBCATCHMENT
- 000 POND
- 000 REACH
- 000 STUDY POINT
- (A) Tc LABEL

NOTES:

- SOILS WITHIN THE WATERSHED AREAS ARE PRIMARILY MAPPED AS LYMAN-ROCK OUTCROP COMPLEX (HSG D), LYMAN LOAM (HSG D) AND WASKISH PEAT (HSG D) BY THE NRCS WEB SOIL SURVEY IN JUNE 2023.

POSTDEVELOPMENT TIME OF CONCENTRATION

Segment ID	Length	Slope
Watershed 10		
A-B	84	0.012
B-C	40	0.050
C-D	21	0.330
D-E	112	0.062
Watershed 11		
MINIMUM 5 MIN. TIME OF CONCENTRATION		
Watershed 20		
A-B	150	0.013
B-C	15	0.005
Watershed 21		
A-B	75	0.053
B-C	120	0.004
Watershed 22		
A-B	150	0.020
B-C	20	0.025
Watershed 30		
A-B	110	0.036
B-C	170	0.012
C-D	115	0.104
D-E	65	0.008
E-F	60	0.150
F-G	50	0.010
Watershed 40		
A-B	70	0.086
B-C	55	0.291
C-D	85	0.024
Watershed 50		
A-B	55	0.055
B-C	120	0.175
Watershed 60		
A-B	40	0.075
B-C	110	0.127
C-D	100	0.090
Watershed 70		
MINIMUM 5 MIN. TIME OF CONCENTRATION		

POSTDEVELOPMENT WATERSHED AREAS

Watershed	Soil Type	Area (sqft)
10	D	32,495
11	D	27,869
20	D	133,166
21	D	26,615
22	D	9,025
30	D	78,844
40	D	18,330
50	D	26,955
60	D	46,555
70	D	11,253
Total Watershed Area =		**411,107**

GRAPHIC SCALE

(IN FEET)
1 INCH = 40 FT.

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
No. 11587
LICENSED
PROFESSIONAL ENGINEER

DATE: 10/2/2023

NO.	DATE	REVISIONS
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POST-DEVELOPMENT WATERSHED MAP

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KENNEBUNK, MAINE 04043

DATE:	10/2/2023
SCALE:	1" = 40'
JOB NO:	23-003
SHEET:	WS-2

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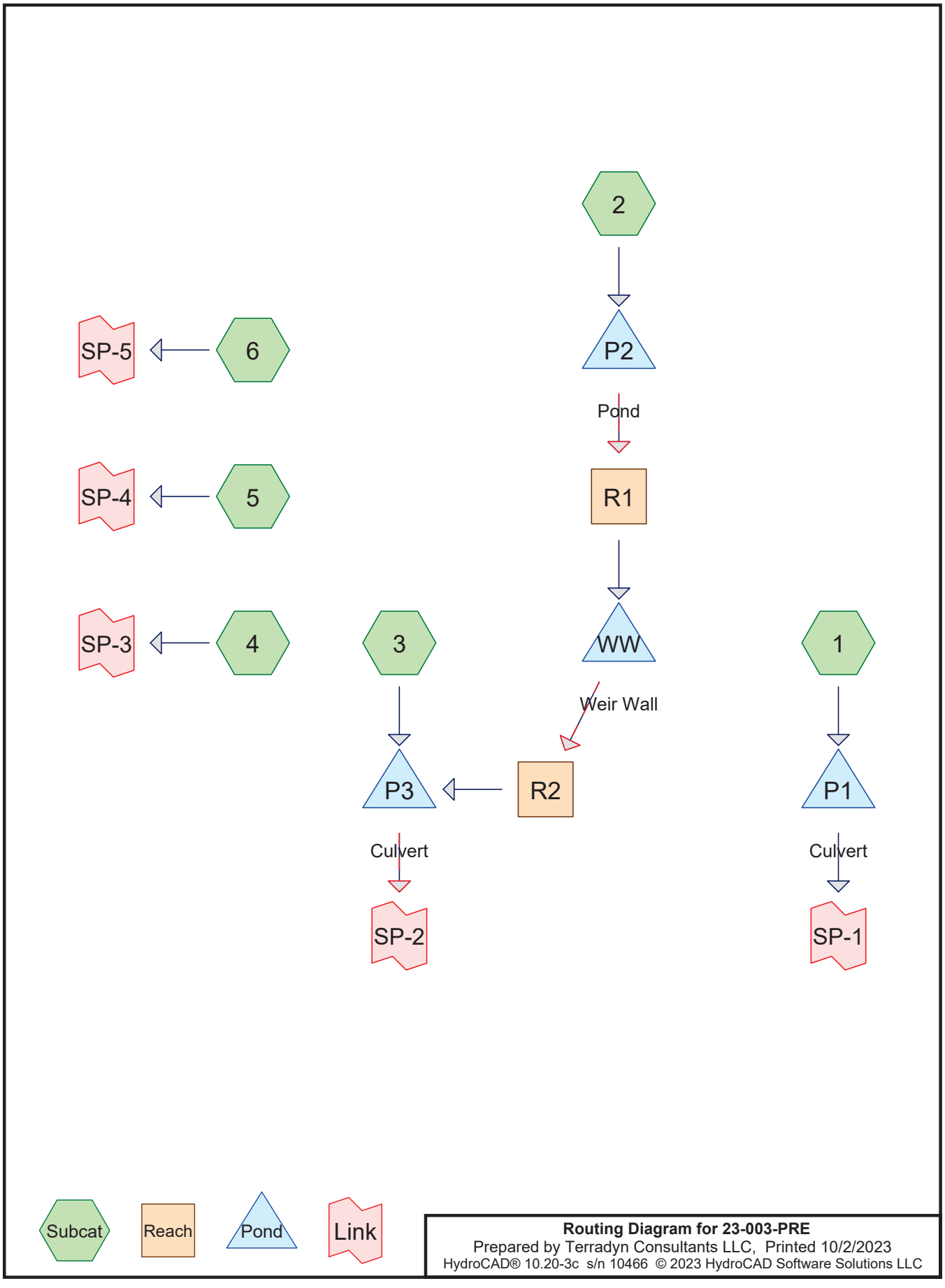
APPENDIX 3

PRE DEVELOPMENT HYDROCAD MODEL



Routing Diagram for 23-003-PRE
Prepared by Terradyn Consultants LLC, Printed 10/2/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.528	80	>75% Grass cover, Good, HSG D (2, 6)
0.284	98	Impervious (1, 2, 4, 5)
0.036	98	Paved parking, HSG D (3)
0.922	98	Water Surface, HSG D (2)
0.398	98	Wildes District Road (6)
7.269	77	Woods, Good, HSG D (1, 2, 3, 4, 5, 6)

Summary for Subcatchment 1:

Runoff = 1.37 cfs @ 12.20 hrs, Volume= 0.129 af, Depth= 1.35"
Routed to Pond P1 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	1,240	98	Impervious
	48,653	77	Woods, Good, HSG D
	49,893	78	Weighted Average
	48,653		97.51% Pervious Area
	1,240		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	35	0.0570	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
6.6	285	0.0210	0.72		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.4	100	0.0600	1.22		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
14.0	420	Total			

Summary for Subcatchment 2:

Runoff = 4.74 cfs @ 12.45 hrs, Volume= 0.612 af, Depth= 1.69"
Routed to Pond P2 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	9,290	98	Impervious
	6,500	80	>75% Grass cover, Good, HSG D
	40,175	98	Water Surface, HSG D
	133,272	77	Woods, Good, HSG D
	189,237	83	Weighted Average
	139,772		73.86% Pervious Area
	49,465		26.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9	150	0.0333	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
7.8	140	0.0036	0.30		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
31.7	290	Total			

Summary for Subcatchment 3:

Runoff = 1.54 cfs @ 12.43 hrs, Volume= 0.197 af, Depth= 1.28"
Routed to Pond P3 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

Area (sf)	CN	Description
1,560	98	Paved parking, HSG D
78,577	77	Woods, Good, HSG D
80,137	77	Weighted Average
78,577		98.05% Pervious Area
1,560		1.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	110	0.0360	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
5.2	170	0.0120	0.55		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.2	115	0.1040	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.4	65	0.0080	0.45		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
0.5	60	0.1500	1.94		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
29.0	570	Total			

Summary for Subcatchment 4:

Runoff = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af, Depth= 1.35"
Routed to Link SP-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
	17,475	77	Woods, Good, HSG D
*	855	98	Impervious
	18,330	78	Weighted Average
	17,475		95.34% Pervious Area
	855		4.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	70	0.0860	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	55	0.2910	2.70		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	85	0.0240	0.77		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.0	210	Total			

Summary for Subcatchment 5:

Runoff = 0.83 cfs @ 12.15 hrs, Volume= 0.069 af, Depth= 1.35"
Routed to Link SP-4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
	25,970	77	Woods, Good, HSG D
*	985	98	Impervious
	26,955	78	Weighted Average
	25,970		96.35% Pervious Area
	985		3.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	55	0.0550	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	120	0.1750	2.09		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
9.7	175	Total			

Summary for Subcatchment 6:

Runoff = 2.27 cfs @ 12.11 hrs, Volume= 0.171 af, Depth= 1.92"
Routed to Link SP-5 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	17,350	98	Wildes District Road
	16,500	80	>75% Grass cover, Good, HSG D
	12,705	77	Woods, Good, HSG D
	46,555	86	Weighted Average
	29,205		62.73% Pervious Area
	17,350		37.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40	0.0750	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	110	0.1270	1.78		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.3	100	0.0900	6.09		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
7.3	250	Total			

Summary for Reach R1:

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 0.52" for 2-Yr event
Inflow = 0.15 cfs @ 20.55 hrs, Volume= 0.188 af
Outflow = 0.15 cfs @ 20.68 hrs, Volume= 0.187 af, Atten= 0%, Lag= 7.7 min
Routed to Pond WW : Weir Wall

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.63 fps, Min. Travel Time= 4.7 min
Avg. Velocity = 0.42 fps, Avg. Travel Time= 6.9 min

Peak Storage= 43 cf @ 20.60 hrs
Average Depth at Peak Storage= 0.12' , Surface Width= 2.23'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 6.13 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 175.0' Slope= 0.0057 '/'
Inlet Invert= 74.00', Outlet Invert= 73.00'

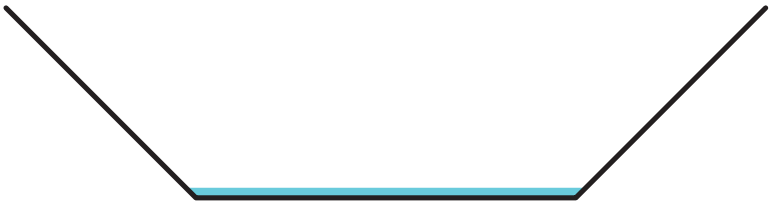
Summary for Reach R2:

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 0.52" for 2-Yr event
Inflow = 0.15 cfs @ 20.78 hrs, Volume= 0.187 af
Outflow = 0.15 cfs @ 20.88 hrs, Volume= 0.187 af, Atten= 0%, Lag= 5.9 min
Routed to Pond P3 : Culvert

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.39 fps, Min. Travel Time= 3.6 min
Avg. Velocity = 0.94 fps, Avg. Travel Time= 5.4 min

Peak Storage= 34 cf @ 20.82 hrs
Average Depth at Peak Storage= 0.05' , Surface Width= 2.11'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 22.04 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 305.0' Slope= 0.0738 '/'
Inlet Invert= 73.00', Outlet Invert= 50.50'



Summary for Pond P1: Culvert

Inflow Area = 1.145 ac, 2.49% Impervious, Inflow Depth = 1.35" for 2-Yr event
Inflow = 1.37 cfs @ 12.20 hrs, Volume= 0.129 af
Outflow = 1.35 cfs @ 12.22 hrs, Volume= 0.129 af, Atten= 1%, Lag= 1.1 min
Primary = 1.35 cfs @ 12.22 hrs, Volume= 0.129 af
Routed to Link SP-1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 60.36' @ 12.22 hrs Surf.Area= 210 sf Storage= 75 cf

Plug-Flow detention time= 0.9 min calculated for 0.128 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (855.8 - 854.9)

Volume	Invert	Avail.Storage	Storage Description
#1	59.65'	1,009 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.65	10	0	0
60.00	100	19	19
61.00	405	253	272
62.00	1,070	738	1,009

Device	Routing	Invert	Outlet Devices
#1	Primary	59.65'	**12.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.65' / 59.00' S= 0.0162 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.33 cfs @ 12.22 hrs HW=60.35' (Free Discharge)
1=Culvert (Inlet Controls 1.33 cfs @ 2.26 fps)

Summary for Pond P2: Pond

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth = 1.69" for 2-Yr event
Inflow = 4.74 cfs @ 12.45 hrs, Volume= 0.612 af
Outflow = 0.15 cfs @ 20.55 hrs, Volume= 0.188 af, Atten= 97%, Lag= 485.9 min
Primary = 0.15 cfs @ 20.55 hrs, Volume= 0.188 af
Routed to Reach R1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 74.12' @ 20.55 hrs Surf.Area= 42,700 sf Storage= 22,338 cf

Plug-Flow detention time= 782.9 min calculated for 0.188 af (31% of inflow)
Center-of-Mass det. time= 648.7 min (1,504.0 - 855.3)

Volume	Invert	Avail.Storage	Storage Description
#1	73.50'	68,631 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.50	30,000	0	0
74.00	40,175	17,544	17,544
75.00	62,000	51,088	68,631

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**Channel/Reach** using Reach R1:

Primary OutFlow Max=0.15 cfs @ 20.55 hrs HW=74.12' (Free Discharge)
1=Channel/Reach (Channel Controls 0.15 cfs @ 0.63 fps)

Summary for Pond P3: Culvert

Inflow Area = 6.184 ac, 18.94% Impervious, Inflow Depth > 0.75" for 2-Yr event
Inflow = 1.54 cfs @ 12.43 hrs, Volume= 0.384 af
Outflow = 1.54 cfs @ 12.43 hrs, Volume= 0.384 af, Atten= 0%, Lag= 0.0 min
Primary = 1.54 cfs @ 12.43 hrs, Volume= 0.384 af
Routed to Link SP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link SP-2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 4
Peak Elev= 48.60' @ 12.43 hrs Surf.Area= 8 sf Storage= 4 cf

Plug-Flow detention time= 0.1 min calculated for 0.384 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (1,188.3 - 1,188.2)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	515 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
48.00	5	0	0
49.00	10	8	8
50.00	25	18	25
51.00	955	490	515

Device	Routing	Invert	Outlet Devices
#1	Primary	48.00'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 48.00' / 47.50' S= 0.0125 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Secondary	50.95'	**10.0' long x 65.0' 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 2.64 2.63

Primary OutFlow Max=1.54 cfs @ 12.43 hrs HW=48.60' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.54 cfs @ 2.64 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=48.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond WW: Weir Wall

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 0.52" for 2-Yr event
Inflow = 0.15 cfs @ 20.68 hrs, Volume= 0.187 af
Outflow = 0.15 cfs @ 20.78 hrs, Volume= 0.187 af, Atten= 0%, Lag= 6.6 min
Primary = 0.15 cfs @ 20.78 hrs, Volume= 0.187 af
Routed to Reach R2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach R2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 73.08' @ 20.78 hrs Surf.Area= 318 sf Storage= 17 cf

Plug-Flow detention time= 1.6 min calculated for 0.187 af (100% of inflow)
Center-of-Mass det. time= 1.4 min (1,514.0 - 1,512.6)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	4,913 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	100	0	0
74.00	2,760	1,430	1,430
75.00	4,205	3,483	4,913

Device	Routing	Invert	Outlet Devices
#1	Secondary	74.00'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00

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

#2	Primary	73.00'	**16.0" x 1.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.15 cfs @ 20.78 hrs HW=73.08' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.15 cfs @ 1.38 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=73.00' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link SP-1:

Inflow Area = 1.145 ac, 2.49% Impervious, Inflow Depth = 1.35" for 2-Yr event
Inflow = 1.35 cfs @ 12.22 hrs, Volume= 0.129 af
Primary = 1.35 cfs @ 12.22 hrs, Volume= 0.129 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-2:

Inflow Area = 6.184 ac, 18.94% Impervious, Inflow Depth > 0.75" for 2-Yr event
Inflow = 1.54 cfs @ 12.43 hrs, Volume= 0.384 af
Primary = 1.54 cfs @ 12.43 hrs, Volume= 0.384 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-3:

Inflow Area = 0.421 ac, 4.66% Impervious, Inflow Depth = 1.35" for 2-Yr event
Inflow = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af
Primary = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-4:

Inflow Area = 0.619 ac, 3.65% Impervious, Inflow Depth = 1.35" for 2-Yr event
Inflow = 0.83 cfs @ 12.15 hrs, Volume= 0.069 af
Primary = 0.83 cfs @ 12.15 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-5:

Inflow Area = 1.069 ac, 37.27% Impervious, Inflow Depth = 1.92" for 2-Yr event
Inflow = 2.27 cfs @ 12.11 hrs, Volume= 0.171 af
Primary = 2.27 cfs @ 12.11 hrs, Volume= 0.171 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1:

Runoff = 2.72 cfs @ 12.20 hrs, Volume= 0.251 af, Depth= 2.63"
Routed to Pond P1 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	1,240	98	Impervious
	48,653	77	Woods, Good, HSG D
	49,893	78	Weighted Average
	48,653		97.51% Pervious Area
	1,240		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	35	0.0570	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
6.6	285	0.0210	0.72		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.4	100	0.0600	1.22		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
14.0	420	Total			

Summary for Subcatchment 2:

Runoff = 8.63 cfs @ 12.44 hrs, Volume= 1.116 af, Depth= 3.08"
Routed to Pond P2 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	9,290	98	Impervious
	6,500	80	>75% Grass cover, Good, HSG D
	40,175	98	Water Surface, HSG D
	133,272	77	Woods, Good, HSG D
	189,237	83	Weighted Average
	139,772		73.86% Pervious Area
	49,465		26.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9	150	0.0333	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
7.8	140	0.0036	0.30		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
31.7	290	Total			

Summary for Subcatchment 3:

Runoff = 3.14 cfs @ 12.41 hrs, Volume= 0.389 af, Depth= 2.54"
Routed to Pond P3 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

Area (sf)	CN	Description
1,560	98	Paved parking, HSG D
78,577	77	Woods, Good, HSG D
80,137	77	Weighted Average
78,577		98.05% Pervious Area
1,560		1.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	110	0.0360	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
5.2	170	0.0120	0.55		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.2	115	0.1040	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.4	65	0.0080	0.45		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
0.5	60	0.1500	1.94		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
29.0	570	Total			

Summary for Subcatchment 4:

Runoff = 1.09 cfs @ 12.16 hrs, Volume= 0.092 af, Depth= 2.63"
Routed to Link SP-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	17,475	77	Woods, Good, HSG D
*	855	98	Impervious
	18,330	78	Weighted Average
	17,475		95.34% Pervious Area
	855		4.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	70	0.0860	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	55	0.2910	2.70		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	85	0.0240	0.77		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.0	210	Total			

Summary for Subcatchment 5:

Runoff = 1.66 cfs @ 12.14 hrs, Volume= 0.135 af, Depth= 2.63"
Routed to Link SP-4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	25,970	77	Woods, Good, HSG D
*	985	98	Impervious
	26,955	78	Weighted Average
	25,970		96.35% Pervious Area
	985		3.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	55	0.0550	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	120	0.1750	2.09		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
9.7	175	Total			

Summary for Subcatchment 6:

Runoff = 3.94 cfs @ 12.10 hrs, Volume= 0.300 af, Depth= 3.37"
Routed to Link SP-5 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	17,350	98	Wildes District Road
	16,500	80	>75% Grass cover, Good, HSG D
	12,705	77	Woods, Good, HSG D
	46,555	86	Weighted Average
	29,205		62.73% Pervious Area
	17,350		37.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40	0.0750	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	110	0.1270	1.78		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.3	100	0.0900	6.09		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
7.3	250	Total			

Summary for Reach R1:

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 1.90" for 10-yr event
Inflow = 0.83 cfs @ 14.89 hrs, Volume= 0.688 af
Outflow = 0.83 cfs @ 14.96 hrs, Volume= 0.688 af, Atten= 0%, Lag= 4.3 min
Routed to Pond WW : Weir Wall

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.13 fps, Min. Travel Time= 2.6 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 4.8 min

Peak Storage= 129 cf @ 14.92 hrs
Average Depth at Peak Storage= 0.32' , Surface Width= 2.64'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 6.13 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 175.0' Slope= 0.0057 '/'
Inlet Invert= 74.00', Outlet Invert= 73.00'

Summary for Reach R2:

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 1.90" for 10-yr event
Inflow = 0.83 cfs @ 15.30 hrs, Volume= 0.688 af
Outflow = 0.83 cfs @ 15.35 hrs, Volume= 0.687 af, Atten= 0%, Lag= 3.3 min
Routed to Pond P3 : Culvert

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.61 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 1.39 fps, Avg. Travel Time= 3.7 min

Peak Storage= 97 cf @ 15.32 hrs
Average Depth at Peak Storage= 0.15' , Surface Width= 2.30'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 22.04 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 305.0' Slope= 0.0738 '/'
Inlet Invert= 73.00', Outlet Invert= 50.50'

Summary for Pond P1: Culvert

Inflow Area = 1.145 ac, 2.49% Impervious, Inflow Depth = 2.63" for 10-yr event
Inflow = 2.72 cfs @ 12.20 hrs, Volume= 0.251 af
Outflow = 2.58 cfs @ 12.24 hrs, Volume= 0.251 af, Atten= 5%, Lag= 2.8 min
Primary = 2.58 cfs @ 12.24 hrs, Volume= 0.251 af
Routed to Link SP-1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 60.90' @ 12.24 hrs Surf.Area= 374 sf Storage= 232 cf

Plug-Flow detention time= 1.0 min calculated for 0.250 af (100% of inflow)
Center-of-Mass det. time= 1.0 min (836.4 - 835.4)

Volume	Invert	Avail.Storage	Storage Description
#1	59.65'	1,009 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.65	10	0	0
60.00	100	19	19
61.00	405	253	272
62.00	1,070	738	1,009

Device	Routing	Invert	Outlet Devices
#1	Primary	59.65'	**12.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.65' / 59.00' S= 0.0162 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.57 cfs @ 12.24 hrs HW=60.89' (Free Discharge)
1=Culvert (Inlet Controls 2.57 cfs @ 3.28 fps)

Summary for Pond P2: Pond

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth = 3.08" for 10-yr event
Inflow = 8.63 cfs @ 12.44 hrs, Volume= 1.116 af
Outflow = 0.83 cfs @ 14.89 hrs, Volume= 0.688 af, Atten= 90%, Lag= 147.1 min
Primary = 0.83 cfs @ 14.89 hrs, Volume= 0.688 af
Routed to Reach R1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 74.32' @ 14.89 hrs Surf.Area= 47,126 sf Storage= 31,445 cf

Plug-Flow detention time= 484.5 min calculated for 0.687 af (62% of inflow)
Center-of-Mass det. time= 381.6 min (1,219.7 - 838.1)

Volume	Invert	Avail.Storage	Storage Description
#1	73.50'	68,631 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.50	30,000	0	0
74.00	40,175	17,544	17,544
75.00	62,000	51,088	68,631

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**Channel/Reach** using Reach R1:

Primary OutFlow Max=0.83 cfs @ 14.89 hrs HW=74.32' (Free Discharge)
1=Channel/Reach (Channel Controls 0.83 cfs @ 1.13 fps)

Summary for Pond P3: Culvert

Inflow Area = 6.184 ac, 18.94% Impervious, Inflow Depth > 2.09" for 10-yr event
Inflow = 3.14 cfs @ 12.41 hrs, Volume= 1.077 af
Outflow = 3.13 cfs @ 12.41 hrs, Volume= 1.077 af, Atten= 0%, Lag= 0.0 min
Primary = 3.13 cfs @ 12.41 hrs, Volume= 1.077 af
Routed to Link SP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link SP-2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 4
Peak Elev= 48.91' @ 12.41 hrs Surf.Area= 10 sf Storage= 7 cf

Plug-Flow detention time= 0.1 min calculated for 1.076 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (1,110.4 - 1,110.4)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	515 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
48.00	5	0	0
49.00	10	8	8
50.00	25	18	25
51.00	955	490	515

Device	Routing	Invert	Outlet Devices
#1	Primary	48.00'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 48.00' / 47.50' S= 0.0125 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Secondary	50.95'	**10.0' long x 65.0' 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 2.64 2.63

Primary OutFlow Max=3.13 cfs @ 12.41 hrs HW=48.91' (Free Discharge)
└**1=Culvert** (Inlet Controls 3.13 cfs @ 3.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=48.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond WW: Weir Wall

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 1.90" for 10-yr event
Inflow = 0.83 cfs @ 14.96 hrs, Volume= 0.688 af
Outflow = 0.83 cfs @ 15.30 hrs, Volume= 0.688 af, Atten= 0%, Lag= 20.2 min
Primary = 0.56 cfs @ 15.30 hrs, Volume= 0.621 af
Routed to Reach R2 :
Secondary = 0.27 cfs @ 15.30 hrs, Volume= 0.067 af
Routed to Reach R2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 74.09' @ 15.30 hrs Surf.Area= 2,884 sf Storage= 1,672 cf

Plug-Flow detention time= 27.6 min calculated for 0.688 af (100% of inflow)
Center-of-Mass det. time= 27.5 min (1,252.6 - 1,225.1)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	4,913 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	100	0	0
74.00	2,760	1,430	1,430
75.00	4,205	3,483	4,913

Device	Routing	Invert	Outlet Devices
#1	Secondary	74.00'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00

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

#2	Primary	73.00'	**16.0" x 1.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.56 cfs @ 15.30 hrs HW=74.09' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.56 cfs @ 5.02 fps)

Secondary OutFlow Max=0.27 cfs @ 15.30 hrs HW=74.09' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.27 cfs @ 0.79 fps)

Summary for Link SP-1:

Inflow Area = 1.145 ac, 2.49% Impervious, Inflow Depth = 2.63" for 10-yr event
Inflow = 2.58 cfs @ 12.24 hrs, Volume= 0.251 af
Primary = 2.58 cfs @ 12.24 hrs, Volume= 0.251 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-2:

Inflow Area = 6.184 ac, 18.94% Impervious, Inflow Depth > 2.09" for 10-yr event
Inflow = 3.13 cfs @ 12.41 hrs, Volume= 1.077 af
Primary = 3.13 cfs @ 12.41 hrs, Volume= 1.077 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-3:

Inflow Area = 0.421 ac, 4.66% Impervious, Inflow Depth = 2.63" for 10-yr event
Inflow = 1.09 cfs @ 12.16 hrs, Volume= 0.092 af
Primary = 1.09 cfs @ 12.16 hrs, Volume= 0.092 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-4:

Inflow Area = 0.619 ac, 3.65% Impervious, Inflow Depth = 2.63" for 10-yr event
Inflow = 1.66 cfs @ 12.14 hrs, Volume= 0.135 af
Primary = 1.66 cfs @ 12.14 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-5:

Inflow Area = 1.069 ac, 37.27% Impervious, Inflow Depth = 3.37" for 10-yr event
Inflow = 3.94 cfs @ 12.10 hrs, Volume= 0.300 af
Primary = 3.94 cfs @ 12.10 hrs, Volume= 0.300 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1:

Runoff = 3.89 cfs @ 12.19 hrs, Volume= 0.359 af, Depth= 3.76"
Routed to Pond P1 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	1,240	98	Impervious
	48,653	77	Woods, Good, HSG D
	49,893	78	Weighted Average
	48,653		97.51% Pervious Area
	1,240		2.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	35	0.0570	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
6.6	285	0.0210	0.72		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.4	100	0.0600	1.22		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
14.0	420	Total			

Summary for Subcatchment 2:

Runoff = 11.88 cfs @ 12.43 hrs, Volume= 1.549 af, Depth= 4.28"
Routed to Pond P2 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	9,290	98	Impervious
	6,500	80	>75% Grass cover, Good, HSG D
	40,175	98	Water Surface, HSG D
	133,272	77	Woods, Good, HSG D
	189,237	83	Weighted Average
	139,772		73.86% Pervious Area
	49,465		26.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9	150	0.0333	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
7.8	140	0.0036	0.30		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
31.7	290	Total			

Summary for Subcatchment 3:

Runoff = 4.52 cfs @ 12.40 hrs, Volume= 0.560 af, Depth= 3.65"
Routed to Pond P3 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

Area (sf)	CN	Description
1,560	98	Paved parking, HSG D
78,577	77	Woods, Good, HSG D
80,137	77	Weighted Average
78,577		98.05% Pervious Area
1,560		1.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	110	0.0360	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
5.2	170	0.0120	0.55		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.2	115	0.1040	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.4	65	0.0080	0.45		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
0.5	60	0.1500	1.94		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
29.0	570	Total			

Summary for Subcatchment 4:

Runoff = 1.56 cfs @ 12.15 hrs, Volume= 0.132 af, Depth= 3.76"
Routed to Link SP-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	17,475	77	Woods, Good, HSG D
*	855	98	Impervious
	18,330	78	Weighted Average
	17,475		95.34% Pervious Area
	855		4.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	70	0.0860	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	55	0.2910	2.70		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	85	0.0240	0.77		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.0	210	Total			

Summary for Subcatchment 5:

Runoff = 2.37 cfs @ 12.14 hrs, Volume= 0.194 af, Depth= 3.76"
Routed to Link SP-4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	25,970	77	Woods, Good, HSG D
*	985	98	Impervious
	26,955	78	Weighted Average
	25,970		96.35% Pervious Area
	985		3.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	55	0.0550	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	120	0.1750	2.09		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
9.7	175	Total			

Summary for Subcatchment 6:

Runoff = 5.31 cfs @ 12.10 hrs, Volume= 0.410 af, Depth= 4.60"
Routed to Link SP-5 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	17,350	98	Wildes District Road
	16,500	80	>75% Grass cover, Good, HSG D
	12,705	77	Woods, Good, HSG D
	46,555	86	Weighted Average
	29,205		62.73% Pervious Area
	17,350		37.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40	0.0750	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	110	0.1270	1.78		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.3	100	0.0900	6.09		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
7.3	250	Total			

Summary for Reach R1:

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 3.09" for 25-yr event
Inflow = 1.76 cfs @ 13.70 hrs, Volume= 1.119 af
Outflow = 1.76 cfs @ 13.76 hrs, Volume= 1.118 af, Atten= 0%, Lag= 3.5 min
Routed to Pond WW : Weir Wall

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.43 fps, Min. Travel Time= 2.0 min
Avg. Velocity = 0.69 fps, Avg. Travel Time= 4.2 min

Peak Storage= 216 cf @ 13.72 hrs
Average Depth at Peak Storage= 0.49' , Surface Width= 2.99'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 6.13 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 175.0' Slope= 0.0057 '/'
Inlet Invert= 74.00', Outlet Invert= 73.00'

Summary for Reach R2:

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 3.09" for 25-yr event
Inflow = 1.76 cfs @ 13.91 hrs, Volume= 1.118 af
Outflow = 1.76 cfs @ 13.96 hrs, Volume= 1.118 af, Atten= 0%, Lag= 2.6 min
Routed to Pond P3 : Culvert

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.39 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 3.2 min

Peak Storage= 158 cf @ 13.93 hrs
Average Depth at Peak Storage= 0.23' , Surface Width= 2.46'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 22.04 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 305.0' Slope= 0.0738 '/'
Inlet Invert= 73.00', Outlet Invert= 50.50'

Summary for Pond P1: Culvert

Inflow Area = 1.145 ac, 2.49% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 3.89 cfs @ 12.19 hrs, Volume= 0.359 af
Outflow = 3.42 cfs @ 12.27 hrs, Volume= 0.359 af, Atten= 12%, Lag= 4.6 min
Primary = 3.42 cfs @ 12.27 hrs, Volume= 0.359 af
Routed to Link SP-1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 61.46' @ 12.27 hrs Surf.Area= 714 sf Storage= 532 cf

Plug-Flow detention time= 1.3 min calculated for 0.359 af (100% of inflow)
Center-of-Mass det. time= 1.2 min (826.4 - 825.2)

Volume	Invert	Avail.Storage	Storage Description
#1	59.65'	1,009 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.65	10	0	0
60.00	100	19	19
61.00	405	253	272
62.00	1,070	738	1,009

Device	Routing	Invert	Outlet Devices
#1	Primary	59.65'	**12.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.65' / 59.00' S= 0.0162 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.40 cfs @ 12.27 hrs HW=61.45' (Free Discharge)
1=Culvert (Inlet Controls 3.40 cfs @ 4.33 fps)

Summary for Pond P2: Pond

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth = 4.28" for 25-yr event
Inflow = 11.88 cfs @ 12.43 hrs, Volume= 1.549 af
Outflow = 1.76 cfs @ 13.70 hrs, Volume= 1.119 af, Atten= 85%, Lag= 75.9 min
Primary = 1.76 cfs @ 13.70 hrs, Volume= 1.119 af
Routed to Reach R1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 74.49' @ 13.70 hrs Surf.Area= 50,974 sf Storage= 40,093 cf

Plug-Flow detention time= 399.9 min calculated for 1.117 af (72% of inflow)
Center-of-Mass det. time= 311.6 min (1,140.4 - 828.8)

Volume	Invert	Avail.Storage	Storage Description
#1	73.50'	68,631 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.50	30,000	0	0
74.00	40,175	17,544	17,544
75.00	62,000	51,088	68,631

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**Channel/Reach** using Reach R1:

Primary OutFlow Max=1.76 cfs @ 13.70 hrs HW=74.49' (Free Discharge)
1=Channel/Reach (Channel Controls 1.76 cfs @ 1.43 fps)

Summary for Pond P3: Culvert

Inflow Area = 6.184 ac, 18.94% Impervious, Inflow Depth > 3.26" for 25-yr event
Inflow = 4.52 cfs @ 12.40 hrs, Volume= 1.678 af
Outflow = 4.52 cfs @ 12.40 hrs, Volume= 1.678 af, Atten= 0%, Lag= 0.1 min
Primary = 4.52 cfs @ 12.40 hrs, Volume= 1.678 af
Routed to Link SP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link SP-2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 4
Peak Elev= 49.20' @ 12.40 hrs Surf.Area= 13 sf Storage= 10 cf

Plug-Flow detention time= 0.1 min calculated for 1.678 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,062.5 - 1,062.5)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	515 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
48.00	5	0	0
49.00	10	8	8
50.00	25	18	25
51.00	955	490	515

Device	Routing	Invert	Outlet Devices
#1	Primary	48.00'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 48.00' / 47.50' S= 0.0125 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Secondary	50.95'	**10.0' long x 65.0' 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 2.64 2.63

Primary OutFlow Max=4.51 cfs @ 12.40 hrs HW=49.20' (Free Discharge)
└**1=Culvert** (Inlet Controls 4.51 cfs @ 3.73 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=48.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond WW: Weir Wall

Inflow Area = 4.344 ac, 26.14% Impervious, Inflow Depth > 3.09" for 25-yr event
Inflow = 1.76 cfs @ 13.76 hrs, Volume= 1.118 af
Outflow = 1.76 cfs @ 13.91 hrs, Volume= 1.118 af, Atten= 0%, Lag= 9.3 min
Primary = 0.59 cfs @ 13.91 hrs, Volume= 0.729 af
Routed to Reach R2 :
Secondary = 1.17 cfs @ 13.91 hrs, Volume= 0.389 af
Routed to Reach R2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 74.23' @ 13.91 hrs Surf.Area= 3,088 sf Storage= 2,094 cf

Plug-Flow detention time= 25.2 min calculated for 1.118 af (100% of inflow)
Center-of-Mass det. time= 25.1 min (1,169.9 - 1,144.8)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	4,913 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	100	0	0
74.00	2,760	1,430	1,430
75.00	4,205	3,483	4,913

Device	Routing	Invert	Outlet Devices
#1	Secondary	74.00'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00

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

#2	Primary	73.00'	**16.0" x 1.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.59 cfs @ 13.91 hrs HW=74.23' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.59 cfs @ 5.33 fps)

Secondary OutFlow Max=1.17 cfs @ 13.91 hrs HW=74.23' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 1.17 cfs @ 1.28 fps)

Summary for Link SP-1:

Inflow Area = 1.145 ac, 2.49% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 3.42 cfs @ 12.27 hrs, Volume= 0.359 af
Primary = 3.42 cfs @ 12.27 hrs, Volume= 0.359 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-2:

Inflow Area = 6.184 ac, 18.94% Impervious, Inflow Depth > 3.26" for 25-yr event
Inflow = 4.52 cfs @ 12.40 hrs, Volume= 1.678 af
Primary = 4.52 cfs @ 12.40 hrs, Volume= 1.678 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-3:

Inflow Area = 0.421 ac, 4.66% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 1.56 cfs @ 12.15 hrs, Volume= 0.132 af
Primary = 1.56 cfs @ 12.15 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-4:

Inflow Area = 0.619 ac, 3.65% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 2.37 cfs @ 12.14 hrs, Volume= 0.194 af
Primary = 2.37 cfs @ 12.14 hrs, Volume= 0.194 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

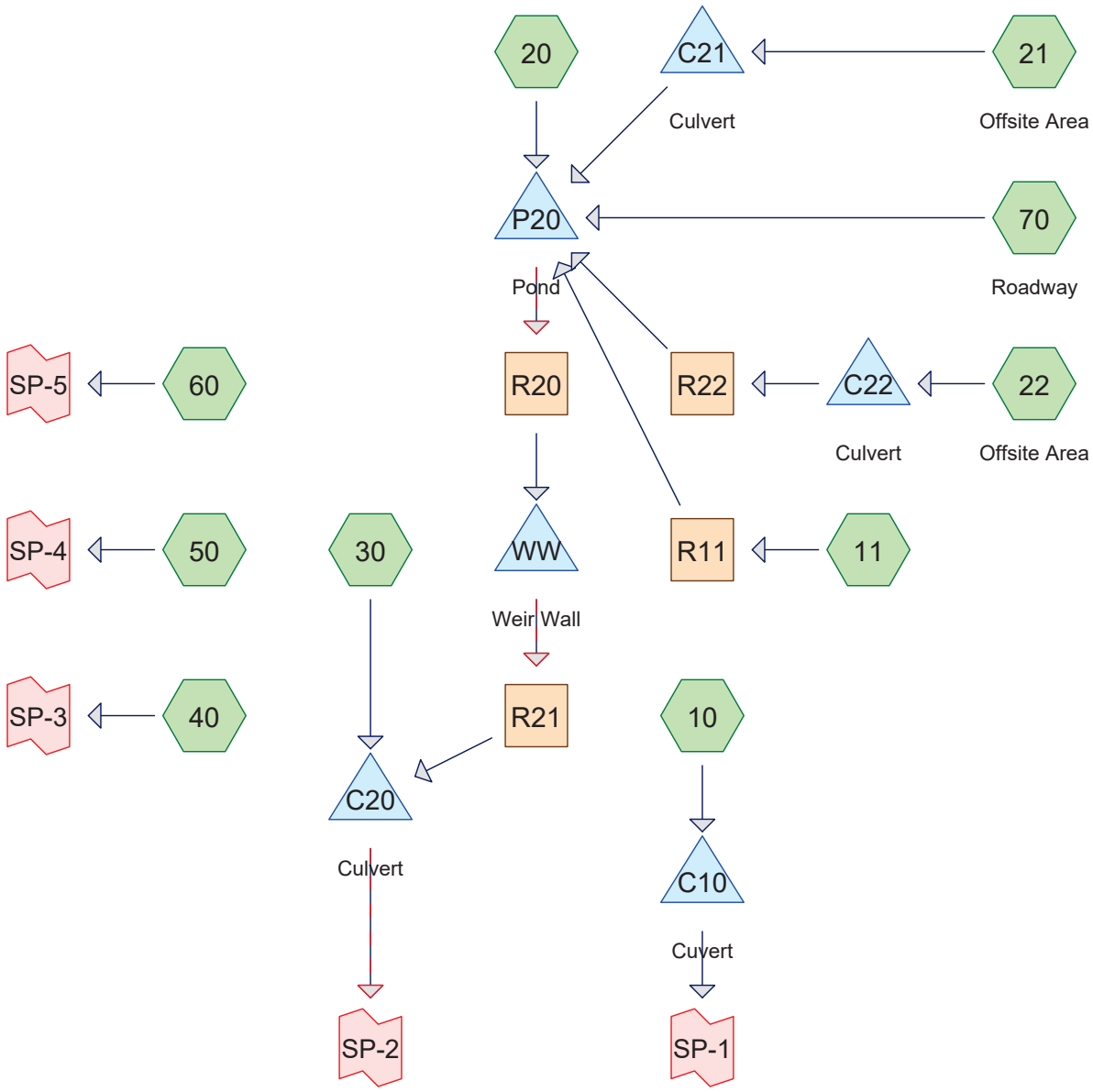
Summary for Link SP-5:

Inflow Area = 1.069 ac, 37.27% Impervious, Inflow Depth = 4.60" for 25-yr event
Inflow = 5.31 cfs @ 12.10 hrs, Volume= 0.410 af
Primary = 5.31 cfs @ 12.10 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

APPENDIX 4

POST DEVELOPMENT HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for 23-003-POST_V2
Prepared by Terradyn Consultants LLC, Printed 10/2/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.453	80	>75% Grass cover, Good, HSG D (21, 60)
0.042	98	Impervious (40, 50)
0.927	80	Lot Developed Grass (10, 11, 20, 30)
0.092	98	Lot Impervious (10)
0.184	99	Lot Impervious (11)
0.064	98	Offsite Driveway (10, 30)
0.258	98	Road (70)
0.053	98	Subdivision Road (20)
0.922	98	Water Surface, HSG D (20)
0.566	98	Wildes District Road (20, 21, 60)
5.876	77	Woods, Good, HSG D (10, 20, 21, 22, 30, 40, 50, 60)

Summary for Subcatchment 10:

Runoff = 1.14 cfs @ 12.17 hrs, Volume= 0.101 af, Depth= 1.62"
Routed to Pond C10 : Cuvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
	11,257	77	Woods, Good, HSG D
*	1,238	98	Offsite Driveway
*	4,000	98	Lot Impervious
*	16,000	80	Lot Developed Grass
	32,495	82	Weighted Average
	27,257		83.88% Pervious Area
	5,238		16.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	84	0.0120	0.14		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.30"
0.4	40	0.0500	1.57		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	21	0.3300	4.02		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.5	112	0.0620	1.24		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
12.3	257	Total			

Summary for Subcatchment 11:

Runoff = 1.38 cfs @ 12.08 hrs, Volume= 0.098 af, Depth= 1.84"
Routed to Reach R11 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	8,000	99	Lot Impervious
*	19,869	80	Lot Developed Grass
	27,869	85	Weighted Average
	19,869		71.29% Pervious Area
	8,000		28.71% Impervious Area

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

Summary for Subcatchment 20:

Runoff = 3.43 cfs @ 12.50 hrs, Volume= 0.470 af, Depth= 1.84"
Routed to Pond P20 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	2,500	80	Lot Developed Grass
	40,175	98	Water Surface, HSG D
	82,389	77	Woods, Good, HSG D
*	5,794	98	Wildes District Road
*	2,308	98	Subdivision Road
	133,166	85	Weighted Average
	84,889		63.75% Pervious Area
	48,277		36.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.1	150	0.0127	0.07		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.7	15	0.0050	0.35		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
35.8	165	Total			

Summary for Subcatchment 21: Offsite Area

Runoff = 0.70 cfs @ 12.25 hrs, Volume= 0.072 af, Depth= 1.41"
Routed to Pond C21 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	1,500	98	Wildes District Road
	3,250	80	>75% Grass cover, Good, HSG D
	21,865	77	Woods, Good, HSG D
	26,615	79	Weighted Average
	25,115		94.36% Pervious Area
	1,500		5.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	75	0.0533	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
6.2	120	0.0042	0.32		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
17.6	195	Total			

Summary for Subcatchment 22: Offsite Area

Runoff = 0.17 cfs @ 12.44 hrs, Volume= 0.022 af, Depth= 1.28"
Routed to Pond C22 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

Area (sf)	CN	Description
9,025	77	Woods, Good, HSG D
9,025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.4	20	0.0250	0.79		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
29.6	170	Total			

Summary for Subcatchment 30:

Runoff = 1.52 cfs @ 12.43 hrs, Volume= 0.194 af, Depth= 1.28"
Routed to Pond C20 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	1,560	98	Offsite Driveway
	75,284	77	Woods, Good, HSG D
*	0	98	Lot Impervious
*	2,000	80	Lot Developed Grass
	78,844	77	Weighted Average
	77,284		98.02% Pervious Area
	1,560		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	110	0.0360	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
5.2	170	0.0120	0.55		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.2	115	0.1040	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.4	65	0.0080	0.45		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
0.5	60	0.1500	1.94		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
29.0	570	Total			

Summary for Subcatchment 40:

Runoff = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af, Depth= 1.35"
Routed to Link SP-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
	17,475	77	Woods, Good, HSG D
*	855	98	Impervious
	18,330	78	Weighted Average
	17,475		95.34% Pervious Area
	855		4.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	70	0.0860	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	55	0.2910	2.70		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	85	0.0240	0.77		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.0	210	Total			

Summary for Subcatchment 50:

Runoff = 0.83 cfs @ 12.15 hrs, Volume= 0.069 af, Depth= 1.35"
Routed to Link SP-4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
	25,970	77	Woods, Good, HSG D
*	985	98	Impervious
	26,955	78	Weighted Average
	25,970		96.35% Pervious Area
	985		3.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	55	0.0550	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	120	0.1750	2.09		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
9.7	175	Total			

Summary for Subcatchment 60:

Runoff = 2.27 cfs @ 12.11 hrs, Volume= 0.171 af, Depth= 1.92"
Routed to Link SP-5 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	17,350	98	Wildes District Road
	16,500	80	>75% Grass cover, Good, HSG D
	12,705	77	Woods, Good, HSG D
	46,555	86	Weighted Average
	29,205		62.73% Pervious Area
	17,350		37.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40	0.0750	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	110	0.1270	1.78		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.3	100	0.0900	6.09		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
7.3	250	Total			

Summary for Subcatchment 70: Roadway

Runoff = 0.83 cfs @ 12.07 hrs, Volume= 0.066 af, Depth= 3.07"
Routed to Pond P20 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr Rainfall=3.30"

	Area (sf)	CN	Description
*	11,253	98	Road
	11,253		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, A-B**

Summary for Reach R11:

Inflow Area = 0.640 ac, 28.71% Impervious, Inflow Depth = 1.84" for 2-Yr event
Inflow = 1.38 cfs @ 12.08 hrs, Volume= 0.098 af
Outflow = 1.22 cfs @ 12.18 hrs, Volume= 0.098 af, Atten= 11%, Lag= 6.3 min
Routed to Pond P20 : Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.51 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 13.7 min

Peak Storage= 287 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.06' , Surface Width= 44.44'
Bank-Full Depth= 0.50' Flow Area= 29.4 sf, Capacity= 53.29 cfs

40.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 50.0 25.0 '/' Top Width= 77.50'
Length= 115.0' Slope= 0.0087 '/'
Inlet Invert= 75.00', Outlet Invert= 74.00'

‡

Summary for Reach R20:

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 0.76" for 2-Yr event
Inflow = 0.27 cfs @ 17.56 hrs, Volume= 0.302 af
Outflow = 0.27 cfs @ 17.66 hrs, Volume= 0.302 af, Atten= 0%, Lag= 6.2 min
Routed to Pond WW : Weir Wall

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.77 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.49 fps, Avg. Travel Time= 6.0 min

Peak Storage= 62 cf @ 17.60 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 2.33'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 6.13 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 175.0' Slope= 0.0057 '/'
Inlet Invert= 74.00', Outlet Invert= 73.00'

Summary for Reach R21:

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 0.76" for 2-Yr event
Inflow = 0.27 cfs @ 18.07 hrs, Volume= 0.301 af
Outflow = 0.27 cfs @ 18.15 hrs, Volume= 0.301 af, Atten= 0%, Lag= 4.9 min
Routed to Pond C20 : Culvert

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.69 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 1.06 fps, Avg. Travel Time= 4.8 min

Peak Storage= 49 cf @ 18.10 hrs
Average Depth at Peak Storage= 0.07' , Surface Width= 2.30'
Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 7.58 cfs

2.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 2.0 '/' Top Width= 4.00'
Length= 305.0' Slope= 0.0738 '/'
Inlet Invert= 73.00', Outlet Invert= 50.50'

‡

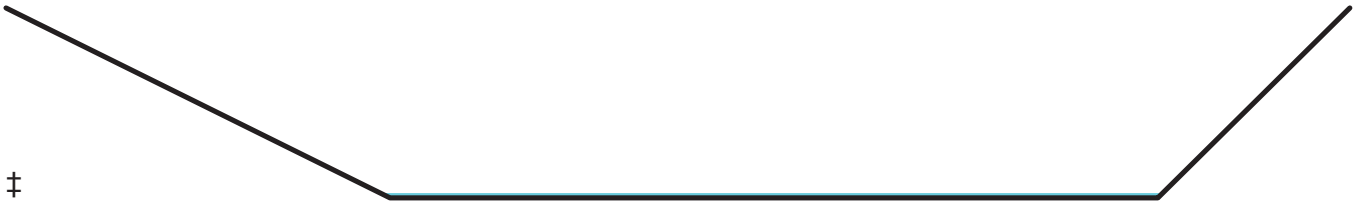
Summary for Reach R22:

Inflow Area = 0.207 ac, 0.00% Impervious, Inflow Depth = 1.28" for 2-Yr event
Inflow = 0.16 cfs @ 12.54 hrs, Volume= 0.022 af
Outflow = 0.15 cfs @ 12.84 hrs, Volume= 0.022 af, Atten= 7%, Lag= 18.2 min
Routed to Pond P20 : Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.24 fps, Min. Travel Time= 10.6 min
Avg. Velocity = 0.13 fps, Avg. Travel Time= 19.1 min

Peak Storage= 95 cf @ 12.67 hrs
Average Depth at Peak Storage= 0.01' , Surface Width= 50.94'
Bank-Full Depth= 0.50' Flow Area= 34.4 sf, Capacity= 79.09 cfs

50.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 50.0 25.0 '/' Top Width= 87.50'
Length= 150.0' Slope= 0.0133 '/'
Inlet Invert= 76.00', Outlet Invert= 74.00'



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Summary for Pond C10: Cuvert

Inflow Area = 0.746 ac, 16.12% Impervious, Inflow Depth = 1.62" for 2-Yr event
Inflow = 1.14 cfs @ 12.17 hrs, Volume= 0.101 af
Outflow = 1.13 cfs @ 12.20 hrs, Volume= 0.101 af, Atten= 1%, Lag= 1.3 min
Primary = 1.13 cfs @ 12.20 hrs, Volume= 0.101 af
Routed to Link SP-1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 60.29' @ 12.20 hrs Surf.Area= 187 sf Storage= 60 cf

Plug-Flow detention time= 0.9 min calculated for 0.101 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (841.6 - 840.6)

Volume	Invert	Avail.Storage	Storage Description
#1	59.65'	1,009 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.65	10	0	0
60.00	100	19	19
61.00	405	253	272
62.00	1,070	738	1,009

Device	Routing	Invert	Outlet Devices
#1	Primary	59.65'	**12.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.65' / 59.00' S= 0.0162 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.12 cfs @ 12.20 hrs HW=60.28' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 1.12 cfs @ 2.14 fps)

Summary for Pond C20: Culvert

Inflow Area = 6.583 ac, 24.62% Impervious, Inflow Depth > 0.90" for 2-Yr event
Inflow = 1.52 cfs @ 12.43 hrs, Volume= 0.495 af
Outflow = 1.52 cfs @ 12.43 hrs, Volume= 0.495 af, Atten= 0%, Lag= 0.0 min
Primary = 1.52 cfs @ 12.43 hrs, Volume= 0.495 af
Routed to Link SP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link SP-2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 4
Peak Elev= 48.60' @ 12.43 hrs Surf.Area= 8 sf Storage= 4 cf

Plug-Flow detention time= 0.1 min calculated for 0.494 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (1,196.8 - 1,196.7)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	515 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
48.00	5	0	0
49.00	10	8	8
50.00	25	18	25
51.00	955	490	515

Device	Routing	Invert	Outlet Devices
#1	Primary	48.00'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 48.00' / 47.50' S= 0.0125 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Secondary	50.95'	**10.0' long x 65.0' 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 2.64 2.63

Primary OutFlow Max=1.51 cfs @ 12.43 hrs HW=48.60' (Free Discharge)
1=Culvert (Inlet Controls 1.51 cfs @ 2.63 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=48.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C21: Culvert

Inflow Area = 0.611 ac, 5.64% Impervious, Inflow Depth = 1.41" for 2-Yr event
Inflow = 0.70 cfs @ 12.25 hrs, Volume= 0.072 af
Outflow = 0.56 cfs @ 12.41 hrs, Volume= 0.072 af, Atten= 21%, Lag= 9.2 min
Primary = 0.56 cfs @ 12.41 hrs, Volume= 0.072 af
Routed to Pond P20 : Pond

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 75.87' @ 12.41 hrs Surf.Area= 1,863 sf Storage= 354 cf

Plug-Flow detention time= 11.2 min calculated for 0.072 af (100% of inflow)
Center-of-Mass det. time= 11.0 min (866.1 - 855.1)

Volume	Invert	Avail.Storage	Storage Description
#1	75.50'	5,560 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
75.50	50	0	0
76.00	2,500	638	638
77.00	7,345	4,923	5,560

Device	Routing	Invert	Outlet Devices
#1	Primary	75.50'	**15.0" Round Culvert** L= 50.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 75.50' / 74.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.55 cfs @ 12.41 hrs HW=75.87' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.55 cfs @ 1.83 fps)

Summary for Pond C22: Culvert

Inflow Area = 0.207 ac, 0.00% Impervious, Inflow Depth = 1.28" for 2-Yr event
Inflow = 0.17 cfs @ 12.44 hrs, Volume= 0.022 af
Outflow = 0.16 cfs @ 12.54 hrs, Volume= 0.022 af, Atten= 6%, Lag= 6.3 min
Primary = 0.16 cfs @ 12.54 hrs, Volume= 0.022 af
Routed to Reach R22 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 76.71' @ 12.54 hrs Surf.Area= 558 sf Storage= 63 cf

Plug-Flow detention time= 7.9 min calculated for 0.022 af (100% of inflow)
Center-of-Mass det. time= 7.9 min (880.4 - 872.5)

Volume	Invert	Avail.Storage	Storage Description
#1	76.50'	331 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
76.50	50	0	0
77.00	1,275	331	331

Device	Routing	Invert	Outlet Devices
#1	Primary	76.50'	**12.0" Round Culvert** L= 70.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 76.50' / 75.50' S= 0.0143 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.16 cfs @ 12.54 hrs HW=76.71' (Free Discharge)
1=Culvert (Inlet Controls 0.16 cfs @ 1.37 fps)

Summary for Pond P20: Pond

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth = 1.83" for 2-Yr event
Inflow = 4.72 cfs @ 12.44 hrs, Volume= 0.728 af
Outflow = 0.27 cfs @ 17.56 hrs, Volume= 0.302 af, Atten= 94%, Lag= 306.9 min
Primary = 0.27 cfs @ 17.56 hrs, Volume= 0.302 af
Routed to Reach R20 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 74.16' @ 17.56 hrs Surf.Area= 43,739 sf Storage= 24,395 cf

Plug-Flow detention time= 673.6 min calculated for 0.302 af (41% of inflow)
Center-of-Mass det. time= 544.2 min (1,388.6 - 844.4)

Volume	Invert	Avail.Storage	Storage Description
#1	73.50'	68,631 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.50	30,000	0	0
74.00	40,175	17,544	17,544
75.00	62,000	51,088	68,631

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**Channel/Reach** using Reach R20:

Primary OutFlow Max=0.27 cfs @ 17.56 hrs HW=74.16' (Free Discharge)
1=Channel/Reach (Channel Controls 0.27 cfs @ 0.77 fps)

Summary for Pond WW: Weir Wall

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 0.76" for 2-Yr event
Inflow = 0.27 cfs @ 17.66 hrs, Volume= 0.302 af
Outflow = 0.27 cfs @ 18.07 hrs, Volume= 0.301 af, Atten= 0%, Lag= 24.4 min
Primary = 0.27 cfs @ 18.07 hrs, Volume= 0.301 af
Routed to Reach R21 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach R21 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 73.26' @ 18.07 hrs Surf.Area= 782 sf Storage= 113 cf

Plug-Flow detention time= 3.8 min calculated for 0.301 af (100% of inflow)
Center-of-Mass det. time= 3.7 min (1,399.7 - 1,395.9)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	4,913 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	100	0	0
74.00	2,760	1,430	1,430
75.00	4,205	3,483	4,913

Device	Routing	Invert	Outlet Devices
#1	Secondary	74.00'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Primary	73.00'	**16.0" x 1.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.27 cfs @ 18.07 hrs HW=73.26' (Free Discharge)
2=Orifice/Grate (Orifice Controls 0.27 cfs @ 2.44 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=73.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link SP-1:

Inflow Area = 0.746 ac, 16.12% Impervious, Inflow Depth = 1.62" for 2-Yr event
Inflow = 1.13 cfs @ 12.20 hrs, Volume= 0.101 af
Primary = 1.13 cfs @ 12.20 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-2:

Inflow Area = 6.583 ac, 24.62% Impervious, Inflow Depth > 0.90" for 2-Yr event
Inflow = 1.52 cfs @ 12.43 hrs, Volume= 0.495 af
Primary = 1.52 cfs @ 12.43 hrs, Volume= 0.495 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-3:

Inflow Area = 0.421 ac, 4.66% Impervious, Inflow Depth = 1.35" for 2-Yr event
Inflow = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af
Primary = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-4:

Inflow Area = 0.619 ac, 3.65% Impervious, Inflow Depth = 1.35" for 2-Yr event
Inflow = 0.83 cfs @ 12.15 hrs, Volume= 0.069 af
Primary = 0.83 cfs @ 12.15 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-5:

Inflow Area = 1.069 ac, 37.27% Impervious, Inflow Depth = 1.92" for 2-Yr event
Inflow = 2.27 cfs @ 12.11 hrs, Volume= 0.171 af
Primary = 2.27 cfs @ 12.11 hrs, Volume= 0.171 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 10:

Runoff = 2.11 cfs @ 12.17 hrs, Volume= 0.186 af, Depth= 2.99"
Routed to Pond C10 : Cuvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	11,257	77	Woods, Good, HSG D
*	1,238	98	Offsite Driveway
*	4,000	98	Lot Impervious
*	16,000	80	Lot Developed Grass
	32,495	82	Weighted Average
	27,257		83.88% Pervious Area
	5,238		16.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	84	0.0120	0.14		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.30"
0.4	40	0.0500	1.57		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	21	0.3300	4.02		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.5	112	0.0620	1.24		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
12.3	257	Total			

Summary for Subcatchment 11:

Runoff = 2.45 cfs @ 12.07 hrs, Volume= 0.175 af, Depth= 3.28"
Routed to Reach R11 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	8,000	99	Lot Impervious
*	19,869	80	Lot Developed Grass
	27,869	85	Weighted Average
	19,869		71.29% Pervious Area
	8,000		28.71% Impervious Area

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

Summary for Subcatchment 20:

Runoff = 6.06 cfs @ 12.49 hrs, Volume= 0.835 af, Depth= 3.28"
Routed to Pond P20 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	2,500	80	Lot Developed Grass
	40,175	98	Water Surface, HSG D
	82,389	77	Woods, Good, HSG D
*	5,794	98	Wildes District Road
*	2,308	98	Subdivision Road
	133,166	85	Weighted Average
	84,889		63.75% Pervious Area
	48,277		36.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.1	150	0.0127	0.07		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.7	15	0.0050	0.35		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
35.8	165	Total			

Summary for Subcatchment 21: Offsite Area

Runoff = 1.38 cfs @ 12.25 hrs, Volume= 0.138 af, Depth= 2.72"
Routed to Pond C21 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	1,500	98	Wildes District Road
	3,250	80	>75% Grass cover, Good, HSG D
	21,865	77	Woods, Good, HSG D
	26,615	79	Weighted Average
	25,115		94.36% Pervious Area
	1,500		5.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	75	0.0533	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
6.2	120	0.0042	0.32		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
17.6	195	Total			

Summary for Subcatchment 22: Offsite Area

Runoff = 0.35 cfs @ 12.42 hrs, Volume= 0.044 af, Depth= 2.54"
Routed to Pond C22 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

Area (sf)	CN	Description
9,025	77	Woods, Good, HSG D
9,025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.4	20	0.0250	0.79		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
29.6	170	Total			

Summary for Subcatchment 30:

Runoff = 3.09 cfs @ 12.41 hrs, Volume= 0.383 af, Depth= 2.54"
Routed to Pond C20 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	1,560	98	Offsite Driveway
	75,284	77	Woods, Good, HSG D
*	0	98	Lot Impervious
*	2,000	80	Lot Developed Grass
	78,844	77	Weighted Average
	77,284		98.02% Pervious Area
	1,560		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	110	0.0360	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
5.2	170	0.0120	0.55		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.2	115	0.1040	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.4	65	0.0080	0.45		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
0.5	60	0.1500	1.94		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
29.0	570	Total			

Summary for Subcatchment 40:

Runoff = 1.09 cfs @ 12.16 hrs, Volume= 0.092 af, Depth= 2.63"
Routed to Link SP-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	17,475	77	Woods, Good, HSG D
*	855	98	Impervious
	18,330	78	Weighted Average
	17,475		95.34% Pervious Area
	855		4.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	70	0.0860	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	55	0.2910	2.70		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	85	0.0240	0.77		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.0	210	Total			

Summary for Subcatchment 50:

Runoff = 1.66 cfs @ 12.14 hrs, Volume= 0.135 af, Depth= 2.63"
Routed to Link SP-4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	25,970	77	Woods, Good, HSG D
*	985	98	Impervious
	26,955	78	Weighted Average
	25,970		96.35% Pervious Area
	985		3.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	55	0.0550	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	120	0.1750	2.09		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
9.7	175	Total			

Summary for Subcatchment 60:

Runoff = 3.94 cfs @ 12.10 hrs, Volume= 0.300 af, Depth= 3.37"
Routed to Link SP-5 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	17,350	98	Wildes District Road
	16,500	80	>75% Grass cover, Good, HSG D
	12,705	77	Woods, Good, HSG D
	46,555	86	Weighted Average
	29,205		62.73% Pervious Area
	17,350		37.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40	0.0750	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	110	0.1270	1.78		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.3	100	0.0900	6.09		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
7.3	250	Total			

Summary for Subcatchment 70: Roadway

Runoff = 1.25 cfs @ 12.07 hrs, Volume= 0.100 af, Depth= 4.66"
Routed to Pond P20 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	11,253	98	Road
	11,253		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, A-B**

Summary for Reach R11:

Inflow Area = 0.640 ac, 28.71% Impervious, Inflow Depth = 3.28" for 10-yr event
Inflow = 2.45 cfs @ 12.07 hrs, Volume= 0.175 af
Outflow = 2.29 cfs @ 12.16 hrs, Volume= 0.175 af, Atten= 6%, Lag= 5.1 min
Routed to Pond P20 : Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.63 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.16 fps, Avg. Travel Time= 11.8 min

Peak Storage= 417 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.08' , Surface Width= 46.30'
Bank-Full Depth= 0.50' Flow Area= 29.4 sf, Capacity= 53.29 cfs

40.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 50.0 25.0 '/' Top Width= 77.50'
Length= 115.0' Slope= 0.0087 '/'
Inlet Invert= 75.00', Outlet Invert= 74.00'

‡

Summary for Reach R20:

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 2.17" for 10-yr event
Inflow = 1.18 cfs @ 14.17 hrs, Volume= 0.863 af
Outflow = 1.18 cfs @ 14.24 hrs, Volume= 0.862 af, Atten= 0%, Lag= 4.0 min
Routed to Pond WW : Weir Wall

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.26 fps, Min. Travel Time= 2.3 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 4.5 min

Peak Storage= 164 cf @ 14.20 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 2.78'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 6.13 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 175.0' Slope= 0.0057 '/'
Inlet Invert= 74.00', Outlet Invert= 73.00'

Summary for Reach R21:

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 2.17" for 10-yr event
Inflow = 1.18 cfs @ 14.44 hrs, Volume= 0.862 af
Outflow = 1.18 cfs @ 14.49 hrs, Volume= 0.862 af, Atten= 0%, Lag= 3.1 min
Routed to Pond C20 : Culvert

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.83 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.43 fps, Avg. Travel Time= 3.5 min

Peak Storage= 127 cf @ 14.46 hrs
Average Depth at Peak Storage= 0.18' , Surface Width= 2.71'
Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 7.58 cfs

2.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 2.0 '/' Top Width= 4.00'
Length= 305.0' Slope= 0.0738 '/'
Inlet Invert= 73.00', Outlet Invert= 50.50'

‡

Summary for Reach R22:

Inflow Area = 0.207 ac, 0.00% Impervious, Inflow Depth = 2.54" for 10-yr event
Inflow = 0.33 cfs @ 12.52 hrs, Volume= 0.044 af
Outflow = 0.31 cfs @ 12.75 hrs, Volume= 0.044 af, Atten= 5%, Lag= 13.7 min
Routed to Pond P20 : Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.31 fps, Min. Travel Time= 8.0 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 18.2 min

Peak Storage= 151 cf @ 12.62 hrs
Average Depth at Peak Storage= 0.02' , Surface Width= 51.49'
Bank-Full Depth= 0.50' Flow Area= 34.4 sf, Capacity= 79.09 cfs

50.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 50.0 25.0 '/' Top Width= 87.50'
Length= 150.0' Slope= 0.0133 '/'
Inlet Invert= 76.00', Outlet Invert= 74.00'

‡

Summary for Pond C10: Cuvert

Inflow Area = 0.746 ac, 16.12% Impervious, Inflow Depth = 2.99" for 10-yr event
Inflow = 2.11 cfs @ 12.17 hrs, Volume= 0.186 af
Outflow = 2.05 cfs @ 12.20 hrs, Volume= 0.186 af, Atten= 3%, Lag= 1.9 min
Primary = 2.05 cfs @ 12.20 hrs, Volume= 0.186 af
Routed to Link SP-1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 60.61' @ 12.20 hrs Surf.Area= 287 sf Storage= 138 cf

Plug-Flow detention time= 1.0 min calculated for 0.186 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (823.9 - 823.0)

Volume	Invert	Avail.Storage	Storage Description
#1	59.65'	1,009 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.65	10	0	0
60.00	100	19	19
61.00	405	253	272
62.00	1,070	738	1,009

Device	Routing	Invert	Outlet Devices
#1	Primary	59.65'	**12.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.65' / 59.00' S= 0.0162 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.05 cfs @ 12.20 hrs HW=60.61' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.05 cfs @ 2.64 fps)

Summary for Pond C20: Culvert

Inflow Area = 6.583 ac, 24.62% Impervious, Inflow Depth > 2.27" for 10-yr event
Inflow = 3.09 cfs @ 12.41 hrs, Volume= 1.245 af
Outflow = 3.08 cfs @ 12.41 hrs, Volume= 1.245 af, Atten= 0%, Lag= 0.0 min
Primary = 3.08 cfs @ 12.41 hrs, Volume= 1.245 af
Routed to Link SP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link SP-2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 4
Peak Elev= 48.91' @ 12.41 hrs Surf.Area= 10 sf Storage= 7 cf

Plug-Flow detention time= 0.1 min calculated for 1.244 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,103.7 - 1,103.7)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	515 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
48.00	5	0	0
49.00	10	8	8
50.00	25	18	25
51.00	955	490	515

Device	Routing	Invert	Outlet Devices
#1	Primary	48.00'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 48.00' / 47.50' S= 0.0125 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Secondary	50.95'	**10.0' long x 65.0' 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 2.64 2.63

Primary OutFlow Max=3.07 cfs @ 12.41 hrs HW=48.90' (Free Discharge)
1=Culvert (Inlet Controls 3.07 cfs @ 3.24 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=48.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C21: Culvert

Inflow Area = 0.611 ac, 5.64% Impervious, Inflow Depth = 2.72" for 10-yr event
Inflow = 1.38 cfs @ 12.25 hrs, Volume= 0.138 af
Outflow = 1.07 cfs @ 12.40 hrs, Volume= 0.138 af, Atten= 22%, Lag= 9.1 min
Primary = 1.07 cfs @ 12.40 hrs, Volume= 0.138 af
Routed to Pond P20 : Pond

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 76.03' @ 12.40 hrs Surf.Area= 2,631 sf Storage= 707 cf

Plug-Flow detention time= 10.9 min calculated for 0.138 af (100% of inflow)
Center-of-Mass det. time= 10.9 min (847.0 - 836.1)

Volume	Invert	Avail.Storage	Storage Description
#1	75.50'	5,560 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
75.50	50	0	0
76.00	2,500	638	638
77.00	7,345	4,923	5,560

Device	Routing	Invert	Outlet Devices
#1	Primary	75.50'	**15.0" Round Culvert** L= 50.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 75.50' / 74.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.07 cfs @ 12.40 hrs HW=76.03' (Free Discharge)
↑**1=Culvert** (Inlet Controls 1.07 cfs @ 2.18 fps)

Summary for Pond C22: Culvert

Inflow Area = 0.207 ac, 0.00% Impervious, Inflow Depth = 2.54" for 10-yr event
Inflow = 0.35 cfs @ 12.42 hrs, Volume= 0.044 af
Outflow = 0.33 cfs @ 12.52 hrs, Volume= 0.044 af, Atten= 7%, Lag= 6.3 min
Primary = 0.33 cfs @ 12.52 hrs, Volume= 0.044 af
Routed to Reach R22 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 76.80' @ 12.52 hrs Surf.Area= 786 sf Storage= 126 cf

Plug-Flow detention time= 7.7 min calculated for 0.044 af (100% of inflow)
Center-of-Mass det. time= 7.3 min (859.9 - 852.5)

Volume	Invert	Avail.Storage	Storage Description
#1	76.50'	331 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
76.50	50	0	0
77.00	1,275	331	331

Device	Routing	Invert	Outlet Devices
#1	Primary	76.50'	**12.0" Round Culvert** L= 70.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 76.50' / 75.50' S= 0.0143 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.33 cfs @ 12.52 hrs HW=76.80' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.33 cfs @ 1.64 fps)

Summary for Pond P20: Pond

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth = 3.25" for 10-yr event
Inflow = 8.40 cfs @ 12.44 hrs, Volume= 1.292 af
Outflow = 1.18 cfs @ 14.17 hrs, Volume= 0.863 af, Atten= 86%, Lag= 104.0 min
Primary = 1.18 cfs @ 14.17 hrs, Volume= 0.863 af
Routed to Reach R20 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 74.39' @ 14.17 hrs Surf.Area= 48,716 sf Storage= 34,937 cf

Plug-Flow detention time= 449.8 min calculated for 0.863 af (67% of inflow)
Center-of-Mass det. time= 350.3 min (1,179.7 - 829.4)

Volume	Invert	Avail.Storage	Storage Description
#1	73.50'	68,631 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.50	30,000	0	0
74.00	40,175	17,544	17,544
75.00	62,000	51,088	68,631

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**Channel/Reach** using Reach R20:

Primary OutFlow Max=1.18 cfs @ 14.17 hrs HW=74.39' (Free Discharge)
↑—**1=Channel/Reach** (Channel Controls 1.18 cfs @ 1.26 fps)

Summary for Pond WW: Weir Wall

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 2.17" for 10-yr event
Inflow = 1.18 cfs @ 14.24 hrs, Volume= 0.862 af
Outflow = 1.18 cfs @ 14.44 hrs, Volume= 0.862 af, Atten= 0%, Lag= 12.1 min
Primary = 0.57 cfs @ 14.44 hrs, Volume= 0.675 af
Routed to Reach R21 :
Secondary = 0.60 cfs @ 14.44 hrs, Volume= 0.187 af
Routed to Reach R21 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 74.15' @ 14.44 hrs Surf.Area= 2,972 sf Storage= 1,850 cf

Plug-Flow detention time= 27.2 min calculated for 0.862 af (100% of inflow)
Center-of-Mass det. time= 27.1 min (1,211.7 - 1,184.6)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	4,913 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	100	0	0
74.00	2,760	1,430	1,430
75.00	4,205	3,483	4,913

Device	Routing	Invert	Outlet Devices
#1	Secondary	74.00'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Primary	73.00'	**16.0" x 1.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.57 cfs @ 14.44 hrs HW=74.15' (Free Discharge)
2=Orifice/Grate (Orifice Controls 0.57 cfs @ 5.16 fps)

Secondary OutFlow Max=0.60 cfs @ 14.44 hrs HW=74.15' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.60 cfs @ 1.03 fps)

Summary for Link SP-1:

Inflow Area = 0.746 ac, 16.12% Impervious, Inflow Depth = 2.99" for 10-yr event
Inflow = 2.05 cfs @ 12.20 hrs, Volume= 0.186 af
Primary = 2.05 cfs @ 12.20 hrs, Volume= 0.186 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-2:

Inflow Area = 6.583 ac, 24.62% Impervious, Inflow Depth > 2.27" for 10-yr event
Inflow = 3.08 cfs @ 12.41 hrs, Volume= 1.245 af
Primary = 3.08 cfs @ 12.41 hrs, Volume= 1.245 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-3:

Inflow Area = 0.421 ac, 4.66% Impervious, Inflow Depth = 2.63" for 10-yr event
Inflow = 1.09 cfs @ 12.16 hrs, Volume= 0.092 af
Primary = 1.09 cfs @ 12.16 hrs, Volume= 0.092 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-4:

Inflow Area = 0.619 ac, 3.65% Impervious, Inflow Depth = 2.63" for 10-yr event
Inflow = 1.66 cfs @ 12.14 hrs, Volume= 0.135 af
Primary = 1.66 cfs @ 12.14 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-5:

Inflow Area = 1.069 ac, 37.27% Impervious, Inflow Depth = 3.37" for 10-yr event
Inflow = 3.94 cfs @ 12.10 hrs, Volume= 0.300 af
Primary = 3.94 cfs @ 12.10 hrs, Volume= 0.300 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 10:

Runoff = 2.93 cfs @ 12.17 hrs, Volume= 0.259 af, Depth= 4.17"
Routed to Pond C10 : Cuvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	11,257	77	Woods, Good, HSG D
*	1,238	98	Offsite Driveway
*	4,000	98	Lot Impervious
*	16,000	80	Lot Developed Grass
	32,495	82	Weighted Average
	27,257		83.88% Pervious Area
	5,238		16.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	84	0.0120	0.14		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.30"
0.4	40	0.0500	1.57		**Shallow Concentrated Flow, B-C** Short Grass Pasture Kv= 7.0 fps
0.1	21	0.3300	4.02		**Shallow Concentrated Flow, C-D** Short Grass Pasture Kv= 7.0 fps
1.5	112	0.0620	1.24		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
12.3	257	Total			

Summary for Subcatchment 11:

Runoff = 3.32 cfs @ 12.07 hrs, Volume= 0.239 af, Depth= 4.49"
Routed to Reach R11 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	8,000	99	Lot Impervious
*	19,869	80	Lot Developed Grass
	27,869	85	Weighted Average
	19,869		71.29% Pervious Area
	8,000		28.71% Impervious Area

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

Summary for Subcatchment 20:

Runoff = 8.23 cfs @ 12.48 hrs, Volume= 1.144 af, Depth= 4.49"
Routed to Pond P20 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	2,500	80	Lot Developed Grass
	40,175	98	Water Surface, HSG D
	82,389	77	Woods, Good, HSG D
*	5,794	98	Wildes District Road
*	2,308	98	Subdivision Road
	133,166	85	Weighted Average
	84,889		63.75% Pervious Area
	48,277		36.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.1	150	0.0127	0.07		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.7	15	0.0050	0.35		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
35.8	165	Total			

Summary for Subcatchment 21: Offsite Area

Runoff = 1.95 cfs @ 12.24 hrs, Volume= 0.196 af, Depth= 3.86"
Routed to Pond C21 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	1,500	98	Wildes District Road
	3,250	80	>75% Grass cover, Good, HSG D
	21,865	77	Woods, Good, HSG D
	26,615	79	Weighted Average
	25,115		94.36% Pervious Area
	1,500		5.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	75	0.0533	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
6.2	120	0.0042	0.32		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
17.6	195	Total			

Summary for Subcatchment 22: Offsite Area

Runoff = 0.50 cfs @ 12.41 hrs, Volume= 0.063 af, Depth= 3.65"
Routed to Pond C22 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

Area (sf)	CN	Description
9,025	77	Woods, Good, HSG D
9,025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.4	20	0.0250	0.79		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
29.6	170	Total			

Summary for Subcatchment 30:

Runoff = 4.45 cfs @ 12.40 hrs, Volume= 0.551 af, Depth= 3.65"
Routed to Pond C20 : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	1,560	98	Offsite Driveway
	75,284	77	Woods, Good, HSG D
*	0	98	Lot Impervious
*	2,000	80	Lot Developed Grass
	78,844	77	Weighted Average
	77,284		98.02% Pervious Area
	1,560		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	110	0.0360	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
5.2	170	0.0120	0.55		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.2	115	0.1040	1.61		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
2.4	65	0.0080	0.45		**Shallow Concentrated Flow, D-E** Woodland Kv= 5.0 fps
0.5	60	0.1500	1.94		**Shallow Concentrated Flow, E-F** Woodland Kv= 5.0 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
29.0	570	Total			

Summary for Subcatchment 40:

Runoff = 1.56 cfs @ 12.15 hrs, Volume= 0.132 af, Depth= 3.76"
Routed to Link SP-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	17,475	77	Woods, Good, HSG D
*	855	98	Impervious
	18,330	78	Weighted Average
	17,475		95.34% Pervious Area
	855		4.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	70	0.0860	0.13		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	55	0.2910	2.70		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
1.8	85	0.0240	0.77		**Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps
11.0	210	Total			

Summary for Subcatchment 50:

Runoff = 2.37 cfs @ 12.14 hrs, Volume= 0.194 af, Depth= 3.76"
Routed to Link SP-4 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	25,970	77	Woods, Good, HSG D
*	985	98	Impervious
	26,955	78	Weighted Average
	25,970		96.35% Pervious Area
	985		3.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	55	0.0550	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	120	0.1750	2.09		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
9.7	175	Total			

Summary for Subcatchment 60:

Runoff = 5.31 cfs @ 12.10 hrs, Volume= 0.410 af, Depth= 4.60"
Routed to Link SP-5 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	17,350	98	Wildes District Road
	16,500	80	>75% Grass cover, Good, HSG D
	12,705	77	Woods, Good, HSG D
	46,555	86	Weighted Average
	29,205		62.73% Pervious Area
	17,350		37.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40	0.0750	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.30"
1.0	110	0.1270	1.78		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.3	100	0.0900	6.09		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
7.3	250	Total			

Summary for Subcatchment 70: Roadway

Runoff = 1.58 cfs @ 12.07 hrs, Volume= 0.128 af, Depth= 5.96"
Routed to Pond P20 : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	11,253	98	Road
	11,253		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, A-B**

Summary for Reach R11:

Inflow Area = 0.640 ac, 28.71% Impervious, Inflow Depth = 4.49" for 25-yr event
Inflow = 3.32 cfs @ 12.07 hrs, Volume= 0.239 af
Outflow = 3.11 cfs @ 12.15 hrs, Volume= 0.239 af, Atten= 6%, Lag= 4.7 min
Routed to Pond P20 : Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.71 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 0.18 fps, Avg. Travel Time= 10.9 min

Peak Storage= 509 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.10' , Surface Width= 47.58'
Bank-Full Depth= 0.50' Flow Area= 29.4 sf, Capacity= 53.29 cfs

40.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 50.0 25.0 '/' Top Width= 77.50'
Length= 115.0' Slope= 0.0087 '/'
Inlet Invert= 75.00', Outlet Invert= 74.00'

‡

Summary for Reach R20:

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 3.37" for 25-yr event
Inflow = 2.35 cfs @ 13.51 hrs, Volume= 1.341 af
Outflow = 2.35 cfs @ 13.56 hrs, Volume= 1.341 af, Atten= 0%, Lag= 3.3 min
Routed to Pond WW : Weir Wall

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.56 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 0.72 fps, Avg. Travel Time= 4.1 min

Peak Storage= 264 cf @ 13.53 hrs
Average Depth at Peak Storage= 0.58' , Surface Width= 3.17'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 6.13 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 1.0 '/' Top Width= 4.00'
Length= 175.0' Slope= 0.0057 '/'
Inlet Invert= 74.00', Outlet Invert= 73.00'

Summary for Reach R21:

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 3.37" for 25-yr event
Inflow = 2.34 cfs @ 13.69 hrs, Volume= 1.341 af
Outflow = 2.34 cfs @ 13.73 hrs, Volume= 1.341 af, Atten= 0%, Lag= 2.5 min
Routed to Pond C20 : Culvert

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.55 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 1.60 fps, Avg. Travel Time= 3.2 min

Peak Storage= 202 cf @ 13.71 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 3.05'
Bank-Full Depth= 0.50' Flow Area= 1.5 sf, Capacity= 7.58 cfs

2.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 2.0 '/' Top Width= 4.00'
Length= 305.0' Slope= 0.0738 '/'
Inlet Invert= 73.00', Outlet Invert= 50.50'

‡

Summary for Reach R22:

Inflow Area = 0.207 ac, 0.00% Impervious, Inflow Depth = 3.65" for 25-yr event
Inflow = 0.47 cfs @ 12.52 hrs, Volume= 0.063 af
Outflow = 0.45 cfs @ 12.71 hrs, Volume= 0.063 af, Atten= 3%, Lag= 11.7 min
Routed to Pond P20 : Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.36 fps, Min. Travel Time= 6.9 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 17.5 min

Peak Storage= 189 cf @ 12.60 hrs
Average Depth at Peak Storage= 0.02' , Surface Width= 51.86'
Bank-Full Depth= 0.50' Flow Area= 34.4 sf, Capacity= 79.09 cfs

50.00' x 0.50' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 50.0 25.0 '/' Top Width= 87.50'
Length= 150.0' Slope= 0.0133 '/'
Inlet Invert= 76.00', Outlet Invert= 74.00'

‡

Summary for Pond C10: Cuvert

Inflow Area = 0.746 ac, 16.12% Impervious, Inflow Depth = 4.17" for 25-yr event
Inflow = 2.93 cfs @ 12.17 hrs, Volume= 0.259 af
Outflow = 2.73 cfs @ 12.22 hrs, Volume= 0.259 af, Atten= 7%, Lag= 3.0 min
Primary = 2.73 cfs @ 12.22 hrs, Volume= 0.259 af
Routed to Link SP-1 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 60.99' @ 12.22 hrs Surf.Area= 401 sf Storage= 266 cf

Plug-Flow detention time= 1.0 min calculated for 0.259 af (100% of inflow)
Center-of-Mass det. time= 1.0 min (814.5 - 813.5)

Volume	Invert	Avail.Storage	Storage Description
#1	59.65'	1,009 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.65	10	0	0
60.00	100	19	19
61.00	405	253	272
62.00	1,070	738	1,009

Device	Routing	Invert	Outlet Devices
#1	Primary	59.65'	**12.0" Round Culvert** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.65' / 59.00' S= 0.0162 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.70 cfs @ 12.22 hrs HW=60.97' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.70 cfs @ 3.44 fps)

Summary for Pond C20: Culvert

Inflow Area = 6.583 ac, 24.62% Impervious, Inflow Depth > 3.45" for 25-yr event
Inflow = 4.53 cfs @ 12.42 hrs, Volume= 1.892 af
Outflow = 4.52 cfs @ 12.42 hrs, Volume= 1.892 af, Atten= 0%, Lag= 0.1 min
Primary = 4.52 cfs @ 12.42 hrs, Volume= 1.892 af
Routed to Link SP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link SP-2 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 4
Peak Elev= 49.20' @ 12.42 hrs Surf.Area= 13 sf Storage= 10 cf

Plug-Flow detention time= 0.0 min calculated for 1.890 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,056.1 - 1,056.0)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	515 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
48.00	5	0	0
49.00	10	8	8
50.00	25	18	25
51.00	955	490	515

Device	Routing	Invert	Outlet Devices
#1	Primary	48.00'	**15.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 48.00' / 47.50' S= 0.0125 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Secondary	50.95'	**10.0' long x 65.0' 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 2.64 2.63

Primary OutFlow Max=4.51 cfs @ 12.42 hrs HW=49.20' (Free Discharge)
1=Culvert (Inlet Controls 4.51 cfs @ 3.73 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=48.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C21: Culvert

Inflow Area = 0.611 ac, 5.64% Impervious, Inflow Depth = 3.86" for 25-yr event
Inflow = 1.95 cfs @ 12.24 hrs, Volume= 0.196 af
Outflow = 1.50 cfs @ 12.40 hrs, Volume= 0.196 af, Atten= 23%, Lag= 9.2 min
Primary = 1.50 cfs @ 12.40 hrs, Volume= 0.196 af
Routed to Pond P20 : Pond

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 76.14' @ 12.40 hrs Surf.Area= 3,161 sf Storage= 1,024 cf

Plug-Flow detention time= 10.9 min calculated for 0.196 af (100% of inflow)
Center-of-Mass det. time= 10.9 min (837.0 - 826.1)

Volume	Invert	Avail.Storage	Storage Description
#1	75.50'	5,560 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
75.50	50	0	0
76.00	2,500	638	638
77.00	7,345	4,923	5,560

Device	Routing	Invert	Outlet Devices
#1	Primary	75.50'	**15.0" Round Culvert** L= 50.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 75.50' / 74.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.50 cfs @ 12.40 hrs HW=76.14' (Free Discharge)
└**1=Culvert** (Inlet Controls 1.50 cfs @ 2.40 fps)

Summary for Pond C22: Culvert

Inflow Area = 0.207 ac, 0.00% Impervious, Inflow Depth = 3.65" for 25-yr event
Inflow = 0.50 cfs @ 12.41 hrs, Volume= 0.063 af
Outflow = 0.47 cfs @ 12.52 hrs, Volume= 0.063 af, Atten= 7%, Lag= 6.3 min
Primary = 0.47 cfs @ 12.52 hrs, Volume= 0.063 af
Routed to Reach R22 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 76.86' @ 12.52 hrs Surf.Area= 943 sf Storage= 181 cf

Plug-Flow detention time= 7.1 min calculated for 0.063 af (100% of inflow)
Center-of-Mass det. time= 7.1 min (849.2 - 842.1)

Volume	Invert	Avail.Storage	Storage Description
#1	76.50'	331 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
76.50	50	0	0
77.00	1,275	331	331

Device	Routing	Invert	Outlet Devices
#1	Primary	76.50'	**12.0" Round Culvert** L= 70.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 76.50' / 75.50' S= 0.0143 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.47 cfs @ 12.52 hrs HW=76.86' (Free Discharge)
1=Culvert (Inlet Controls 0.47 cfs @ 1.81 fps)

Summary for Pond P20: Pond

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth = 4.45" for 25-yr event
Inflow = 11.45 cfs @ 12.44 hrs, Volume= 1.772 af
Outflow = 2.35 cfs @ 13.51 hrs, Volume= 1.341 af, Atten= 79%, Lag= 64.4 min
Primary = 2.35 cfs @ 13.51 hrs, Volume= 1.341 af
Routed to Reach R20 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 74.58' @ 13.51 hrs Surf.Area= 52,925 sf Storage= 44,738 cf

Plug-Flow detention time= 375.9 min calculated for 1.340 af (76% of inflow)
Center-of-Mass det. time= 292.6 min (1,113.7 - 821.0)

Volume	Invert	Avail.Storage	Storage Description
#1	73.50'	68,631 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.50	30,000	0	0
74.00	40,175	17,544	17,544
75.00	62,000	51,088	68,631

Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**Channel/Reach** using Reach R20:

Primary OutFlow Max=2.35 cfs @ 13.51 hrs HW=74.58' (Free Discharge)
1=Channel/Reach (Channel Controls 2.35 cfs @ 1.56 fps)

Summary for Pond WW: Weir Wall

Inflow Area = 4.773 ac, 33.20% Impervious, Inflow Depth > 3.37" for 25-yr event
Inflow = 2.35 cfs @ 13.56 hrs, Volume= 1.341 af
Outflow = 2.34 cfs @ 13.69 hrs, Volume= 1.341 af, Atten= 0%, Lag= 7.6 min
Primary = 0.61 cfs @ 13.69 hrs, Volume= 0.765 af
Routed to Reach R21 :
Secondary = 1.74 cfs @ 13.69 hrs, Volume= 0.576 af
Routed to Reach R21 :

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 74.30' @ 13.69 hrs Surf.Area= 3,187 sf Storage= 2,308 cf

Plug-Flow detention time= 23.2 min calculated for 1.341 af (100% of inflow)
Center-of-Mass det. time= 23.2 min (1,141.0 - 1,117.8)

Volume	Invert	Avail.Storage	Storage Description
#1	73.00'	4,913 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.00	100	0	0
74.00	2,760	1,430	1,430
75.00	4,205	3,483	4,913

Device	Routing	Invert	Outlet Devices
#1	Secondary	74.00'	**4.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Primary	73.00'	**16.0" x 1.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.61 cfs @ 13.69 hrs HW=74.30' (Free Discharge)
↑—**2=Orifice/Grate** (Orifice Controls 0.61 cfs @ 5.48 fps)

Secondary OutFlow Max=1.73 cfs @ 13.69 hrs HW=74.30' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 1.73 cfs @ 1.47 fps)

Summary for Link SP-1:

Inflow Area = 0.746 ac, 16.12% Impervious, Inflow Depth = 4.17" for 25-yr event
Inflow = 2.73 cfs @ 12.22 hrs, Volume= 0.259 af
Primary = 2.73 cfs @ 12.22 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-2:

Inflow Area = 6.583 ac, 24.62% Impervious, Inflow Depth > 3.45" for 25-yr event
Inflow = 4.52 cfs @ 12.42 hrs, Volume= 1.892 af
Primary = 4.52 cfs @ 12.42 hrs, Volume= 1.892 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-3:

Inflow Area = 0.421 ac, 4.66% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 1.56 cfs @ 12.15 hrs, Volume= 0.132 af
Primary = 1.56 cfs @ 12.15 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-4:

Inflow Area = 0.619 ac, 3.65% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 2.37 cfs @ 12.14 hrs, Volume= 0.194 af
Primary = 2.37 cfs @ 12.14 hrs, Volume= 0.194 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link SP-5:

Inflow Area = 1.069 ac, 37.27% Impervious, Inflow Depth = 4.60" for 25-yr event
Inflow = 5.31 cfs @ 12.10 hrs, Volume= 0.410 af
Primary = 5.31 cfs @ 12.10 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

APPENDIX 5

INSPECTION AND MAINTENANCE MANUAL

207.926.5111
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www.terradynconsultants.com

WILDES DISTRICT ROAD
KENNEBUNKPORT, MAINE
STORMWATER MANAGEMENT SYSTEM
INSPECTION & MAINTENANCE PLAN

Project Owner/Developer: Beachwood Development Fund LP
P.O. Box 261
Kennebunk, ME 04043
(207) 985-3646

Responsible Party: Owner or Homeowners Association

Prepared By: Terradyn Consultants, LLC
565 Congress Street, Suite 201
Portland, ME 04101
(207) 926-5111

INTRODUCTION:

Regular inspection and maintenance of the entire stormwater management system is crucial to the long-term effectiveness of the system. The responsible party must provide regular inspection and maintenance of all permanent erosion control measures and stormwater management structures, establish any contract services required to implement the program, and keep records and a maintenance log book of inspection and maintenance activities. At a minimum, the inspection and maintenance activities outlined herein should be performed at the recommended intervals. A rainfall event of 1” in a 24 hour period would trigger a wet weather post-constrction inspection.

All measures must be maintained in effective operating condition. A person with knowledge of erosion and sedimentation practices, stormwater management, and the standards and conditions of all local, state and federal permits for the project shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected.

INSPECTION TASKS

1. Inspect **vegetated areas**, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

2. Inspect **ditches, swales and other open stormwater channels** in the spring, late fall and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris, control vegetated growth that could obstruct flow and repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

3. Inspect **culverts** in the spring, in late fall, and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris at the inlet, the outlet and within the culvert. Repair any erosion damage at the culvert’s inlet and outlet.

4. Clear accumulations of winter sand **along roadways** at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder.

5. Inspect and clean out **catch basins**. Clean-out must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

DOCUMENTATION

Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. The log must be made accessible to Maine DEP staff and a copy provided to the department upon request. The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization.

The log attached at the end of this plan is from the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers (May 2016)*. The log may be used or adapted for this project.

ATTACHMENTS:
Stormwater Management Facilities Inspection & Maintenance Log

Stormwater Management Facilities
Post Construction Inspection & Maintenance Log
Whitetail Drive Subdivision, Freeport, Maine

General Information:

Inspected by:	Date:	Weather:

Reason for Inspection: (Regular Inspection) (Major Rain Event, 1" in 24 hours)

BMP	Conditions Observed	Repairs Needed?
1. Vegetated Areas		
2. Ditches, Swales, Open Channels		
3. Culverts		
4. Catchbasins		

Detailed Repair Notes:

BMP Type	Date	Description of Repairs & Sediment Disposal

Notes:
If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. A copy of this log shall be retained for a period of at least five years from the completion of permanent stabilization. The log must be made accessible to Department of Environmental Protection staff and a copy provided to the Department upon request.

Attachment 7

Wetland & Vernal Pool Delineation

DELINEATION NOTES:
WETLAND STUDY CONDUCTED OCTOBER 27, 2022
OTHER UPLAND "ISLANDS" MAY EXIST WITHIN WETLAND BOUNDARIES.

PLAN NOTES:
THIS PLAN IS A COMPOSITE OF PROPERTY BOUNDARY INFORMATION PER PLAN ENTITLED "PRIVATE WAY PLAN" BY PINKHAM & GREER DATED OCTOBER 17, 2002, MAINE OFFICE OF GIS 2' TOPOGRAPHIC CONTOURS & AERIAL PHOTOGRAPH, AND SUBMETER GPS LOCATION OF WETLAND BOUNDARIES & OTHER SITE FEATURES AS DEPICTED BY LONGVIEW PARTNERS, LLC.

LEGEND:

- FRESHWATER WETLAND AREA (LOCATED BY LONGVIEW PARTNERS, LLC SUBMETER GPS)
- SURFACE WATER RUNOFF (LOCATED BY LONGVIEW PARTNERS, LLC SUBMETER GPS)
- MAN-MADE DRIANAGE DITCH (LOCATED BY LONGVIEW PARTNERS, LLC SUBMETER GPS)
- POTENTIAL VERNAL POOL (LOCATED BY LONGVIEW PARTNERS, LLC SUBMETER GPS)

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

client review copy only- not for permitting

WETLAND DELINEATION PLAN
PREPARED FOR
BOWLEY BUILDERS
WILDES DISTRICT ROAD
(MAP 9, BLK 10, LOT 23)
KENNEBUNKPORT, MAINE

LONGVIEW PARTNERS, LLC
ENVIRONMENTAL PERMITTING SPECIALISTS

DRAFT:	SCALE:	CHECKED:	PLAN DATE:
BO	1" = 30'	JL	10/3/22

Attachment 8

Traffic Generation

TERRADYN
CONSULTANTS, LLC

207.926.5111
info@terradynconsultants.com
www.terradynconsultants.com

Project #23-003

ESTIMATE OF TRAFFIC GENERATION

WILDES DISTRICT SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

The following traffic generation estimate is based on the Institute of Traffic Engineers (ITE) **Trip Generation Manual**, 9th Edition.

Land Use: Single Family Lot

Time Period	Trip Rate	# Dwelling Units	Trips
AM Peak Hour	0.75 Trips per lot	3	3
PM Peak Hour	1.00 Trips per lot	3	3

Attachment 9

Financial Capacity

Camden NATIONAL BANK

August 2, 2023

Beachwood Development Fund LP
PO Box 261
Kennebunk

To whom it may concern:

This letter is to confirm you that Beachwood Development Fund LP and all of its subsidiaries, as of today's date August 2, 2023 have in their Camden National Bank Account have a balance over $500,00, and is good standing at Camden National Bank.

If you have any questions, please don't hesitate to give me a call.

Michelle A. Dow

Michelle A. Dow | Assistant Vice President
Kennebunk Banking Center Asst Manager
36 Portland Rd, PO Box 1130
Kennebunk, ME 04043
(207) 985-9222 ext 24260 (o)
(207) 230-4853 (m)
(207) 985-3233 (f)
NMLS# 456723
www.CamdenNational.com

Camden NATIONAL BANK

Attachment 10

Correspondence with State Agencies

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

September 19, 2023

Matthew Pelletier
Terradyn Consultants
565 Congress Street, Suite 201
Portland, ME 04101

Via email: matt@terradyneconsultants.com

Re: Rare and exemplary botanical features in proximity to: #23-003, Wildes District Road Subdivision, Kennebunkport, Maine

Dear Matthew Pelletier:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received September 7, 2023 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Kennebunkport, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: #23-003, Wildes District Road Subdivision, Kennebunkport, ME

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
American Sea-blite						
	T	S2	G5	2006-08-30	12	Tidal wetland (non-forested, wetland)
Beach Plum						
	E	S1	G4	1954-06-22	14	Rocky coastal (non-forested, upland)
Beach Wormwood						
	SC	S1S2	G5T5	2006-09-12	2	
	SC	S1S2	G5T5	2011-11-02	9	
	SC	S1S2	G5T5	2016-10-19	11	
Brackish Tidal Marsh						
		S3	GNR	2009	15	
Button Sedge						
	SC	S2	G5	1880-09-06	2	
Clammy Azalea						
	E	S1	G5	1898-09-21	3	Hardwood to mixed forest (forest, upland),Forested
Coastal Dune-marsh Ecosystem						
		S3	GNR	2010-08-24	6	
Dioecious Sedge						
	SC	S3	G4G5	1858-06	10	Non-tidal rivershore (non-forested, seasonally wet),Open
Dune Grassland						
		S2	G4?	2006-09-12	5	
		S2	G4?	2006-09-12	5	
Dwarf Dandelion						
	E	S1	G5	1916-08	2	Rocky coastal (non-forested, upland),Dry barrens (partly
Dwarf Glasswort						

Dwarf Glasswort					
T	S1	G5	2006-08-30	9	Tidal wetland (non-forested, wetland)
Fern-leaved False Foxglove					
SC	S3	G5	1898-09-12	20	Dry barrens (partly forested, upland),Hardwood to mixed
Freshwater Tidal Marsh					
	S2	G4?	2009	11	
Hairy Boneset					
E	S1	G5T5	1870	1	Hardwood to mixed forest (forest, upland)
Marsh Milkwort					
PE	SH	G5T4	1901-09-03	2	Dry barrens (partly forested, upland),Open wetland, not
Muhlenberg Sedge					
E	S1	G5	1939-07-20	3	Dry barrens (partly forested, upland)
Northern Blazing Star					
T	S1	G5?T3	1976-09	8	Dry barrens (partly forested, upland)
Pitch Pine - Heath Barren					
	S1	G3G5	2013-06-25	5	
Pitch Pine Bog					
	S2	G3G5	2006-09-12	2	
Pitch Pine Dune Woodland					
	S1	G2	1978	3	
Prairie Wedge-grass					
PE	SH	G5	1898-07-18	4	Dry barrens (partly forested, upland)
Pygmyweed					
SC	S2S3	G5	2006-09-19	27	Open water (non-forested, wetland)
Salt-hay Saltmarsh					
	S3	G5	2010-10-14	9	
	S3	G5	2010-10-13	10	
	S3	G5	2016-07-12	23	
	S3	G5	2010-10-14	28	

Salt-hay Saltmarsh					
	S3	G5	2011-10-21	46	
Saltmarsh Bulrush					
T	S2	G5	2006-09-19	1	
Saltmarsh False-foxglove					
SC	S3	G5	1916-08	7	Tidal wetland (non-forested, wetland)
SC	S3	G5	1982	8	Tidal wetland (non-forested, wetland)
SC	S3	G5	1982	9	Tidal wetland (non-forested, wetland)
SC	S3	G5	1985	13	Tidal wetland (non-forested, wetland)
SC	S3	G5	2006-09-12	22	Tidal wetland (non-forested, wetland)
SC	S3	G5	2016-07-16	30	Tidal wetland (non-forested, wetland)
SC	S3	G5	2010-10-14	32	Tidal wetland (non-forested, wetland)
SC	S3	G5	2010-10-14	33	Tidal wetland (non-forested, wetland)
SC	S3	G5	2011-10-21	40	Tidal wetland (non-forested, wetland)
Scarlet Oak					
E	S1	G5	1937-06	6	Hardwood to mixed forest (forest, upland)
Schreber's Wood-aster					
PE	SX	G4	1894-09	1	Rocky coastal (non-forested, upland)
Slender Blue Flag					
T	S2	G4G5	2013-06-19	19	Tidal wetland (non-forested, wetland)
Slender Pinweed					
PE	SX	G5	1879	2	Dry barrens (partly forested, upland)
Smooth Winterberry Holly					
SC	S3	G5	2010-09-20	6	Forested wetland
SC	S3	G5	2013-06-26	16	Forested wetland
SC	S3	G5	2013-06-25	41	Forested wetland
Smooth-sheathed Sedge					
SC	S1	G5	1954-06-22	2	Forested wetland,Open wetland, not coastal nor
Southern Slender Ladies'-tresses					
PE	SH	G5T4T5	1918-08-27	1	Dry barrens (partly forested, upland)

Spongy-leaved Arrowhead					
SC	S3	G5T4	2006-09-19	47	Tidal wetland (non-forested, wetland)
Spotted Wintergreen					
T	S2	G5	2010-08-20	28	Conifer forest (forest, upland),Hardwood to mixed forest
T	S2	G5	2013-06-25	36	Conifer forest (forest, upland),Hardwood to mixed forest
Sweet Pepper-bush					
SC	S2	G5	1917-09	9	Hardwood to mixed forest (forest, upland),Forested
Tidal Marsh Estuary Ecosystem					
	S3	GNR	2010-10-14	3	
Unicorn Root					
E	S1	G5	1879	2	Dry barrens (partly forested, upland)
Variable Sedge					
E	S1	G3	1881-06	3	Dry barrens (partly forested, upland),Hardwood to mixed
White Vervain					
SC	S1?	G5	1898-07	3	Hardwood to mixed forest (forest, upland),Open wetland,
Yellow Wild Indigo					
PE	SH	G5	1877	3	Dry barrens (partly forested, upland),Hardwood to mixed

Date Exported: 2023-09-19 12:15

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 **G1**	**Critically Imperiled** – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 **G2**	**Imperiled** – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 **G3**	**Vulnerable** – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 **G4**	**Apparently Secure** – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 **G5**	**Secure** – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX **GX**	**Presumed Extinct** – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH **GH**	**Possibly Extinct** – Known from only historical occurrences but still some hope of rediscovery.
S#S# **G#G#**	**Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU **GU**	**Unrankable** – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR **SNR**	**Unranked** – Global or subnational conservation status not yet assessed.
SNA **GNA**	**Not Applicable** – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems.
Qualifier	**Definition**
S#? **G#?**	**Inexact Numeric Rank** – Denotes inexact numeric rank.
Q	**Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The "Q" modifier is only used at a global level.
T#	**Infraspecific Taxon (trinomial)** – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	**Endangered** – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	**Threatened** – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	**Special Concern** – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	**Potentially Extirpated** – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	**Excellent** – Excellent estimated viability/ecological integrity.
B	**Good** – Good estimated viability/ecological integrity.
C	**Fair** – Fair estimated viability/ecological integrity.
D	**Poor** – Poor estimated viability/ecological integrity.
E	**Extant** – Verified extant, but viability/ecological integrity not assessed.
H	**Historical** – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	**Extirpated** – Documented loss of population/destruction of habitat.
U	**Unrankable** – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	**Not Ranked** – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
http://www.maine.gov/dacf/mnap

maine DEPARTMENT OF Agriculture Conservation & Forestry
NATURAL AREAS

Attachment 11

Street Light Specification

URBAN SERIES

URBAN LUMINAIRE

Cat.#	
Job	Type

BEACON design . performance . technology

Approvals

SPECIFICATIONS

Intended Use:

The Beacon Urban luminaire is available with a choice of different LED wattage configurations, shapes, sizes and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- The drivers shall be located in the top cast housing and shall be accessible without tools by hinging the lower shade assembly. The driver and all electrical components shall be on a tray.
- The lower shade shall be made from a one-piece aluminum spinning.
- The housing is designed for LED thermal management without the use of metallic screens, cages, or fans. The top casting shall be able to be pendent mounted in place with a stainless steel safety pin and then permanently held in place with four stainless steel bolts.

Electrical:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is ≥0.90 at full load.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.
- Fixture electrical compartment shall contain all LED driver components.
- Button photocell available.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night visit: www.beaconproducts.com/products/energeni
- Urban can be specified with **SiteSync™** wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit: www.hubbelllighting.com/products/sitesync/ for more details

Finish:

- IFS polyester powder-coat electrostatically applied and thermocured.
- IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Certifications:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- NRTL Certified, UL8750, UL 1598 and CSA22.2#250. 13-14 for wet locations
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at http://www.beaconproducts.com/products/urban

Warranty:

Five year limited warranty for more information visit: www.hubbelllighting.com/resources/warranty

CERTIFICATIONS/LISTINGS

C SP US

ida DARK SKY APPROVED 2016

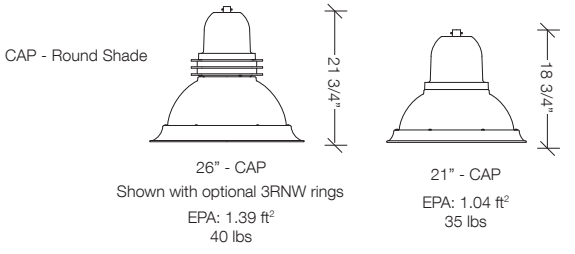
*3000K and warmer CCTs only

PRODUCT IMAGE(S)

Shown with arm

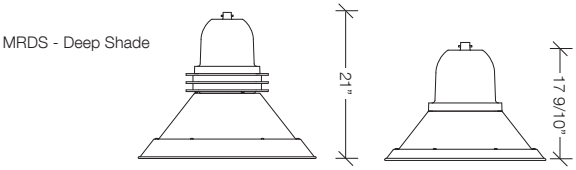
Shown with SiteSync™

STYLES



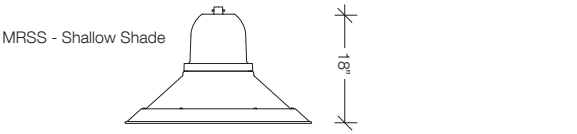
26" - CAP
Shown with optional 3RNW rings
EPA: 1.39 ft²
40 lbs

21" - CAP
EPA: 1.04 ft²
35 lbs

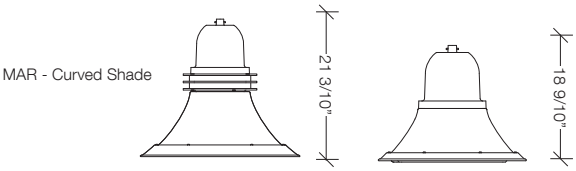


26" - MRDS
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs

21" - MRDS
EPA: 1.00 ft²
35 lbs



26" - MRSS
EPA: 1.17 ft²
40 lbs



26" - MAR
Shown with optional 3RNW rings
EPA: 1.25 ft²
40 lbs

21" - MAR
EPA: 1.00 ft²
35 lbs

HUBBELL Lighting

ORDERING INFORMATION ORDERING EXAMPLE: URBCAP21/36NB-80/5K/UNV/T4/SWP/NRNW/BBT

URB			3K		T2					

MODEL
- **URB** Urban

SERIES
- **CAP-21** 21" Capitol
- **MRDS-21** 21" Miramar deep shade
- **MAR-21** 21" Maritas
- **CAP-26** 26" Capitol
- **MRSS-26** 26" Miramar shallow shade
- **MRDS-26** 26" Miramar deep shade
- **MAR-26** 26" Maritas

LED COLOR[7]
- **3K** 3000K
- **4K** 4000K
- **5K** 5000K

VOLTAGE
- **UNV** 120-277V
- **347V** 347V
- **480V** 480V

ELECTRICAL OPTIONS
- **PEC-120** button, 120V
- **PEC-208** button, 208V
- **PEC-240** button, 240V
- **PEC-277** button, 277V

STYLE
- **NRNW** No rings
- **3RNW** Three rings

FINISH
- **BBT** basic black textured
- **BMT** black matte textured
- **WHT** white textured
- **MBT** metallic bronze textured
- **BZT** bronze textured
- **DBT** dark bronze textured
- **GYS** gray smooth
- **DPS** dark platinum smooth
- **GNT** green textured
- **MST** metallic silver textured
- **MTT** metallic titanium textured
- **OWI** old world iron
- **RAL** _____

ENGINE-WATTS
- **24NB-27** 27W, LED array
- **24NB-55** 55W, LED array
- **36NB-80** 80W, LED array
- **48NB-110**[1] 110W, LED array
- **60NB-136**[1] 136W, LED array

OPTICS[2]
- **T1** type I
- **T2** type II
- **T3** type III
- **T4** type IV
- **T4BLC** type IV, backlight control
- **T5R** type V, rectangular
- **T5QM** type V, square medium
- **T5W** type V, round wide

SENSOR OPTION
- **MOB**[4,6] Motion sensor 33% or 50% dimming

CONTROL OPTIONS
- **GENI-XX**[5] energeni
- **SWP**[3,4] SiteSync Wireless Pre-Commission

[1] 26" only
[2] To rotate optics Left or Right 90 degrees, specify L or R after the optical distribution example:T4L
[3] Must specify group and zone information at time of order. See www.hubbelllighting.com/controls/sitesync for further details.
[4] Not available with other control or sensor options.
[5] When ordering Energeni, specify the routine setting code (Example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[6] Specify time delay; dimming level and mounting height.
[7] This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at http://cdn.beaconproducts.com/content/products/specs/specs_files/Urban_LED_spec_sheet_turtle.pdf

PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.hubbelllighting.com/products/sitesync/ or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: URB/CAP-26/60NB-136/3K/UNV/T5QM/SWP/NRNW/BBT SiteSync only
URB/CAP-26/60NB-136/3K/UNV/T5QM/SWPM-20F/NRNW/BBT SiteSync with Motion Control

SiteSync Lighting Control is available from our most popular brands in a broad range of award-winning product families.

Accessories and Services (Ordered Separately)

Catalog Number	Description
SWUSB*^	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*^	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.

*When ordering SiteSync at least one of these two interface options must be ordered per project.
+ If needed, an additional Bridge Node can be ordered.

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	350mA	120	27	0.2
			277		0.1
			347		0.1
			480		0.1
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

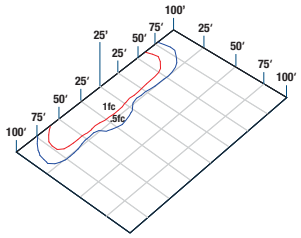
[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.98
40°C	104°F	0.98

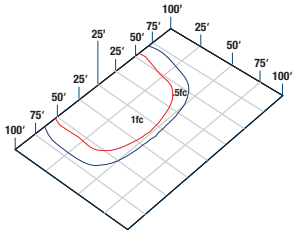
Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PHOTOMETRICS

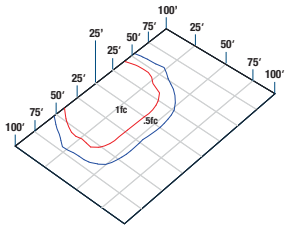
Type II
URB-60NB-136-5K-T2



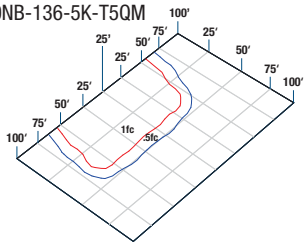
Type III
URB-60NB-136-5K-T3



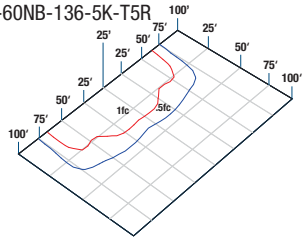
Type IV
URB-60NB-136-5K-T4



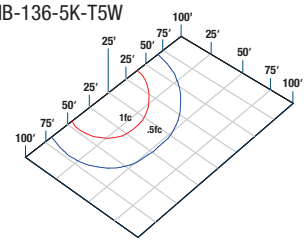
Type V Square Medium
URB-60NB-136-5K-T5QM



Type V Rectangular
URB-60NB-136-5K-T5R



Type V Round Wide
URB-60NB-136-5K-T5W



PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS (120-277V)	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	350 mA	27 W	T2	2833	105	1	0	1	2805	104	1	0	1	2408	89	1	0	1
			T3	2805	104	1	0	1	2777	103	1	0	1	2392	89	1	0	1
			T4	3086	114	1	0	1	3055	113	1	0	1	2623	97	1	0	1
			T5QM	3085	114	2	0	0	3055	113	2	0	0	2623	97	1	0	0
			T5R	3142	115	2	0	2	3111	115	2	0	2	2670	99	2	0	2
			T5W	3044	113	2	0	1	3014	112	2	0	1	2600	96	2	0	1
24	700 mA	55 W	T2	5666	102	2	0	2	5610	101	2	0	2	4816	86	1	0	2
			T3	5610	101	1	0	2	5554	100	1	0	2	4784	86	1	0	2
			T4	6171	111	1	0	2	6110	109	1	0	2	5245	94	1	0	2
			T5QM	6171	111	3	0	1	6110	109	3	0	1	5245	94	2	0	1
			T5R	6283	113	3	0	3	6221	111	3	0	3	5341	96	3	0	3
			T5W	6087	109	3	0	1	6027	108	3	0	1	5201	93	3	0	1
36	700 mA	80 W	T2	8505	101	2	0	3	8415	100	2	0	3	7224	87	2	0	2
			T3	8415	100	2	0	2	8331	99	2	0	2	7175	86	2	0	2
			T4	9256	110	1	0	3	9164	109	1	0	3	7868	94	1	0	3
			T5QM	9257	110	3	0	1	9164	109	3	0	1	7868	94	3	0	1
			T5R	9425	112	3	0	3	9331	111	3	0	3	8011	96	3	0	3
			T5W	9131	109	3	0	2	9040	108	3	0	2	7801	93	3	0	2
48*	700 mA	110 W	T2	11332	102	3	0	3	11220	101	3	0	3	9633	87	2	0	3
			T3	11220	101	2	0	3	11108	100	2	0	3	9567	86	2	0	3
			T4	12342	111	2	0	3	12219	110	2	0	3	10491	95	2	0	3
			T5QM	12342	111	3	0	2	12219	111	3	0	2	10491	95	3	0	2
			T5R	12567	113	4	0	4	12441	112	4	0	4	10682	96	3	0	3
			T5W	12175	110	4	0	2	12053	109	4	0	2	10402	94	4	0	2
60*	700 mA	136 W	T2	14165	103	3	0	3	14025	102	3	0	3	12041	88	3	0	3
			T3	14025	102	3	0	3	13885	101	3	0	3	11959	87	3	0	3
			T4	15427	113	2	0	3	15274	111	2	0	3	13114	96	2	0	3
			T5QM	15427	113	4	0	2	15274	111	4	0	2	13314	96	3	0	2
			T5R	15708	115	4	0	4	15259	111	4	0	4	13352	97	4	0	4
			T5W	15218	111	4	0	2	15551	114	4	0	2	13002	95	4	0	2

[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

*AVAILABLE IN THE 26" URBAN ONLY

HUBBELL Lighting

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	350mA	120	27	0.2
			277		0.1
			347		0.1
			480		0.1
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

[1] Projected per IESNA TM-21-11

Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
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30°C	86°F	0.98
40°C	104°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

SUBDIVISION PLANS

WILDES DISTRICT SUBDIVISION

WILDES DISTRICT ROAD,
KENNEBUNKPORT, MAINE

APPLICANT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET, # 3
KENNEBUNK, MAINE 04043

RECORD OWNER:
MICHAEL D. PRENDERGAST
789 RIDGEFIELD ROAD
WILTON, CT 06897

PROJECT PARCEL SITE
TOWN OF KENNEBUNKPORT TAX ASSESSOR'S MAP, LOT NUMBER & ZONING DISTRICT

MAP	LOT	ZONING DISTRICT
9	10-23	VILLAGE RESIDENTIAL DISTRICT

PREPARED BY

CIVIL ENGINEER:
TERRADYN CONSULTANTS, LLC
565 CONGRESS STREET, SUITE 201
PORTLAND, MAINE 04101
(207) 926-5111

SURVEYOR:
TERRADYN CONSULTANTS, LLC
79 MAIN STREET, SUITE 300
AUBURN, MAINE 04210
(207) 946-4480

SOIL SCIENTIST:
LONGVIEW PARTNERS, LLC
6 SECOND STREET
BUXTON, MAINE 04093
(207) 807-1739

UTILITIES

SEWER
KENNEBUNKPORT
WASTEWATER DEPARTMENT
25 RECREATION WAY
KENNEBUNKPORT, ME 04043
(207) 967-2245

WATER
KENNEBUNK, KENNEBUNKPORT
& WELLS WATER DISTRICT
92 MAIN STREET
KENNEBUNK, ME 04043
(207) 985-3385

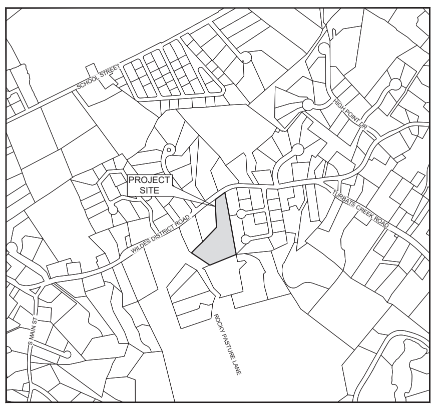
ELECTRIC
CENTRAL MAINE POWER CO.
162 CANCO ROAD
PORTLAND, ME 04103
(207) 842-2367

TELEPHONE
CONSOLIDATED
COMMUNICATIONS
P.O. BOX 11560
PORTLAND, MAINE 04104
1-888-984-1515

CABLE
SPECTRUM
386 FORE ST #204
PORTLAND, MAINE 04101
(207) 331-5331

DIG SAFE SYSTEM, INC.
TEL. 1-888-DIG-SAFE (344-7233)
FAX 1-781-721-0047
WWW.DIGSAFE.COM

N
GRID NORTH



LOCATION MAP
SCALE: 1"=500'

GENERAL NOTES

1. THE PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE TOWN OF KENNEBUNKPORT, AND THE LOCAL UTILITY COMPANIES.
2. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY THE TOWN OF KENNEBUNKPORT OR THE LOCAL UTILITY COMPANIES SHALL BE COORDINATED BY THE CONTRACTOR.
3. THE LOCATION AND/OR ELEVATIONS OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION. IT SHALL BE THE RESPONSIBLE OF THE CONTRACTOR TO RELOCATE ANY EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
4. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIRED TO PREVENT EROSION AND SEDIMENTATION. ADDITIONAL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY THE OWNER, ENGINEER, OR REGULATING AGENCIES.
5. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
6. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE STRICTEST STANDARDS CONTAINED IN THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE PROJECT SPECIFICATIONS, AND THE UTILITY COMPANY AND TOWN OF KENNEBUNKPORT REQUIREMENTS.
7. ALL DIMENSIONS, UNLESS OTHERWISE NOTED ARE TO THE EDGE OF PAVEMENT OR FACE OF CURB.
8. ALL SIGNAGE SHALL BE SUPPLIED AND INSTALLED IN COMPLIANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

UTILITY NOTES

1. PROPOSED LOTS WILL BE SERVED BY CONNECTIONS TO THE PUBLIC SEWER SYSTEM OWNED AND MAINTAINED BY THE TOWN OF KENNEBUNKPORT AND THE PUBLIC WATER SYSTEM OWNED AND MAINTAINED BY THE KENNEBUNK, KENNEBUNPORT AND WELLS WATER DISTRICT.
2. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n=0.012 OR LESS.

PERMITS

TYPE OF PERMIT	GOVERNING BODY	STATUS
SUBDIVISION APPROVAL	TOWN OF KENNEBUNKPORT, MAINE PLANNING BOARD 6 ELM STREET KENNEBUNKPORT, ME 04046 TEL. 207-967-4243	SUBMITTED 10/2/2023

LEGEND

EXISTING PROPERTY LINE
PROJECT SITE BOUNDARY
EXISTING SETBACK LINE
PROPOSED EASEMENT
124 EXISTING MINOR CONTOUR
124 EXISTING MAJOR CONTOUR
124 PROPOSED CONTOUR
SD EXISTING STORMDRAIN
SD PROPOSED STORMDRAIN
UD EXISTING UNDERDRAIN
UD PROPSED UNDERDRAIN
OHE EXISTING OVERHEAD ELECTRIC & TELEPHONE
OHE PROPOSED OVERHEAD ELECTRIC & TELEPHONE
UGE EXISTING UNDERGROUND ELECTRIC & TELEPHONE
UGE PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
EXISTING EDGE OF PAVEMENT
PROPOSED EDGE OF PAVEMENT
EXISTING EDGE OF GRAVEL
PROPOSED EDGE OF GRAVEL
EXISTING CURB
PROPOSED CURB
PROPOSED FENCE
SF SILT FENCE
TP-A TEST PIT
EXISTING VALVE
PROPOSED VALVE
EXISTING HYDRANT
EXISTING LIGHT POLE
PROPOSED LIGHT POLE
EXISTING UTILITY POLE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING DRAIN MANHOLE
PROPOSED DRAIN MANHOLE
EXISTING SEWER MANHOLE
PROPOSED SEWER MANHOLE
30.20 EXISTING SPOT GRADE
30.20 PROPOSED SPOT GRADE
SURVEY CONTROL POINT
EXISTING MONUMENT
EXISTING IRON PIPE
EXISTING SIGN
PROPOSED SIGN
EXISTING BUILDING
PROPOSED BUILDING
PROPOSED CONCRETE
PROPOSED PAVEMENT

SHEET INDEX

C-1.0	COVER SHEET
1	TOPOGRAPHIC SURVEY PLAN
C-2.0	SUBDIVISION PLAN
C-3.0	PLAN & PROFILE STA. 0+00 TO STA. 5+88
C-4.0	EROSION AND SEDIMENT CONTROL PLAN
C-5.0	EROSION CONTROL NOTES AND DETAILS
C-5.1	SITE AND UTILITY DETAILS
C-5.2	DRAINAGE AND UTILITY DETAILS

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED
PROFESSIONAL ENGINEER

DATE: 10/2/2023

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260
PHONE:
(207) 926-5111
WEB SITE:
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
COVER SHEET

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE: AS NOTED
JOB NO: 23-003
SHEET: C-1.0

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Location Map
(Not to Scale)

STATE OF MAINE
NICHOLAS RACIOPPI
No. 2621
PROFESSIONAL LAND SURVEYOR

General Notes:

1. The purpose of this plan is to depict the results of a Boundary Retracement & Existing Conditions/Topographic Survey of the subject parcel.
2. All Book and Page numbers refer to the York County Registry of Deeds, unless otherwise noted.
3. The record owner of the subject parcel is Michael D. Prendergast by a deed dated October 6, 2011 and recorded in Book 16177, Page 988.
4. The subject parcel is shown on the Town of Kennebunkport Tax Map 9 as Lot 10-23 and is located in the Villiage Residential District.
5. Space and bulk standards for the Villiage Residential District as of the date of this plan are as follows:

Min. Lot Size:	40,000 sq ft
Min. Lot Width:	100 ft
Min. Front Setback:	20 ft
Min. Side Setback:	15 ft
Min. Rear Setback:	15 ft
Max. Building Height:	35 ft
Min. Open Space:	20%

6. Total area of the subject parcel is 4.1 acres.
7. Boundary and topographic information shown hereon is based on an on the ground survey performed by Terradyn Consultants, LLC in February and March of 2023 and supplemented with LiDAR Remote Sensing, collected in 2020 by the State of Maine and distributed by the USGS as classified .LAZ point cloud.

   NAVD88-Geoid18
   error (95% confidence interval) in meters = 0.040
8. Plan References:
   A. "Plan Showing Maplewood - Kennebunkport, Maine" dated July 19, 1963, prepared by Libby & Dow Engineers, and recorded in Plan Book 37, Page 3.
   B. "Plan Showing Land to Be Conveyed to Anthony & Judith & Paul Gelardi From a Portion of Land Owned By Marjorie Ellis" dated October, 1975 and recorded in Plan Book 78, Page 3.
   C. "Plan Showing a Boundary Survey of Rocky Pasture" dated July, 1988, revised December 13, 1988, prepared for Anthony & Paul Gelardi and recorded in Plan Book 184, Page 45.
   D. "Private Way Plan - Wildes District Road" dated October 17, 2002, prepared for Wesley & Liz Phillips by Pinkham & Greer Consulting Engineers, Inc. and being previously unrecorded.
9. Plan orientation is Grid North, Maine State Plane Coordinate System, West Zone 1802-NAD83. Elevations depicted hereon are NAVD88, based on dual-frequency GPS observations.
10. No record width was found for Wildes District Road. Per MSRA Title 23, Subsection 2103 this surveyor held 1 1/2 rods on each side of the approximate center of the traveled way as further evidenced by stone walls found on either side of the road in the project area.
11. The subject parcel is located within Zone C, Areas of Minimal Flood Hazard, as delineated on the Flood Insurance Rate Map for the Town of Kennebunkport, York County, Community-Panel Number 230170 0003 B, having an Effective Date of April 18, 1983.
12. A wetland delineation was performed on this project site by Longview Partners, LLC on October 3, 2022. This wetlands delineation conforms to the standards and methods outlined in the 1987 Wetland Delineation Manual and Northeast Regional Supplement authored and published by the U.S. Army Corps of Engineers. All Wetland flags were located using Global Positioning System (GPS) technology capable of decimeter accuracy.
13. The depth, size, location, existence or nonexistence of underground utilities and/or structures were not investigated as part of this survey. Utilities depicted hereon may not necessarily represent all existing utilities. Owners, contractors, and/or designers need to contact Dig-Safe Systems, Inc. (call 811) and field verify existing utilities prior to digging or breaking ground.

Legend:

Existing

- Record Property Line/R.O.W.
- Abutter Line/R.O.W.
- Deed/Plan Line/R.O.W.
- Building Setback Line
- Easement Line
- Building
- Deck/Steps
- Edge of Wetland
- Wetlands
- Edge of Pavement
- 120 Major Contour
- 122 Minor Contour
- × 121.3 Spot Elevation
- Stone Wall
- SD Storm Drain
- OHU Overhead Utilities
- Iron Pipe/Rod (as noted.)
- Ledge
- Hydrant
- Sewer Manhole
- Utility Pole

Surveyor's Certification

To the best of my knowledge, I have used ordinary and prudent conduct expected of Professional Land Surveyors and the results shown here represent the licensee's responsibility to the public as required under the Standards of Practice as defined by the Board of Licensure for Professional Land Surveyors (M.R.S.A Title 32, Chapter 141, Dated April 2001).

Except as Follows:

1. Survey Report Limited to Notes on the Plan
2. No Deed Description to Date

Plan Prepared by: [signature]

Nicholas Racioppi PLS # 2621

STATE OF MAINE, York County, SS
REGISTRY OF DEEDS

Received ______________________

At ____ h ____ m ____M and recorded in

Plan Book ________, Page _______

Attest ______________________
Registrar

NO.	DATE	REVISION
NO.	DATE	REVISIONS

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260
PHONE:
(207) 926-5111
WEB SITE:
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PROJECT:
WILDES DISTRICT ROAD PROJECT
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
BOUNDARY RETRACEMENT & EXISTING CONDITIONS/TOPOGRAPHIC SURVEY

FOR RECORD OWNER:
BEACHWOOD DEVELOPMENT FUND
86 YORK STREET #3
KENNEBUNK, ME 04043

DATE:	01/25/2023
SCALE:	1"= 40'
JOB NO:	23-003
SHEET:	1 OF 1

Sheet Size: 24" X 36"

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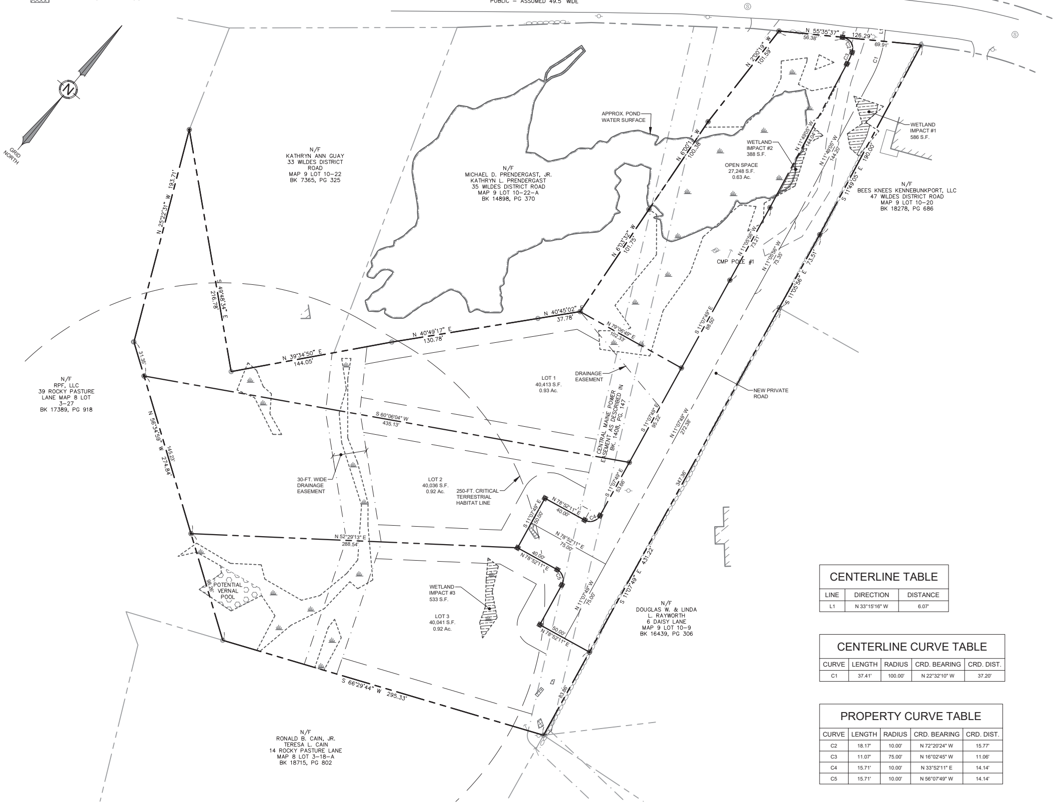
LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED SETBACK LINE
- EXISTING SETBACK LINE
- EXISTING EASEMENT
- STONE WALL
- EXISTING MONUMENT
- PROPOSED MONUMENT
- EXISTING IRON PIPE
- EXISTING REBAR
- EXISTING DRILL HOLE
- PROPOSED REBAR
- WETLAND AREA
- EXPOSED BEDROCK



CENTERLINE TABLE

LINE	DIRECTION	DISTANCE
L1	N 33°15'16" W	6.07'

CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	CRD. BEARING	CRD. DIST.
C1	37.41'	100.00'	N 22°32'10" W	37.20'

PROPERTY CURVE TABLE

CURVE	LENGTH	RADIUS	CRD. BEARING	CRD. DIST.
C2	18.17'	10.00'	N 72°20'24" W	15.77'
C3	11.07'	75.00'	N 16°02'45" W	11.06'
C4	15.71'	10.00'	N 33°52'11" E	14.14'
C5	15.71'	10.00'	N 56°07'49" W	14.14'

GENERAL NOTES:

1. THE PROPOSE OF THIS PLAN IS TO DEPICT A PROPOSED SUBDIVISION OF THE SUBJECT PARCELS
2. ALL BOOK AND PAGE NUMBERS REFER TO THE YORK COUNTY REGISTRY OF DEEDS, UNLESS OTHERWISE NOTED.
3. THE RECORD OWNER OF THE SUBJECT PARCEL IS MICHAEL D. PRENDERGAST BY A DEED DATED OCTOBER 6, 2011 AND RECORDED IN BOOK 16177, PAGE 988.
4. THE SUBJECT PARCEL IS SHOWN ON THE TOWN OF KENNEBUNKPORT TAX MAP 9 AS LOT 10-23 AND IS LOCATED IN THE VILLIAGE RESIDENTIAL DISTRICT.
5. SPACE AND BULK STANDARDS FOR THE VILLIAGE RESIDENTIAL DISTRICT AS OF THE DATE OF THIS PLAN ARE AS FOLLOWS:

MIN. LOT SIZE:	40,000 SQ FT
MIN. LOT WIDTH:	100 FT
MIN. FRONT SETBACK:	20 FT
MIN. SIDE SETBACK:	15 FT
MIN. REAR SETBACK:	15 FT
MAX. BUILDING HEIGHT:	35 FT
MIN. OPEN SPACE:	20%

6. TOTAL AREA OF THE SUBJECT PARCEL IS 4.1 ACRES.
7. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON AN ON THE GROUND SURVEY PERFORMED BY TERRADYN CONSULTANTS, LLC IN FEBRUARY AND MARCH OF 2023 AND SUPPLEMENTED WITH LIDAR REMOTE SENSING, COLLECTED IN 2020 BY THE STATE OF MAINE AND DISTRIBUTED BY THE USGS AS CLASSIFIED .LAZ POINT CLOUD.

   NAVD88-GEOID18
   ERROR (95% CONFIDENCE INTERVAL) IN METERS = 0.040

8. PLAN REFERENCES:
   A. "PLAN SHOWING MAPLEWOOD - KENNEBUNKPORT, MAINE" DATED JULY 19, 1963, PREPARED BY LIBBY & DOW ENGINEERS, AND RECORDED IN PLAN BOOK 37, PAGE 3.
   B. "PLAN SHOWING LAND TO BE CONVEYED TO ANTHONY & JUDITH & PAUL GELARDI FROM A PORTION OF LAND OWNED BY MARJORIE ELLIS" DATED OCTOBER, 1975 AND RECORDED IN PLAN BOOK 78, PAGE 3.
   C. "PLAN SHOWING A BOUNDARY SURVEY OF ROCKY PASTURE" DATED JULY, 1988, REVISED DECEMBER 13, 1988, PREPARED FOR ANTHONY & PAUL GELARDI AND RECORDED IN PLAN BOOK 184, PAGE 45.
   D. "PRIVATE WAY PLAN - WILDES DISTRICT ROAD" DATED OCTOBER 17, 2002, PREPARED FOR WESLEY & LIZ PHILLIPS BY PINKHAM & GREER CONSULTING ENGINEERS, INC. AND BEING PREVIOUSLY UNRECORDED.
9. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83. ELEVATIONS DEPICTED HEREON ARE NAVD88, BASED ON DUAL-FREQUENCY GPS OBSERVATIONS.
10. NO RECORD WIDTH WAS FOUND FOR WILDES DISTRICT ROAD. PER MSRA TITLE 23, SUBSECTION 2103 THIS SURVEYOR HELD 1 1/2 RODS ON EACH SIDE OF THE APPROXIMATE CENTER OF THE TRAVELED WAY AS FURTHER EVIDENCED BY STONE WALLS FOUND ON EITHER SIDE OF THE ROAD IN THE PROJECT AREA.
11. THE SUBJECT PARCEL IS LOCATED WITHIN ZONE C, AREAS OF MINIMAL FLOOD HAZARD, AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR THE TOWN OF KENNEBUNKPORT, YORK COUNTY, COMMUNITY-PANEL NUMBER 230170 0003 B, HAVING AN EFFECTIVE DATE OF APRIL 18, 1983.
12. A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE BY LONGVIEW PARTNERS, LLC ON OCTOBER 3, 2022. THIS WETLANDS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 WETLAND DELINEATION MANUAL AND NORTHEAST REGIONAL SUPPLEMENT AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS. ALL WETLAND FLAGS WERE LOCATED USING GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY CAPABLE OF DECIMETER ACCURACY.
13. THE DEPTH, SIZE, LOCATION, EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES AND/OR STRUCTURES WERE NOT INVESTIGATED AS PART OF THIS SURVEY. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. OWNERS, CONTRACTORS, AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (CALL 811) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO DIGGING OR BREAKING GROUND.

NET RESIDENTIAL AREA CALCULATIONS

NET RESIDENTIAL		
ITEM#	DESCRIPTION	AREA SF
	GROSS LOT AREA	180,353
1	15% ROADS	27,053
2	ISOLATED AREAS	-
3	FLOOD ZONE	-
4	WETLANDS	20,783
5	ROW OR EASEMENTS	10,012
6	RESOURCE PROTECTION	-
7	FILLED WETLAND	-
	TOTAL NET RESIDENTIAL AREA	122,505

LOTS = NET AREA / MIN LOT SIZE PER ZONE DISTRICT = 122,505 SF / 40,000 SF = 3 LOTS

OPEN SPACE:

OPEN SPACE . . . 27,248 SF
TOTAL PROJECT AREA.. . . . . 180,353 SF
PERCENTAGE OF OPEN SPACE . 15.11% > 15% REQUIRED

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FT.

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED
PROFESSIONAL ENGINEER

DATE: 10/2/2023

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260
PHONE:
(207) 926-5111
WEB SITE:
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
SUBDIVISION PLAN

RECORD OWNER:
MICHAEL D. PRENDERGAST
789 RIDGEFIELD ROAD
WILTON, CT 06897

DATE:	10/2/2023
SCALE:	1" = 40'
JOB NO:	23-003
SHEET:	C-2.0

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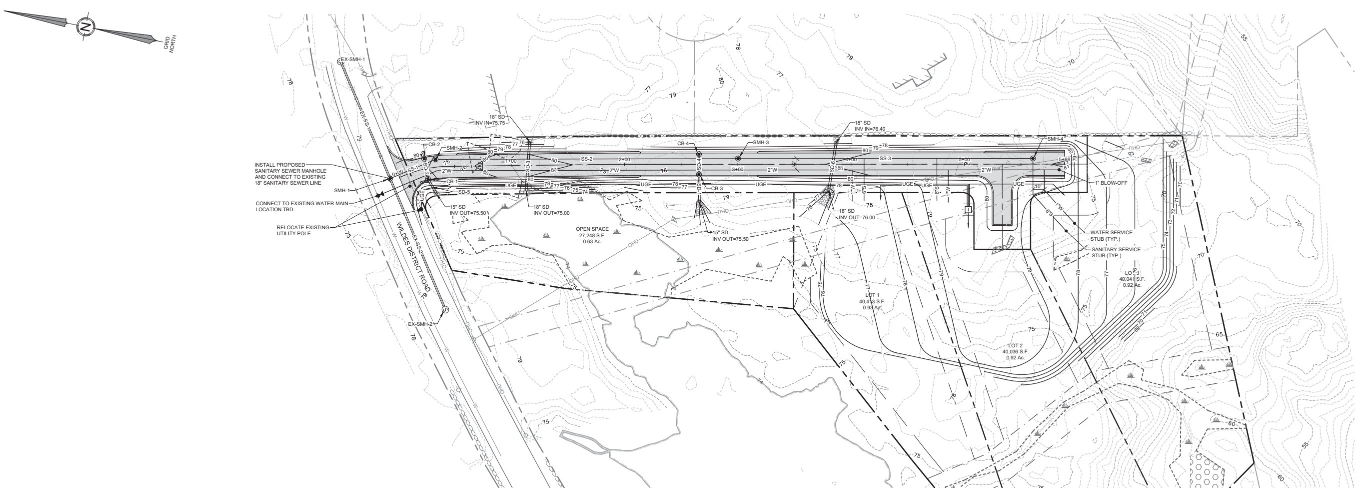
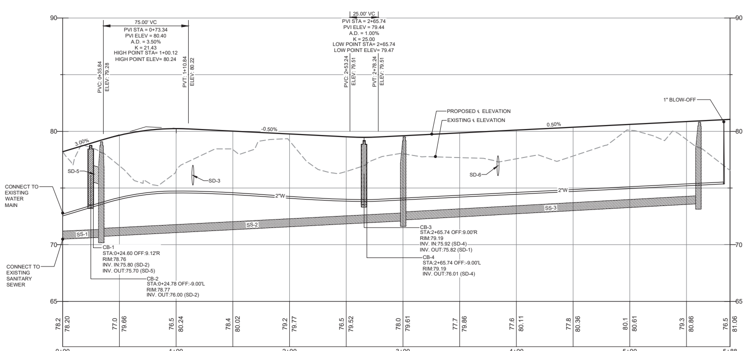

GRID NORTH
INSTALL PROPOSED SANITARY SEWER MANHOLE AND CONNECT TO EXISTING 18" SANITARY SEWER LINE
CONNECT TO EXISTING WATER MAIN LOCATION TBD
RELOCATE EXISTING UTILITY POLE
WILDES DISTRICT ROAD
OPEN SPACE
27,248 S.F.
0.63 Ac.
WATER SERVICE STUB (TYP.)
SANITARY SERVICE STUB (TYP.)
1" BLOW-OFF
LOT 2
40,036 S.F.
0.92 Ac.

PLAN VIEW - PROPOSED ROAD STA. 0+00 TO 5+88

SCALE: 1" = 40'


75.00' VC
PVI STA = 0+73.34
PVI ELEV = 80.40
A.D. = 3.50%
K = 21.43
HIGH POINT STA= 1+00.12
HIGH POINT ELEV= 80.24
25.00' VC
PVI STA = 2+65.74
PVI ELEV = 79.44
A.D. = 1.00%
K = 25.00
LOW POINT STA= 2+65.74
LOW POINT ELEV= 79.47
PROPOSED ℄ ELEVATION
EXISTING ℄ ELEVATION
1" BLOW-OFF
CONNECT TO EXISTING WATER MAIN
CONNECT TO EXISTING SANITARY SEWER
CB-1
STA:0+24.60 OFF:9.12'R
RIM:78.76
INV. IN:75.80 (SD-2)
INV. OUT:75.70 (SD-5)
CB-2
STA:0+24.78 OFF:-9.00'L
RIM:78.77
INV. OUT:76.00 (SD-2)
CB-3
STA:2+65.74 OFF:9.00'R
RIM:79.19
INV. IN:75.92 (SD-4)
INV. OUT:75.82 (SD-1)
CB-4
STA:2+65.74 OFF:-9.00'L
RIM:79.19
INV. OUT:76.01 (SD-4)
0+00
1+00
2+00
3+00
4+00
5+00
5+88

PROFILE - PROPOSED ROAD STA. 0+00 TO 5+88

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

GRAPHIC SCALE
(IN FEET)
1 INCH = 40 FT.

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
EX-SS-1	18"	108'	0.08%
EX-SS-2	18"	121'	0.08%
SS-1	8"	40'	0.47%
SS-2	8"	263'	0.52%
SS-3	8"	256'	0.56%

SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
EX-SMH-1	79.48		70.49 (EX-SS-1)	48"
EX-SMH-2	79.10	70.30 (EX-SS-2)		48"
SMH-1	78.28	70.40 (EX-SS-1)	70.48 (SS-1) 70.40 (EX-SS-2)	48"
SMH-2	79.08	70.67 (SS-1) 70.75 (SS-2)		48"
SMH-3	79.51		72.12 (SS-2) 72.20 (SS-3)	48"
SMH-4	80.82	73.63 (SS-3)		48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	15"	23'	1.39%
SD-2	12"	14'	1.42%
SD-3	18"	44'	1.72%
SD-4	12"	14'	0.64%
SD-5	15"	14'	1.47%
SD-6	18"	45'	0.88%

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	78.76	75.80 (SD-2)	75.70 (SD-5)	48"
CB-2	78.77		76.00 (SD-2)	48"
CB-3	79.19	75.92 (SD-4)	75.82 (SD-1)	48"
CB-4	79.19		76.01 (SD-4)	48"

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

DATE: 10/2/2023

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Stormwater Design | Land Planning | Environmental Permitting
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NEW GLOUCESTER, ME 04260
PHONE:
(207) 926-5111
WEB SITE:
www.terradynconsultants.com

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
PLAN & PROFILE

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE:	10/2/2023
SCALE:	1" = 40'
JOB NO:	23-003
SHEET:	C-3.0

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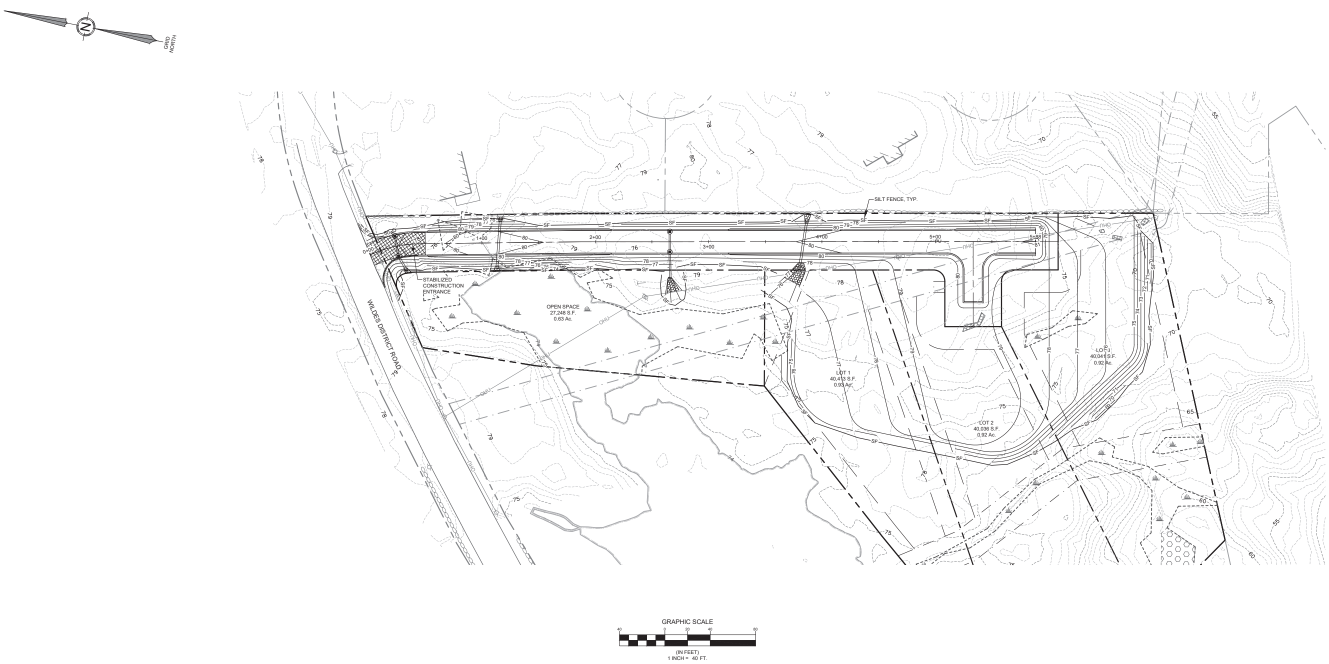

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TERRADYN CONSULTANTS, LLC

Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
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PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
EROSION & SEDIMENT CONTROL PLAN

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE:	10/2/2023
SCALE:	1" = 40'
JOB NO:	23-003
SHEET:	C-4.0

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EROSION AND SEDIMENT CONTROL PLAN

PRE-CONSTRUCTION PHASE
A PERSON WHO CONDUCTS, OR CAUSES TO BE CONDUCTED, AN ACTIVITY THAT INVOLVES FILLING, DISPLACING OR EXPOSING SOIL OR OTHER EARTHEN MATERIALS SHALL TAKE MEASURES TO PREVENT UNREASONABLE EROSION OF SOIL OR SEDIMENT BEYOND THE PROJECT SITE OR INTO A PROTECTED NATURAL RESOURCE AS DEFINED IN 38 MRSA § 480-B. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN. THE SITE MUST BE MAINTAINED TO PREVENT UNREASONABLE EROSION AND SEDIMENTATION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE.

BMP CONSTRUCTION PHASE
A. SEDIMENT BARRIERS. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWNGRADIENT DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE PROPOSED DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

B. CONSTRUCTION ENTRANCE: PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE. TRACKED MUD OR SEDIMENT SHALL BE REMOVED PRIOR TO A STORM EVENT BY VACUUM SWEEPING.

C. RIPRAP: SINCE RIPRAP IS USED WHERE EROSION POTENTIAL IS HIGH, CONSTRUCTION MUST BE SEQUENCED SO THAT THE RIPRAP IS PUT IN PLACE WITH THE MINIMUM DELAY. DISTURBANCE OF AREAS WHERE RIPRAP IS TO BE PLACED SHOULD BE UNDERTAKEN ONLY WHEN FINAL PREPARATION AND PLACEMENT OF THE RIPRAP CAN FOLLOW IMMEDIATELY BEHIND THE INITIAL DISTURBANCE. WHERE RIPRAP IS USED FOR OUTLET PROTECTION, THE RIPRAP SHOULD BE PLACED BEFORE OR IN CONJUNCTION WITH THE CONSTRUCTION OF THE PIPE OR CHANNEL SO THAT IT IS IN PLACE WHEN THE PIPE OR CHANNEL BEGINS TO OPERATE. MAINTAIN TEMPORARY RIPRAP, SUCH AS TEMPORARY CHECK DAMS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

D. TEMPORARY STABILIZATION. STABILIZE WITH TEMPORARY SEEDING, MULCH, OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL REMAIN UNWORKED FOR MORE THAN 14 DAYS EXCEPT, STABILIZE AREAS WITHIN 100 FEET OF A WETLAND OR WATERBODY WITHIN 7 DAYS OR PRIOR TO A PREDICTED STORM EVENT, WHICHEVER COMES FIRST. IF HAY OR STRAW MULCH IS USED, THE APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SF OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE. HAY MULCH MUST BE KEPT MOIST OR ANCHORED TO PREVENT WIND BLOWING. AN EROSION CONTROL BLANKET OR MAT SHALL BE USED AT THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER) AND ON ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS AND WETLANDS. GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE SECOND PHASE, AND SO ON.

E. EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH SUCH AS FLY ASH OR YARD SCRAPING. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 80% AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 6" SCREEN AND 70% TO 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- SOLUBLE SALTS CONTENT SHALL BE <4.0 MMHOS/CM
- THE pH SHALL BE BETWEEN 5.0 AND 8.0

F. VEGETATED WATERWAY. UPON FINAL GRADING, THE DISTURBED AREAS SHALL BE IMMEDIATELY SEEDED TO PERMANENT VEGETATION AND MULCHED AND WILL NOT BE USED AS OUTLETS UNTIL A DENSE, VIGOROUS VEGETATIVE COVER HAS BEEN OBTAINED. ONCE SOIL IS EXPOSED FOR WATERWAY CONSTRUCTION, IT SHOULD BE IMMEDIATELY SHAPED, GRADED AND STABILIZED. VEGETATED WATERWAYS NEED TO BE STABILIZED EARLY DURING THE GROWING SEASON (PRIOR TO SEPTEMBER 15). IF FINAL SEEDING OF WATERWAYS IS DELAYED PAST SEPTEMBER 15, EMERGENCY PROVISIONS SUCH AS SOD OR RIPRAP MAY BE REQUIRED TO STABILIZE THE CHANNEL. WATERWAYS SHOULD BE FULLY STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.

PERMANENT STABILIZATION DEFINED
A. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS AN 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

D. RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.

E. AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.

F. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

G. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIPRAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN-CUTTING OF THE CHANNEL.

GENERAL CONSTRUCTION PHASE
THE FOLLOWING EROSION CONTROL MEASURES SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THIS PROJECT:

A. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3 POUNDS/1,000 SF AND MULCHED, AND REUSED AS REQUIRED. SILT FENCING SHALL BE PLACED DOWN GRADIENT FROM THE STOCKPILED LOAM. STOCKPILE TO BE LOCATED BY DESIGNATION OF THE OWNER AND INSPECTING ENGINEER.

B. THE INSPECTING ENGINEER AT HIS/HER DISCRETION, MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES AND/OR SUPPLEMENTAL VEGETATIVE PROVISIONS TO MAINTAIN STABILITY OF EARTHWORKS AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SUPPLEMENTAL MEASURES AS DIRECTED BY THE INSPECTING ENGINEER. FAILURE TO COMPLY WITH THE ENGINEER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

C. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

D. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED.

E. ALL EROSION, AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

F. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS.

G. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.

H. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

I. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS.

J. EXCEPT FOR APPROVED LANDFILLS OR NON-STRUCTURAL FILLS, FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.

K. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS.

L. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.

M. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY.

N. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

O. REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

PERMANENT VEGETATION
PERMANENT VEGETATIVE COVER SHOULD BE ESTABLISHED ON DISTURBED AREAS WHERE PERMANENT, LONG LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL, TO REDUCE DAMAGES FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE ENVIRONMENT.

SEEDBED PREPARATION
A. GRADE AS FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY THE UNIVERSITY OF MAINE SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P2O5-K2O) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT
A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQ. FT).

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.D. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.

E. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

F. PERMANENT SEEDING SHOULD BE MADE 45 DAYS PRIOR TO THE FIRST KILLING FROST OR AS A DORMANT SEEDING WITH MULCH AFTER THE FIRST KILLING FROST AND BEFORE SNOWFALL. WHEN CROWN VETCH IS SEEDED IN LATER SUMMER, AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SEEDING DATES, MULCH ACCORDING TO THE TEMPORARY MULCHING BMP AND OVERWINTER STABILIZATION AND CONSTRUCTION TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

G. FOLLOWING SEED BED PREPARTATION, SWALE AREAS, FILL AREAS AND BACK SLOPES SHALL BE SEEDED AT A RATE OF 3 LBS./1,000 S.F. WITH A MIXTURE OF 35% CREEPING RED FESCUE, 6% RED TOP, 24% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS AND 5% WHITE DUTCH CLOVER.

I. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.

J. AREAS WHICH CANNOT BE SEEDED WITHIN THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION AND THE AREA SHOULD BE SEEDED AT THE BEGINNING OF THE GROWING SEASON.

WINTER CONSTRUCTION PHASE
IF AN AREA IS NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES BY NOVEMBER 15, THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES.

A. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.

B. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.

C. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.

D. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR ALL SLOPES GREATER THAN 8 % OR OTHER AREAS EXPOSED TO DIRECT WIND.

E. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGEWAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3 %.

F. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

G. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SO THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

H. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.

I. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.

J. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THAT SAME DAY.

K. IF SNOWFALL IS GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.

L. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.

M. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.

N. EROSION CONTROL MUST BE INSPECTED AFTER EACH RAINFALL, SNOW STORM, OR THAWING EVENT AND AT LEAST ONCE A WEEK BETWEEN NOVEMBER 15 AND APRIL 15.

MAINTENANCE AND INSPECTION PHASE
A. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE

B. A LOG (REPORT) MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

DEWATERING
A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE.

GOOD HOUSEKEEPING NOTES:

1. **SPILL PREVENTION.** CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

   NOTE: ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT : HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/

2. **GROUNDWATER PROTECTION.** DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

   SEE MAINE DEP CHAPTER 500 APPENDIX D FOR LICENSE BY RULE STANDARDS FOR INFILTRATION OF STORMWATER.

   NOTE: LACK OF APPROPRIATE POLLUTANT REMOVAL BEST MANAGEMENT PRACTICES (BMPS) MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARD ESTABLISHED BY 38 M.R.S.A. §465-C(1).

3. **FUGITIVE SEDIMENT AND DUST.** ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

   NOTE: DEWATERING A STREAM WITHOUT A PERMIT FROM THE DEPARTMENT MAY VIOLATE STATE WATER QUALITY STANDARDS AND THE *NATURAL RESOURCES PROTECTION ACT*.

4. **DEBRIS AND OTHER MATERIALS.** MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

   NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND POST-CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISION OF RULES RELATED TO SOLID, UNIVERSAL, AND HAZARDOUS WASTE, INCLUDING, BUT NOT LIMITED TO, THE MAINE SOLID WASTE AND HAZARDOUS WASTE MANAGEMENT RULES; MAINE HAZARDOUS WASTE MANAGEMENT RULES; MAINE OIL CONVEYANCE AND STORAGE RULES; AND MAINE PESTICIDE REQUIREMENTS.

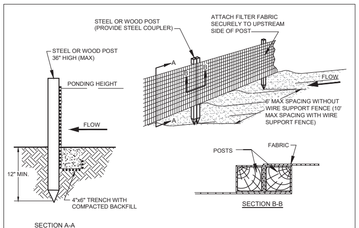
5. **EXCAVATION DE-WATERING.** EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

   NOTE: DEWATERING CONTROLS ARE DISCUSSED IN THE "MAINE EROSION AND SEDIMENT CONTROL BMPS, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION."

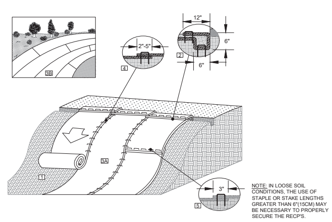
6. **AUTHORIZED NON-STORMWATER DISCHARGES.** IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

   (a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
   (b) FIRE HYDRANT FLUSHINGS;
   (c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
   (d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
   (e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
   (f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
   (g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
   (h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
   (i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
   (j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
   (k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
   (l) LANDSCAPE IRRIGATION.

7. **ADDITIONAL REQUIREMENTS.** ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.



SILT FENCE
NOT TO SCALE



PHOTODEGRADABLE EROSION CONTROL BLANKET SELECTION

6:1 > 3:1 SLOPES	3:1 > 2:1 SLOPES	≥2:1 SLOPES
NA GREEN DS75	NA GREEN S150	NA GREEN SC150

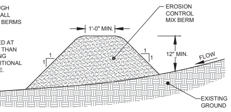
PERMANENT TURF REINFORCEMENT
IF THE PLAN CALLS FOR PERMANENT TURF REINFORCEMENT, USE NORTH AMERICAN GREEN VMAX SC250

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF RECPS BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL THE RECPS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON THE RECPS TYPE.
5. CONSECUTIVE RECPS SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECPS WIDTH.

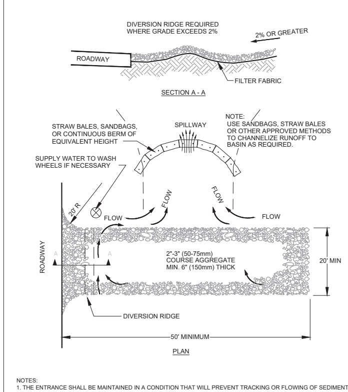
EROSION CONTROL FABRIC SLOPE INSTALLATION
NOT TO SCALE

NOTES:
1. DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.
2. ECM BERMS ARE NOT TO BE USED AT THE BASE OF A SLOPE STEEPER THAN 8% OR WHERE WATER IS FLOWING WITHOUT THE SUPPORT OF ADDITIONAL MEASURES, SUCH AS SILT FENCE.



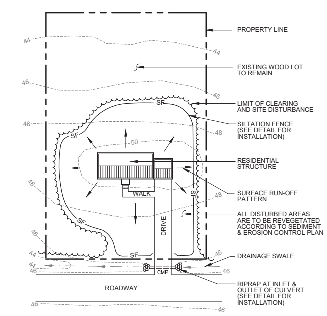
EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- ph SHALL FALL BETWEEN 5.0 - 8.0.

EROSION CONTROL MIX BERM
NOT TO SCALE



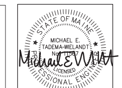
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



Inspection Notes for Lot Grading and Driveway location
Inspections by a professional engineer shall consist of a visit to the site prior to construction to consult with the earthwork contractor and a post construction meeting to confirm grading on lots and for all driveways to ensure runoff is directed according to plans and to oversee the re-stabilization of the lot into a vegetated cover.

TYPICAL EROSION CONTROL MEASURES FOR DWELLING UNITS
NOT TO SCALE



DATE: 10/2/2023

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

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PHONE: (207) 956-4111
WEB SITE: www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

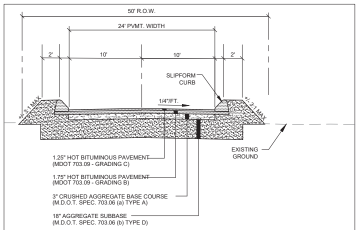
PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT: WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE: EROSION CONTROL NOTES & DETAILS

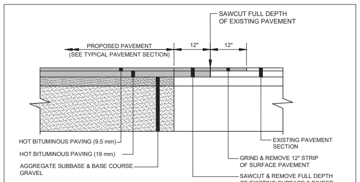
CLIENT: BEACHWOOD DEVELOPMENT FUND, LP
66 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE:
JOB NO: 23-003
SHEET: C-4.0


50' R.O.W.
24' PVMT. WIDTH
2'
10'
10'
2'
SLIPFORM CURB
1/4"/FT.
+/- 3:1 MAX
+/- 3:1 MAX
EXISTING GROUND
1.25" HOT BITUMINOUS PAVEMENT (MDOT 703.09 - GRADING C)
1.75" HOT BITUMINOUS PAVEMENT (MDOT 703.09 - GRADING B)
3" CRUSHED AGGREGATE BASE COURSE (M.D.O.T. SPEC. 703.06 (a) TYPE A)
18" AGGREGATE SUBBASE (M.D.O.T. SPEC. 703.06 (b) TYPE D)

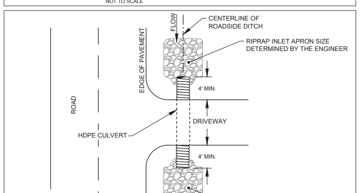
NOTE: FILL AREAS BENEATH DRIVING SURFACE SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUB-GRADE CONSTRUCTION. EXCAVATED ONSITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. GRANULAR BORROW AND COMMON BORROW SHALL ADHERE TO MDOT SPECIFICATIONS 703.19 AND 703.18 RESPECTIVELY.

TYPICAL ROAD SECTION
NOT TO SCALE


SAWCUT FULL DEPTH OF EXISTING PAVEMENT
PROPOSED PAVEMENT (SEE TYPICAL PAVEMENT SECTION)
12"
12"
HOT BITUMINOUS PAVING (9.5 mm)
HOT BITUMINOUS PAVING (19 mm)
AGGREGATE SUBBASE & BASE COURSE GRAVEL
EXISTING PAVEMENT SECTION
GRIND & REMOVE 12" STRIP OF SURFACE PAVEMENT
SAWCUT & REMOVE FULL DEPTH OF EXISTING SURFACE & BINDER PAVEMENT

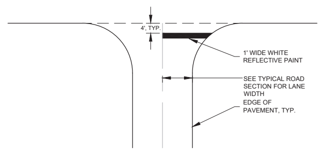
NOTE:
CLEAN & APPLY TACK COAT TO SURFACES WHERE NEW BIT. PAVEMENT IS INSTALLED

TYPICAL PAVEMENT JOINT
NOT TO SCALE

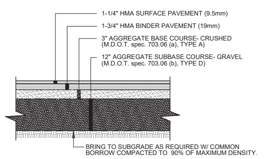


NOTE: CULVERT TO BE INSTALLED WITH A MINIMUM COVER OF 12".

DRIVEWAY CULVERT
NOT TO SCALE

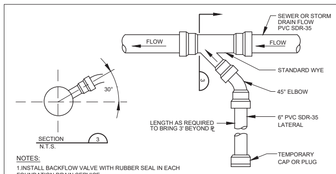


STOP BAR DETAIL
NOT TO SCALE


1-1/4" HMA SURFACE PAVEMENT (9.5mm)
1-3/4" HMA BINDER PAVEMENT (19mm)
3" AGGREGATE BASE COURSE- CRUSHED (M.D.O.T. spec. 703.06 (a), TYPE A)
12" AGGREGATE SUBBASE COURSE- GRAVEL (M.D.O.T. spec. 703.06 (b), TYPE D)
BRING TO SUBGRADE AS REQUIRED W/ COMMON BORROW COMPACTED TO 90% OF MAXIMUM DENSITY.

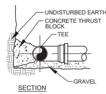
NOTES:
1. MDOT TYPE D AGGREGATE GRADATION SHALL BE MODIFIED FOR A MAXIMUM 4" STONE AND LIMIT #200 SIEVE TO 5% PASSING.

TYP. DRIVEWAY PAVEMENT SECTION
NOT TO SCALE

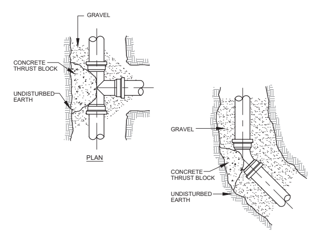


NOTES:
1.INSTALL BACKFLOW VALVE WITH RUBBER SEAL IN EACH FOUNDATION DRAIN SERVICE.
2. IF SUMP PUMP IS UTILIZED INSTALL CHECK VALVE AT SUMP PUMP.

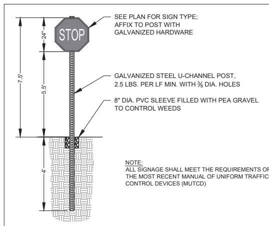
SEWER / FOUNDATION DRAIN SERVICE CONNECTION
NOT TO SCALE



CONCRETE THRUST BLOCK SIZE REQUIREMENTS				
		SQ. FT. OF BEARING ON UNDISTURBED SOIL		
FITTINGS		90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0	3.0
	8"	8.0	4.0	6.0
	12"	15	10	10

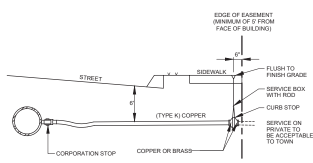


TEE & BEND DETAIL
NOT TO SCALE

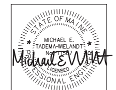


NOTE:
ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF THE MOST RECENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

STREET SIGN
NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



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www.terradynconsultants.com
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
SITE & UTILITY DETAILS

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
kENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE:
JOB NO: 23-003
SHEET: C-4.1

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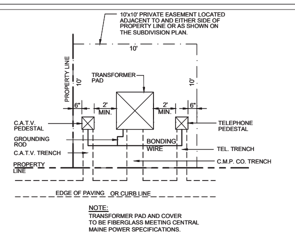
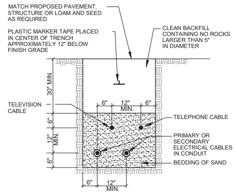


10'x10' PRIVATE EASEMENT LOCATED ADJACENT TO AND EITHER SIDE OF PROPERTY LINE OR AS SHOWN ON THE SUBDIVISION PLAN.
10'
PROPERTY LINE
TRANSFORMER PAD
10'
6"
2' MIN.
2' MIN.
6"
C.A.T.V. PEDESTAL
GROUNDING ROD
C.A.T.V. TRENCH
PROPERTY LINE
BONDING WIRE
TELEPHONE PEDESTAL
TEL. TRENCH
C.M.P. CD. TRENCH
EDGE OF PAVING OR CURB LINE

NOTE:
TRANSFORMER PAD AND COVER TO BE FIBERGLASS MEETING CENTRAL MAINE POWER SPECIFICATIONS.

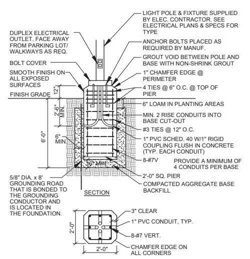
TRANSFORMER DETAIL
NOT TO SCALE



MATCH PROPOSED PAVEMENT, STRUCTURE OR LOAM AND SEED AS REQUIRED
PLASTIC MARKER TAPE PLACED IN CENTER OF TRENCH APPROXIMATELY 12" BELOW FINISH GRADE
CLEAN BACKFILL CONTAINING NO ROCKS LARGER THAN 5" IN DIAMETER
30" MIN.
TELEVISION CABLE
6"
12" MIN.
TELEPHONE CABLE
PRIMARY OR SECONDARY ELECTRICAL CABLES IN CONDUIT
BEDDING OF SAND
6"
12" MIN.

CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

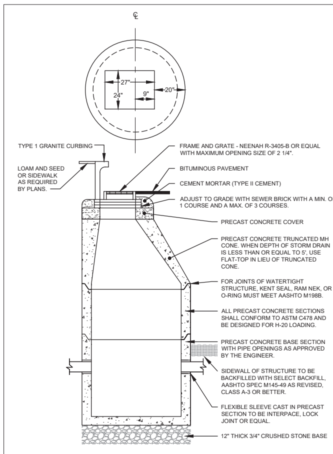
TYPICAL UNDERGROUND CABLE INSTALLATION
NOT TO SCALE



LIGHT POLE & FIXTURE SUPPLIED BY ELEC. CONTRACTOR. SEE ELECTRICAL PLANS & SPECS FOR TYPE
DUPLEX ELECTRICAL OUTLET. FACE AWAY FROM PARKING LOT/ WALKWAYS AS REQ.
ANCHOR BOLTS PLACED AS REQUIRED BY MANUF.
BOLT COVER
GROUT VOID BETWEEN POLE AND BASE WITH NON-SHRINK GROUT
SMOOTH FINISH ON ALL EXPOSED SURFACES
1" CHAMFER EDGE @ PERIMETER
4 TIES @ 6" O.C. @ TOP OF PIER
FINISH GRADE
12"
6" LOAM IN PLANTING AREAS
2'-6" MIN.
MIN. 2 RISE CONDUITS INTO BASE CUT-OUT
#3 TIES @ 12" O.C.
6'-0"
6" MIN.
1" PVC SCHED. 40 W/1" RIGID COUPLING FLUSH IN CONCRETE (TYP. EACH CONDUIT)
8-#7V
PROVIDE A MINIMUM OF 4 CONDUITS PER BASE
6" MIN.
2'-0" SQ. PIER
5/8" DIA. x 8' GROUNDING ROAD THAT IS BONDED TO THE GROUNDING CONDUCTOR AND IS LOCATED IN THE FOUNDATION.
COMPACTED AGGREGATE BASE BACKFILL
SECTION
3" CLEAR
1" PVC CONDUIT, TYP.
2'-0"
8-#7 VERT.
2'-0"
CHAMFER EDGE ON ALL CORNERS
PLAN

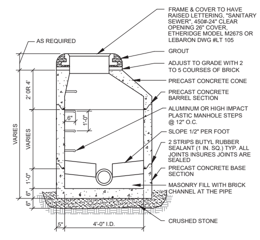
NOTES:
1. CONCRETE f'c=4000 psi.
2. REINF. STEEL GRADE 60 NEW BARS.
3. CONCRETE 3/4" AGG., 6 +/- 1% ENTRAINED AIR.
4. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
5. INSTALL BASE 3'-0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.
6. BID ALT.- CONTRACTOR MAY SUBSTITUTE PRECAST CONCRETE LIGHT POLE BASE EQUAL TO ABOVE SPEC.

LIGHT POLE BASE
NOT TO SCALE



℄
27"
24"
9"
20"
TYPE 1 GRANITE CURBING
LOAM AND SEED OR SIDEWALK AS REQUIRED BY PLANS.
FRAME AND GRATE - NEENAH R-3405-B OR EQUAL WITH MAXIMUM OPENING SIZE OF 2 1/4".
BITUMINOUS PAVEMENT
CEMENT MORTAR (TYPE II CEMENT)
ADJUST TO GRADE WITH SEWER BRICK WITH A MIN. OF 1 COURSE AND A MAX. OF 3 COURSES.
PRECAST CONCRETE COVER
PRECAST CONCRETE TRUNCATED MH CONE. WHEN DEPTH OF STORM DRAIN IS LESS THAN OR EQUAL TO 5', USE FLAT-TOP IN LIEU OF TRUNCATED CONE.
FOR JOINTS OF WATERTIGHT STRUCTURE, KENT SEAL, RAM NEK, OR O-RING MUST MEET AASHTO M198B.
ALL PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C478 AND BE DESIGNED FOR H-20 LOADING.
PRECAST CONCRETE BASE SECTION WITH PIPE OPENINGS AS APPROVED BY THE ENGINEER.
SIDEWALL OF STRUCTURE TO BE BACKFILLED WITH SELECT BACKFILL, AASHTO SPEC M145-49 AS REVISED, CLASS A-3 OR BETTER.
FLEXIBLE SLEEVE CAST IN PRECAST SECTION TO BE INTERPACE, LOCK JOINT OR EQUAL.
12" THICK 3/4" CRUSHED STONE BASE
SECTION VIEW

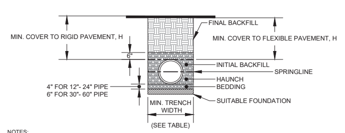
CATCH BASIN - CURB INLET
NOT TO SCALE



FRAME & COVER TO HAVE RAISED LETTERING, "SANITARY SEWER", 450#-24" CLEAR OPENING 26" COVER, ETHERIDGE MODEL M267S OR LEBARON DWG #LT 105
AS REQUIRED
GROUT
ADJUST TO GRADE WITH 2 TO 5 COURSES OF BRICK
PRECAST CONCRETE CONE
2' OR 4'
PRECAST CONCRETE BARREL SECTION
ALUMINUM OR HIGH IMPACT PLASTIC MANHOLE STEPS @ 12" O.C.
6"
1'-0"
VARIES
VARIES
SLOPE 1/2" PER FOOT
2 STRIPS BUTYL RUBBER SEALANT (1 IN. SQ.) TYP. ALL JOINTS INSURES JOINTS ARE SEALED
PRECAST CONCRETE BASE SECTION
1'-0"
MASONRY FILL WITH BRICK CHANNEL AT THE PIPE
6"
6"
CRUSHED STONE
5"
4'-0" I.D.

NOTE: PIPE CONNECTIONS SHALL BE WATERTIGHT FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION

PRECAST SEWER MANHOLE
NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

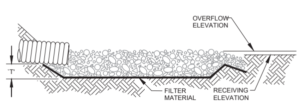
PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

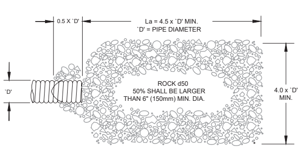
* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TYPICAL TRENCH DETAIL
NOT TO SCALE



THICKNESS ("T") = 1.5 x MAX. ROCK DIAMETER - 6" (150mm) MIN.

SECTION



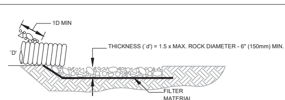
PLAN

PIPE OUTLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	LENGTH (FT)	WIDTH (FT)
6	2.5	2.0
12	5.0	4.0
15	6.25	5.0
18	7.5	6.0
24	10.0	8.0
30	13.0	10.0
36	15.0	12.0
42	17.5	14.0
48	20.0	16.0
60	25.0	20.0

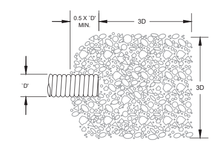
NOTES:
1. `La' = LENGTH OF APRON. DISTANCE `La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC (MIRAFI 600X OR APPROVED EQUAL) OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

PIPE OUTLET PROTECTION
NOT TO SCALE



NOTE:
1. GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON UNDISTURBED SOILS, OR 6" OF 4" MINUS BAN RUN GRAVEL FREE OF FINES, CLAYS, SILTS.
2. GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL.

SECTION



HARD ANGULAR ROCK D50 SELECTION PER CHART

PLAN

PIPE INLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	LENGTH (FT)	WIDTH (FT)
6	2.0	1.5
12	3.5	3.0
15	4.5	3.75
18	5.25	4.5
24	7.0	6.0
30	8.75	7.5
36	10.5	9.0
42	12.25	10.5
48	14.0	12.0
60	17.5	15.0

NOTES:
1. IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE FOOT ABOVE MAX. HEADWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

PIPE INLET PROTECTION
NOT TO SCALE

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED
PROFESSIONAL ENGINEER

DATE: 10/2/2023

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

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PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
DRAINAGE & UTILITY DETAILS

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE: AS NOTED
JOB NO: 23-003
SHEET: C-4.2

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EROSION AND SEDIMENT CONTROL PLAN

PRE-CONSTRUCTION PHASE
A PERSON WHO CONDUCTS, OR CAUSES TO BE CONDUCTED, AN ACTIVITY THAT INVOLVES FILLING, DISPLACING OR EXPOSING SOIL OR OTHER EARTHEN MATERIALS SHALL TAKE MEASURES TO PREVENT UNREASONABLE EROSION OF SOIL OR SEDIMENT BEYOND THE PROJECT SITE OR INTO A PROTECTED NATURAL RESOURCE AS DEFINED IN 38 MRSA § 480-B. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN. THE SITE MUST BE MAINTAINED TO PREVENT UNREASONABLE EROSION AND SEDIMENTATION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE.

BMP CONSTRUCTION PHASE
A. SEDIMENT BARRIERS. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWNGRADIENT DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE PROPOSED DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

B. CONSTRUCTION ENTRANCE: PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE. TRACKED MUD OR SEDIMENT SHALL BE REMOVED PRIOR TO A STORM EVENT BY VACUUM SWEEPING.

C. RIPRAP: SINCE RIPRAP IS USED WHERE EROSION POTENTIAL IS HIGH, CONSTRUCTION MUST BE SEQUENCED SO THAT THE RIPRAP IS PUT IN PLACE WITH THE MINIMUM DELAY. DISTURBANCE OF AREAS WHERE RIPRAP IS TO BE PLACED SHOULD BE UNDERTAKEN ONLY WHEN FINAL PREPARATION AND PLACEMENT OF THE RIPRAP CAN FOLLOW IMMEDIATELY BEHIND THE INITIAL DISTURBANCE. WHERE RIPRAP IS USED FOR OUTLET PROTECTION, THE RIPRAP SHOULD BE PLACED BEFORE OR IN CONJUNCTION WITH THE CONSTRUCTION OF THE PIPE OR CHANNEL SO THAT IT IS IN PLACE WHEN THE PIPE OR CHANNEL BEGINS TO OPERATE. MAINTAIN TEMPORARY RIPRAP, SUCH AS TEMPORARY CHECK DAMS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.

D. TEMPORARY STABILIZATION. STABILIZE WITH TEMPORARY SEEDING, MULCH, OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL REMAIN UNWORKED FOR MORE THAN 14 DAYS EXCEPT, STABILIZE AREAS WITHIN 100 FEET OF A WETLAND OR WATERBODY WITHIN 7 DAYS OR PRIOR TO A PREDICTED STORM EVENT, WHICHEVER COMES FIRST. IF HAY OR STRAW MULCH IS USED, THE APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SF OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE. HAY MULCH MUST BE KEPT MOIST OR ANCHORED TO PREVENT WIND BLOWING. AN EROSION CONTROL BLANKET OR MAT SHALL BE USED AT THE BASE OF GRASSED WATERWAYS, STEEP SLOPES (15% OR GREATER) AND ON ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS AND WETLANDS. GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE SECOND PHASE, AND SO ON.

E. EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH SUCH AS FLY ASH OR YARD SCRAPING. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:

- THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 80% AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 6" SCREEN AND 70% TO 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- SOLUBLE SALTS CONTENT SHALL BE <4.0 MMHOS/CM
- THE pH SHALL BE BETWEEN 5.0 AND 8.0

F. VEGETATED WATERWAY. UPON FINAL GRADING, THE DISTURBED AREAS SHALL BE IMMEDIATELY SEEDED TO PERMANENT VEGETATION AND MULCHED AND WILL NOT BE USED AS OUTLETS UNTIL A DENSE, VIGOROUS VEGETATIVE COVER HAS BEEN OBTAINED. ONCE SOIL IS EXPOSED FOR WATERWAY CONSTRUCTION, IT SHOULD BE IMMEDIATELY SHAPED, GRADED AND STABILIZED. VEGETATED WATERWAYS NEED TO BE STABILIZED EARLY DURING THE GROWING SEASON (PRIOR TO SEPTEMBER 15). IF FINAL SEEDING OF WATERWAYS IS DELAYED PAST SEPTEMBER 15, EMERGENCY PROVISIONS SUCH AS SOD OR RIPRAP MAY BE REQUIRED TO STABILIZE THE CHANNEL. WATERWAYS SHOULD BE FULLY STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.

PERMANENT STABILIZATION DEFINED
A. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS AN 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

D. RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.

E. AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.

F. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

G. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIPRAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN-CUTTING OF THE CHANNEL.

GENERAL CONSTRUCTION PHASE
THE FOLLOWING EROSION CONTROL MEASURES SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THIS PROJECT:

A. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3 POUNDS/1,000 SF AND MULCHED, AND REUSED AS REQUIRED. SILT FENCING SHALL BE PLACED DOWN GRADIENT FROM THE STOCKPILED LOAM. STOCKPILE TO BE LOCATED BY DESIGNATION OF THE OWNER AND INSPECTING ENGINEER.

B. THE INSPECTING ENGINEER AT HIS/HER DISCRETION, MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES AND/OR SUPPLEMENTAL VEGETATIVE PROVISIONS TO MAINTAIN STABILITY OF EARTHWORKS AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SUPPLEMENTAL MEASURES AS DIRECTED BY THE INSPECTING ENGINEER. FAILURE TO COMPLY WITH THE ENGINEER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

C. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

D. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE ADEQUATELY STABILIZED.

E. ALL EROSION, AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

F. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS.

G. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.

H. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

I. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS.

J. EXCEPT FOR APPROVED LANDFILLS OR NON-STRUCTURAL FILLS, FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.

K. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS.

L. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION.

M. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY.

N. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

O. REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

PERMANENT VEGETATION
PERMANENT VEGETATIVE COVER SHOULD BE ESTABLISHED ON DISTURBED AREAS WHERE PERMANENT, LONG LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL, TO REDUCE DAMAGES FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE ENVIRONMENT.

SEEDBED PREPARATION
A. GRADE AS FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY THE UNIVERSITY OF MAINE SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P2O5-K2O) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT
A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQ. FT).

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.D. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.

E. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED; THE AREA MUST BE TILLED AND FIRMED AS ABOVE.

F. PERMANENT SEEDING SHOULD BE MADE 45 DAYS PRIOR TO THE FIRST KILLING FROST OR AS A DORMANT SEEDING WITH MULCH AFTER THE FIRST KILLING FROST AND BEFORE SNOWFALL. WHEN CROWN VETCH IS SEEDED IN LATER SUMMER, AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SEEDING DATES, MULCH ACCORDING TO THE TEMPORARY MULCHING BMP AND OVERWINTER STABILIZATION AND CONSTRUCTION TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

G. FOLLOWING SEED BED PREPARTATION, SWALE AREAS, FILL AREAS AND BACK SLOPES SHALL BE SEEDED AT A RATE OF 3 LBS./1,000 S.F. WITH A MIXTURE OF 35% CREEPING RED FESCUE, 6% RED TOP, 24% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS AND 5% WHITE DUTCH CLOVER.

I. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING.

J. AREAS WHICH CANNOT BE SEEDED WITHIN THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION AND THE AREA SHOULD BE SEEDED AT THE BEGINNING OF THE GROWING SEASON.

WINTER CONSTRUCTION PHASE
IF AN AREA IS NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES BY NOVEMBER 15, THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES.

A. PERMANENT STABILIZATION CONSISTS OF AT LEAST 90% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.

B. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.

C. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.

D. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR ALL SLOPES GREATER THAN 8 % OR OTHER AREAS EXPOSED TO DIRECT WIND.

E. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGEWAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3 %.

F. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

G. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SO THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

H. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.

I. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.

J. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THAT SAME DAY.

K. IF SNOWFALL IS GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.

L. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.

M. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.

N. EROSION CONTROL MUST BE INSPECTED AFTER EACH RAINFALL, SNOW STORM, OR THAWING EVENT AND AT LEAST ONCE A WEEK BETWEEN NOVEMBER 15 AND APRIL 15.

MAINTENANCE AND INSPECTION PHASE
A. MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE

B. A LOG (REPORT) MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

DEWATERING
A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE.

GOOD HOUSEKEEPING NOTES:

1. **SPILL PREVENTION.** CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

   NOTE: ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT : HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/

2. **GROUNDWATER PROTECTION.** DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

   SEE MAINE DEP CHAPTER 500 APPENDIX D FOR LICENSE BY RULE STANDARDS FOR INFILTRATION OF STORMWATER.

   NOTE: LACK OF APPROPRIATE POLLUTANT REMOVAL BEST MANAGEMENT PRACTICES (BMPS) MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARD ESTABLISHED BY 38 M.R.S.A. §465-C(1).

3. **FUGITIVE SEDIMENT AND DUST.** ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

   NOTE: DEWATERING A STREAM WITHOUT A PERMIT FROM THE DEPARTMENT MAY VIOLATE STATE WATER QUALITY STANDARDS AND THE *NATURAL RESOURCES PROTECTION ACT*.

4. **DEBRIS AND OTHER MATERIALS.** MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

   NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND POST-CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISION OF RULES RELATED TO SOLID, UNIVERSAL, AND HAZARDOUS WASTE, INCLUDING, BUT NOT LIMITED TO, THE MAINE SOLID WASTE AND HAZARDOUS WASTE MANAGEMENT RULES; MAINE HAZARDOUS WASTE MANAGEMENT RULES; MAINE OIL CONVEYANCE AND STORAGE RULES; AND MAINE PESTICIDE REQUIREMENTS.

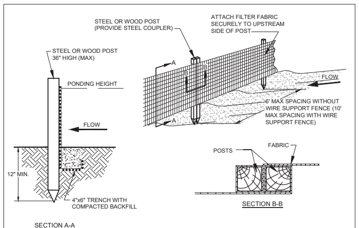
5. **EXCAVATION DE-WATERING.** EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

   NOTE: DEWATERING CONTROLS ARE DISCUSSED IN THE "MAINE EROSION AND SEDIMENT CONTROL BMPS, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION."

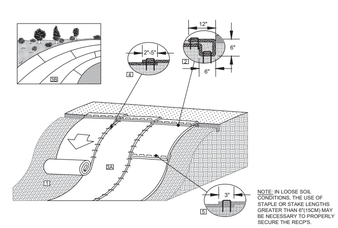
6. **AUTHORIZED NON-STORMWATER DISCHARGES.** IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

   (a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
   (b) FIRE HYDRANT FLUSHINGS;
   (c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
   (d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
   (e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
   (f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
   (g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
   (h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
   (i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
   (j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
   (k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
   (l) LANDSCAPE IRRIGATION.

7. **ADDITIONAL REQUIREMENTS.** ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.



SILT FENCE
NOT TO SCALE



PHOTODEGRADABLE EROSION CONTROL BLANKET SELECTION

6:1 > 3:1 SLOPES	3:1 > 2:1 SLOPES	≥2:1 SLOPES
NA GREEN DS75	NA GREEN S150	NA GREEN SC150

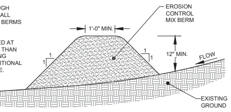
PERMANENT TURF REINFORCEMENT
IF THE PLAN CALLS FOR PERMANENT TURF REINFORCEMENT, USE NORTH AMERICAN GREEN VMAX SC250

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF RECPS BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL THE RECPS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON THE RECPS TYPE.
5. CONSECUTIVE RECPS SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECPS WIDTH.

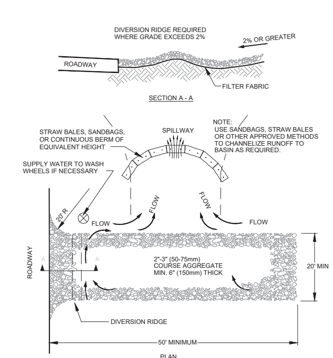
EROSION CONTROL FABRIC SLOPE INSTALLATION
NOT TO SCALE

NOTES:
1. DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.
2. ECM BERMS ARE NOT TO BE USED AT THE BASE OF A SLOPE STEEPER THAN 8% OR WHERE WATER IS FLOWING WITHOUT THE SUPPORT OF ADDITIONAL MEASURES, SUCH AS SILT FENCE.



EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80% - 100% DRY WEIGHT BASIS
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85% PASSING A 0.75" SCREEN
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- ph SHALL FALL BETWEEN 5.0 - 8.0.

EROSION CONTROL MIX BERM
NOT TO SCALE

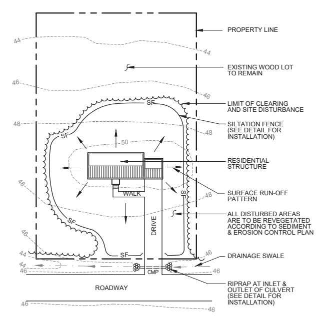


NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



Inspection Notes for Lot Grading and Driveway location
Inspections by a professional engineer shall consist of a visit to the site prior to construction to consult with the earthwork contractor and a post construction meeting to confirm grading on lots and for all driveways to ensure runoff is directed according to plans and to oversee the re-stabilization of the lot into a vegetated cover.

TYPICAL EROSION CONTROL MEASURES FOR DWELLING UNITS
NOT TO SCALE

STATE OF MAINE
MICHAEL E.
TADEMA-WIELANDT
No. 11567
LICENSED
PROFESSIONAL ENGINEER

DATE: 10/2/2023

NO.	DATE	REVISIONS
1	10/2/2023	SUBMITTED FOR PRELIMINARY SUBDIVISION APPROVAL

TERRADYN CONSULTANTS, LLC
ADDRESS:
41 CAMPUS DRIVE, SUITE 301
NEW GLOUCESTER, ME 04260
PHONE:
(207) 926-5111
WEB SITE:
www.terradynconsultants.com
Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

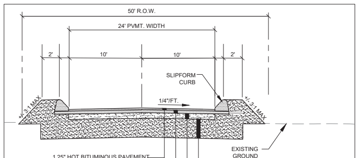
PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
EROSION CONTROL NOTES & DETAILS

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE:
JOB NO: 23-003
SHEET: C-5.0

C:\OD\Terradyn Consultants\Project Folders - Documents\2023 Jobs\23-003 Wildes District Road Subdivision\CAD\Permitting\23-003 D.dwg



1.25" HOT BITUMINOUS PAVEMENT (MDOT 703.09 - GRADING C)

1.75" HOT BITUMINOUS PAVEMENT (MDOT 703.09 - GRADING B)

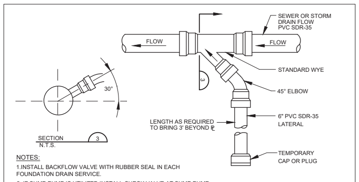
3" CRUSHED AGGREGATE BASE COURSE (M.D.O.T. SPEC. 703.06 (a) TYPE A)

18" AGGREGATE SUBBASE (M.D.O.T. SPEC. 703.06 (b) TYPE D)

NOTE: FILL AREAS BENEATH DRIVING SURFACE SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUB-GRADE CONSTRUCTION. EXCAVATED ONSITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. GRANULAR BORROW AND COMMON BORROW SHALL ADHERE TO MDOT SPECIFICATIONS 703.19 AND 703.18 RESPECTIVELY.

TYPICAL ROAD SECTION

NOT TO SCALE

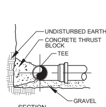


NOTES:

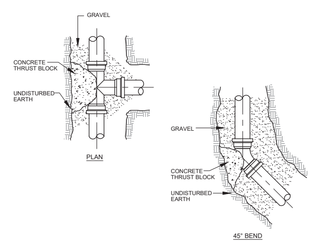
1. INSTALL BACKFLOW VALVE WITH RUBBER SEAL IN EACH FOUNDATION DRAIN SERVICE.
2. IF SUMP PUMP IS UTILIZED INSTALL CHECK VALVE AT SUMP PUMP.

SEWER / FOUNDATION DRAIN SERVICE CONNECTION

NOT TO SCALE

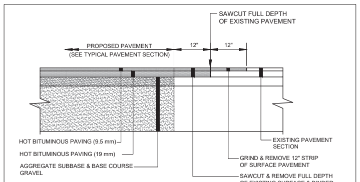


CONCRETE THRUST BLOCK SIZE REQUIREMENTS				
		SQ. FT. OF BEARING ON UNDISTURBED SOIL		
FITTINGS		90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0	3.0
	8"	8.0	4.0	6.0
	12"	15	10	10



TEE & BEND DETAIL

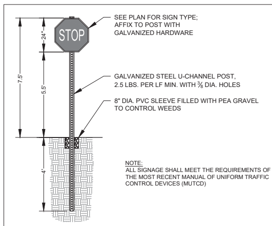
NOT TO SCALE


SAWCUT FULL DEPTH OF EXISTING PAVEMENT
PROPOSED PAVEMENT (SEE TYPICAL PAVEMENT SECTION)
12"
12"
HOT BITUMINOUS PAVING (9.5 mm)
HOT BITUMINOUS PAVING (19 mm)
AGGREGATE SUBBASE & BASE COURSE GRAVEL
EXISTING PAVEMENT SECTION
GRIND & REMOVE 12" STRIP OF SURFACE PAVEMENT
SAWCUT & REMOVE FULL DEPTH OF EXISTING SURFACE & BINDER PAVEMENT

NOTE:
CLEAN & APPLY TACK COAT TO SURFACES WHERE NEW BIT. PAVEMENT IS INSTALLED

TYPICAL PAVEMENT JOINT

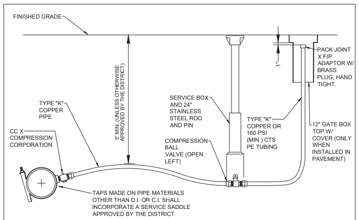
NOT TO SCALE



NOTE:
ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF THE MOST RECENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

STREET SIGN

NOT TO SCALE


FINISHED GRADE
PACK JOINT X FIP ADAPTOR W/ BRASS PLUG, HAND TIGHT.
1'
5' MIN UNLESS OTHERWISE APPROVED BY THE DISTRICT
TYPE "K" COPPER PIPE
CC X COMPRESSION CORPORATION
SERVICE BOX AND 24" STAINLESS STEEL ROD AND PIN
COMPRESSION BALL VALVE (OPEN LEFT)
TYPE "K" COPPER OR 160 PSI (MIN.) CTS PE TUBING
12" GATE BOX TOP W/ COVER (ONLY WHEN INSTALLED IN PAVEMENT)
TAPS MADE ON PIPE MATERIALS OTHER THAN D.I. OR C.I. SHALL INCORPORATE A SERVICE SADDLE APPROVED BY THE DISTRICT

STANDARD BLOW OFF

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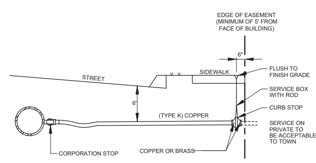

TYPICAL WATER SERVICE CONNECTION

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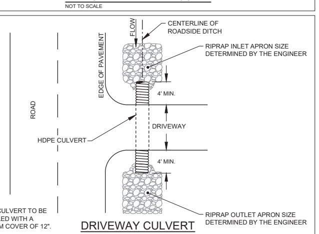

NOTE: CULVERT TO BE INSTALLED WITH A MINIMUM COVER OF 12".

DRIVEWAY CULVERT

NOT TO SCALE

DATE: 10/2/2023

NO.	DATE	REVISIONS
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Civil Engineering | Land Surveying | Geomatics
Stormwater Design | Land Planning | Environmental Permitting

PERMIT DRAWING
NOT FOR CONSTRUCTION

PROJECT:
WILDES DISTRICT ROAD SUBDIVISION
WILDES DISTRICT ROAD, KENNEBUNKPORT, MAINE

SHEET TITLE:
SITE & UTILITY DETAILS

CLIENT:
BEACHWOOD DEVELOPMENT FUND, LP
86 YORK STREET #3
KENNEBUNK, MAINE 04043

DATE: 10/2/2023
SCALE:
JOB NO: 23-003
SHEET: C-5.1

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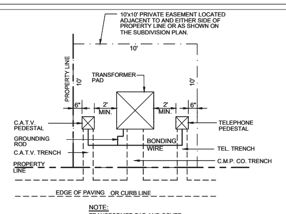
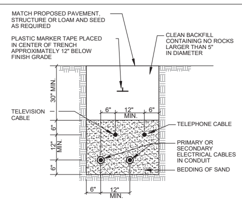


10'x10' PRIVATE EASEMENT LOCATED ADJACENT TO AND EITHER SIDE OF PROPERTY LINE OR AS SHOWN ON THE SUBDIVISION PLAN.
10'
PROPERTY LINE
TRANSFORMER PAD
10'
6"
2' MIN.
C.A.T.V. PEDESTAL
GROUNDING ROD
C.A.T.V. TRENCH
PROPERTY LINE
BONDING WIRE
TELEPHONE PEDESTAL
TEL. TRENCH
C.M.P. CO. TRENCH
EDGE OF PAVING OR CURB LINE

NOTE:
TRANSFORMER PAD AND COVER TO BE FIBERGLASS MEETING CENTRAL MAINE POWER SPECIFICATIONS.

TRANSFORMER DETAIL

NOT TO SCALE

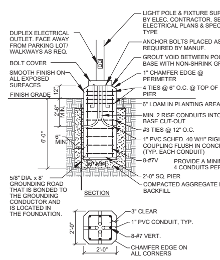


MATCH PROPOSED PAVEMENT, STRUCTURE OR LOAM AND SEED AS REQUIRED
PLASTIC MARKER TAPE PLACED IN CENTER OF TRENCH APPROXIMATELY 12" BELOW FINISH GRADE
CLEAN BACKFILL CONTAINING NO ROCKS LARGER THAN 5" IN DIAMETER
30" MIN.
TELEVISION CABLE
6"
12" MIN.
TELEPHONE CABLE
PRIMARY OR SECONDARY ELECTRICAL CABLES IN CONDUIT
BEDDING OF SAND

CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.

TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE

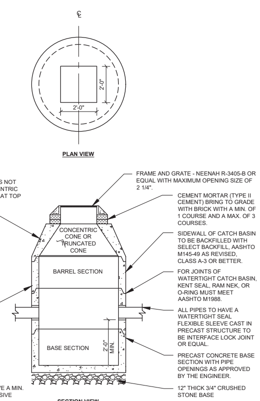


LIGHT POLE & FIXTURE SUPPLIED BY ELEC. CONTRACTOR. SEE ELECTRICAL PLANS & SPECS FOR TYPE
DUPLEX ELECTRICAL OUTLET. FACE AWAY FROM PARKING LOT/ WALKWAYS AS REQ.
ANCHOR BOLTS PLACED AS REQUIRED BY MANUF.
BOLT COVER
GROUT VOID BETWEEN POLE AND BASE WITH NON-SHRINK GROUT
SMOOTH FINISH ON ALL EXPOSED SURFACES
1" CHAMFER EDGE @ PERIMETER
4 TIES @ 6" O.C. @ TOP OF PIER
FINISH GRADE
12"
2'-6" MIN.
6" LOAM IN PLANTING AREAS
MIN. 2 RISE CONDUITS INTO BASE CUT-OUT
#3 TIES @ 12" O.C.
6'-0"
6" MIN.
1" PVC SCHED. 40 W/1" RIGID COUPLING FLUSH IN CONCRETE (TYP. EACH CONDUIT)
8-#7V
PROVIDE A MINIMUM OF 4 CONDUITS PER BASE
6" MIN.
2'-0" SQ. PIER
COMPACTED AGGREGATE BASE BACKFILL
5/8" DIA. x 8' GROUNDING ROAD THAT IS BONDED TO THE GROUNDING CONDUCTOR AND IS LOCATED IN THE FOUNDATION.
SECTION
3" CLEAR
1" PVC CONDUIT, TYP.
8-#7 VERT.
CHAMFER EDGE ON ALL CORNERS
2'-0"
PLAN

NOTES:
1. CONCRETE f'c=4000 psi.
2. REINF. STEEL GRADE 60 NEW BARS.
3. CONCRETE 3/4" AGG., 6 +/- 1% ENTRAINED AIR.
4. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
5. INSTALL BASE 3'-0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.
6. BID ALT.- CONTRACTOR MAY SUBSTITUTE PRECAST CONCRETE LIGHT POLE BASE EQUAL TO ABOVE SPEC.

LIGHT POLE BASE

NOT TO SCALE



℄
2'-0"
PLAN VIEW
WHERE DEPTH OF COVER IS NOT SUFFICIENT TO USE CONCENTRIC OR TRUNCATED CONE, A FLAT TOP MAY BE USED.
FRAME AND GRATE - NEENAH R-3405-B OR EQUAL WITH MAXIMUM OPENING SIZE OF 2 1/4".
CEMENT MORTAR (TYPE II CEMENT) BRING TO GRADE WITH BRICK WITH A MIN. OF 1 COURSE AND A MAX. OF 3 COURSES.
CONCENTRIC CONE OR TRUNCATED CONE
SIDEWALL OF CATCH BASIN TO BE BACKFILLED WITH SELECT BACKFILL, AASHTO M145-49 AS REVISED, CLASS A-3 OR BETTER.
BARREL SECTION
FOR JOINTS OF WATERTIGHT CATCH BASIN, KENT SEAL, RAM NEK, OR O-RING MUST MEET AASHTO M1988.
EXTERIOR OF STRUCTURE SHALL BE TREATED WITH 2 COATS OF APPROVED DAMP PROOF MATERIAL.
ALL PIPES TO HAVE A WATERTIGHT SEAL FLEXIBLE SLEEVE CAST IN PRECAST STRUCTURE TO BE INTERFACE LOCK JOINT OR EQUAL.
BASE SECTION
2'-0" MIN.
PRECAST CONCRETE BASE SECTION WITH PIPE OPENINGS AS APPROVED BY THE ENGINEER.
12" THICK 3/4" CRUSHED STONE BASE
SECTION VIEW

NOTE:
WHERE THE CATCH BASIN IS INSTALLED ADJACENT TO BITUMINOUS CONCRETE OF TYPE V SLOPED CURB. SET CENTERLINE OF CATCH BASIN FRAME 1'-6" OFF FACE OF CURB.

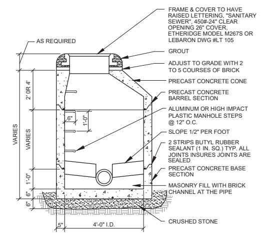
DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

NOTE:
CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF GUTTER IF PROFILE GRADE EXCEEDS 5% GRATES SHALL BE DEPRESSED 2" BELOW NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT.

TYPICAL CATCH BASIN

NOT TO SCALE

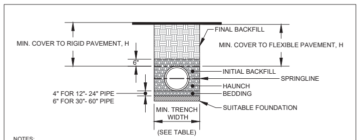


AS REQUIRED
FRAME & COVER TO HAVE RAISED LETTERING, "SANITARY SEWER", 450#-24" CLEAR OPENING 26" COVER, ETHERIDGE MODEL M267S OR LEBARON DWG #LT 105
GROUT
ADJUST TO GRADE WITH 2 TO 5 COURSES OF BRICK
PRECAST CONCRETE CONE
PRECAST CONCRETE BARREL SECTION
ALUMINUM OR HIGH IMPACT PLASTIC MANHOLE STEPS @ 12" O.C.
SLOPE 1/2" PER FOOT
2 STRIPS BUTYL RUBBER SEALANT (1 IN. SQ.) TYP. ALL JOINTS INSURES JOINTS ARE SEALED
PRECAST CONCRETE BASE SECTION
MASONRY FILL WITH BRICK CHANNEL AT THE PIPE
CRUSHED STONE
2' 0R 4'
VARIES
6"
1'-0"
5"
4'-0" I.D.

NOTE: PIPE CONNECTIONS SHALL BE WATERTIGHT FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION

PRECAST SEWER MANHOLE

NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

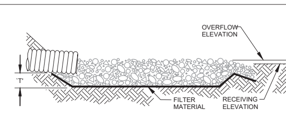
MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

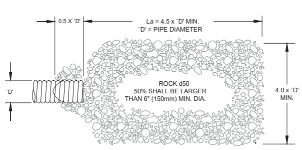
TYPICAL TRENCH DETAIL

NOT TO SCALE



THICKNESS (`T') = 1.5 x MAX. ROCK DIAMETER - 6" (150mm) MIN.

SECTION



PLAN

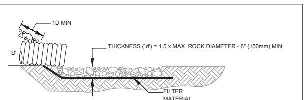
PIPE OUTLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	LENGTH (FT)	WIDTH (FT)
6	2.5	2.0
12	5.0	4.0
15	6.25	5.0
18	7.5	6.0
24	10.0	8.0
30	13.0	10.0
36	15.0	12.0
42	17.5	14.0
48	20.0	16.0
60	25.0	20.0

NOTES:
1. `La' = LENGTH OF APRON. DISTANCE `La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC (MIRAFI 600X OR APPROVED EQUAL) OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

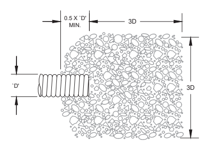
PIPE OUTLET PROTECTION

NOT TO SCALE



NOTE:
1. GEOTEXTILE FILTER FABRIC BENEATH STONE BASED ON UNDISTURBED SOILS, OR 6" OF 4" MINUS BAN RUN GRAVEL FREE OF FINES, CLAYS, SILTS.
2. GEOTEXTILE TO BE MIRAFI 600X OR APPROVED EQUAL.

SECTION



HARD ANGULAR ROCK D50 SELECTION PER CHART

PLAN

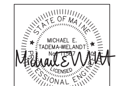
PIPE INLET PROTECTION SIZING TABLE

PIPE SIZE (IN)	LENGTH (FT)	WIDTH (FT)
6	2.0	1.5
12	3.5	3.0
15	4.5	3.75
18	5.25	4.5
24	7.0	6.0
30	8.75	7.5
36	10.5	9.0
42	12.25	10.5
48	14.0	12.0
60	17.5	15.0

NOTES:
1. IN DEFINED CHANNELS, APRON SHALL EXTEND FULL WIDTH OF BOTTOM AND ONE FOOT ABOVE MAX. HEADWATER OR UP TO BANK FULL, WHICHEVER IS LESS.

PIPE INLET PROTECTION

NOT TO SCALE



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CLIENT:
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