LETTER OF TRANSMITTAL

Date: September 20, 2011

To: City of Watertown, City Engineer
Mr. Kurt Hauk
Room 105, City Hall
245 Washington Street
Watertown, NY 13601

Re: **Morgia Group New Office**

Please Find Attached:

3 Copies of the Following:

Cover Letter Dated 09/20/2011

Tax Map

Site Plan Application & Short EAF

Engineering report

Survey Map by Aubertine and Currier dated 09/20/2011

Drawing C100 Site Plan (24 x 36) dated 09/20/11

Drawing C101 Site Details (24 x 36) dated 09/20/2011

Drawing A200 Exterior Elevations (24 x 36) dated 09/20/2011

Check #8098 in the amount of $50

13 Copies of the Following:

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Check #8098 in the amount of $50

1 Electronic Copy (PDF) of the same

Cc: Don Clark, DC Building Systems

Signed: JFoley for Patrick Currier, RA

522 Bradley Street Watertown, NY, 13601

Phone: 315-782-2005 Fax: 315-782-1472

September 20, 2011

City of Watertown
Kurt Hauk, City Engineer
Room 105, City Hall
245 Washington Street
Watertown, NY 13601

RE: Morgia Group- Proposed Office Building

Dear Mr. Hauk,

Aubertine and Currier, on behalf of Morgia Group, is requesting Site Plan review of the attached documents, for the above referenced project.

The proposed project consists of removing the existing home and constructing a 54' x 54' office building on tax parcel 10-15-115.000 in the City of Watertown. The project site is currently zoned Limited Business. The proposed project is an acceptable use within the zoning district with site plan review and approval.

The parking shall be expanded along the west side, the existing grading and drainage shall not be disturbed. The Owner shall maintain all existing utilities, site lighting and landscaping.

The project shall be a single phase starting in the fall of 2011 and complete by the end of the year.

Sincerely,
Aubertine and Currier Architects, Engineers & Land Surveyors, PLLC

Patrick J. Currier, RA
NYS Certified Code Enforcement Official

Cc: Don Clark, DC Building Systems

AUBERTINE and CURRIER
ARCHITECTS, ENGINEERS & LAND SURVEYORS, PLLC

522 Bradley Street
Watertown, New York 13601

aubertinecurrier.com

Phone: 315.782.2005
Fax: 315.782.1472

Managing Partners
Michael L. Aubertine, R.A.
Architect

Patrick J. Currier, R.A.
Architect

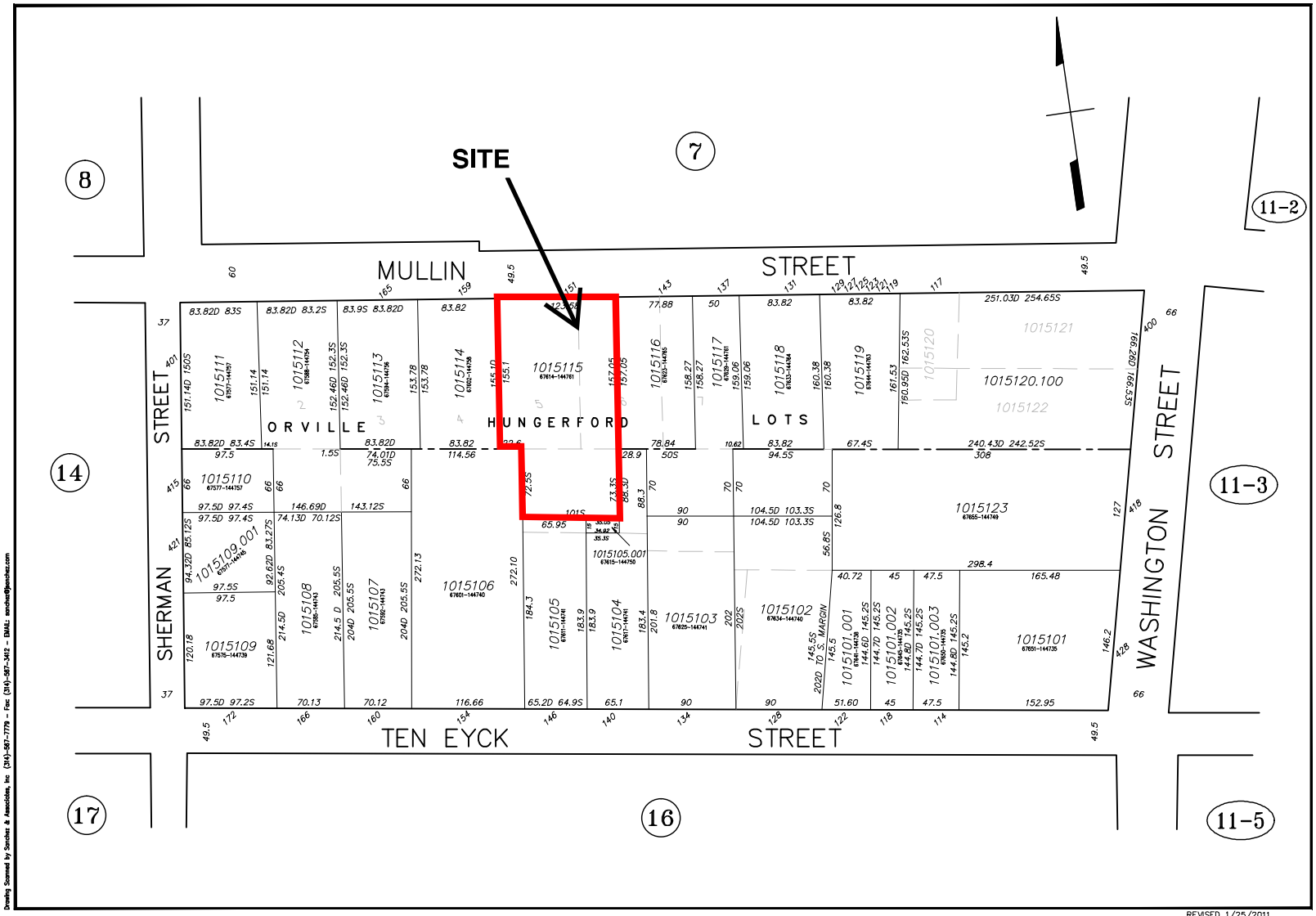
Partners
Brian A. Jones, R.A., LEED AP
Architect

Matthew R. Morgia, P.E.
Civil Engineer

Jayson J. Jones, P.L.S.
Land Surveyor

MADE FOR
DEPARTMENT OF ASSESSMENT AND TAXATION
CITY OF WATERTOWN, N. Y.

BY
DEPARTMENT OF ENGINEERING
CITY OF WATERTOWN, N. Y.



Drawing Scanned by Sanchez & Associates, Inc (314)-567-7779 - Fax: (314)-567-3412 - EMAIL: sanchez@sanchez.com

SCALE: 1 INCH = 50 FEET

FOR TAX PURPOSES ONLY
NOT TO BE USED FOR CONVEYANCE

REVISED 1/25/2011

DISTRICT 10 MAP 15

CITY OF WATERTOWN
SITE PLAN APPLICATION PROCESS

The applicant is responsible for completeness of application and inclusion of all required information.

****INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED****

In order to expedite the Site Plan review process, all applicants are encouraged to have a pre-application meeting with Planning & Engineering staff. Staff can be reached at (315) 785-7740.

In the interest of expediting site plan approvals, the City of Watertown wishes to advise you of the procedures in applying for these referrals:

A. Fill out the Site Plan / Site Plan Waiver - Determination Flow Chart below:

1. Is the use a one, two, or three family dwelling?
   - ☐ YES (Site Plan Review is **not** required. You may apply directly for Building Permit.)
   - ☒ NO (Go to question 2)

2. Is your building or parking lot construction or expansion less than or equal to 400 sq. ft.?
   - ☐ YES (Site Plan Review is not required. You may apply directly for Building Permit.)
   - ☒ NO (Go to question 3)

3. Does your building or parking lot construction or expansion exceed 2500 sq. ft.?
   - ☒ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (Go to question 4)

4. Is your proposed building the first on the lot?
   - ☐ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (Go to question 5)

5. Does your project involve a change in the property boundaries?
   - ☐ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (Go to question 6)

6. Does your building or parking lot construction or expansion change or impair the overall grading, circulation, drainage, utility services, and appearance and visual effect of the property?
   - ☐ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (*Site Plan Waiver allowed. Submit the Site Plan Waiver Form.)

   * The City of Watertown Planning Board reserves the right to require Site Plan Review.

CITY OF WATERTOWN
SITE PLAN APPLICATION
AND
SHORT ENVIRONMENTAL
ASSESSMENT FORM, PART 1

** Provide responses for all sections. INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. Failure to submit required information by the submittal deadline will result in **not** making the agenda for the upcoming Planning Board meeting.

PROPERTY LOCATION

Proposed Project Name: Morgia Group New Office

Tax Parcel Number: 10-15-115.000

Property Address: 151 Mullin Street, Watertown

Existing Zoning Classification: _____

OWNER OF PROPERTY

Name: Cynthia M. Fearon Living Trust

Address: 151 Mullin Street

Watertown, New York 13601

Telephone Number: _____

Fax Number: _____

APPLICANT

Name: Aubertine and Currier Architects, Engineers & Land Surveyors PLLC

Address: 522 Bradley Street

Watertown, New York 13601

Telephone Number: 315-782-2005

Fax Number: 315-782-1472

Email Address: pjc@aubertinecurrier.com

ENGINEER/ARCHITECT/SURVEYOR

Name: Aubertine and Currier Architects, Engineers & Land Surveyors PLLC

Address: 522 Bradley Street

Watertown, New York 13601

Telephone Number: 315-782-2005

Fax Number: 315-782-1472

Email Address: pjc@aubertinecurrier.com

PROJECT DESCRIPTION

Describe project and proposed use briefly:

The proposed office building shall be 54' x 54' with a partial second floor. The building shall be wood framed construction and the parking shall be expanded to provide for 15 vehicles.

Is proposed Action:

☐ New ☒ Expansion ☐ Modification/Alteration

Amount of Land Affected:

Initially: _____Acres Ultimately: _____Acres

Will proposed action comply with existing zoning or other existing land use restrictions?

☒ Yes ☐ No If no, describe briefly

What is present land use in vicinity of project?

☒ Residential ☐ Industrial ☐ Commercial ☐ Agriculture

☐ Park/Forest/Open Space ☐ Other

Describe:_____

Does project involve a permit approval, or funding, now or ultimately from any other Governmental Agency (Federal, State or Local)?

☐ Yes ☒ No If yes, list agency(s) and permit/approval(s)

Does any aspect of the project have a currently valid permit or approval?

☐ Yes ☒ No If yes, list agency(s) and permit/approval(s)

As a result of proposed project, will existing permit/approval require modification?

☐ Yes ☒ No

Proposed number of housing units (if applicable): N/A

Proposed building area: 1st Floor 2,961 Sq. Ft.
2nd Floor 529 Sq. Ft.
3rd Floor N/A Sq. Ft.
Total 3,490 Sq. Ft.

Area of building to be used for the boiler room, heat facilities, utility facilities and storage: 2,961 (basement) Sq. Ft.

Number of parking spaces proposed: 15

Construction Schedule: Fall 2011

Hours of Operation: 8:00am - 5:00pm

Volume of traffic to be generated: Minimal ADT

ENGINEERING REPORT

MORGIA GROUP
NEW OFFICE BUILDING
151 MULLIN STREET
CITY OF WATERTOWN
JEFFERSON COUNTY, NEW YORK

Owner: Morgia Group
171 Clinton Street
Watertown, NY 13601

September 20,2011

_____

Patrick J. Currier, R.A.
Architect

The above Architect states that to the best of his knowledge, information and belief, the plans and specifications are in accordance with applicable requirements of New York State. It is a violation of New York State Law for any person, unless acting under the direction of a licensed professional engineer to alter this document in any way. If altered, such licensee shall affix his or her seal and the notation "altered by" followed by his or her signature, date, and a specific description of alteration.

Aubertine & Currier Architects, Engineers & Land Surveyors, PLLC
522 Bradley Street Watertown, New York 13601 TELE: (315) 782-2005 FAX: (315) 782-1472

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1.0 SITE AND PROJECT DESCRIPTIONS

1.1 Location

The project is located along Mullin Street within the City of Watertown just east of the intersection of Sherman and Mullin streets. Morgia Group purchased 151 Mullin Street this summer. The tax map # is 10-15-115.000 and the property is currently zoned Limited Business.

1.2 Project Description

The project consists of removing the 30' x 50' modular single family home and constructing a new 54' x 54' 1 ½ story office building.

1.3 Site Topography

The existing site is a relatively flat, pre-developed property. Existing site features include driveways, parking areas, walks, and grassed lawns.

Site runoff is primarily sheet flow.

The developed area of the project is not located within a 100 year flood plain.

1.4 Soil Classification

The project site is located just outside downtown Watertown, which is an urban environment and consists primarily of previously developed area. According to the Soils Survey of Jefferson County, New York, the project area soils are classified as Niagara Silt Loam (NoA).

Soil Symbol	Soil Name	Hydrologic Group
NoA	Niagara, Silt loam	Type C

2.0 WATER FACILITIES

2.1 Existing Water Facilities

There is a municipal water main along Mullin Street.

2.2 Proposed Water Facilities

The existing ¾" water service shall be cut and re-used for the new office building.

2.3 Water Demand

The projected peak water usage is 150 gpd. This is based upon 10 employees x 15 gpd.

3.0 SANITARY SEWER FACILITIES

3.1 Existing Sanitary Sewer Facilities

There is a municipal gravity sanitary storm sewer main along Mullin Street. The Mullin Street storm sewer main is a 10-inch diameter vitrified clay tile pipe. Gravity flows from Washington Street to the West and travels through the City, eventually discharging into the City Wastewater Treatment Plant. The existing 4" cast iron lateral is approximately 115' long and provides service for the existing home.

3.2 Proposed Sanitary Sewer Facilities

Cut the existing 4" cast iron lateral inside of the new basement and connect the plumbing of the new office.

3.3 Sewer Flows

The projected peak flows from the office building are 150 gpd. This assumes 10 employees, at 15 gpd per employee.

4.0 HYDROLOGIC AND HYDRAULIC ANALYSES

4.1 Existing Drainage

The project site includes a 0.61 acre property located at 151 Mullin Street. The property includes an existing 1,560 sf residence, 4,538 sf of asphalt driveway/ parking lot and walkway, and remaining 20,473 sf lawn area.

Site runoff is primarily sheet flow to the front, rear and sides of the lot. The site and adjacent lots are extremely flat. The majority of runoff appears to collect within the flat front, side and rear lawn areas, and eventually pool and overflow to the Mullin Street strom drains. Existing storm drainage inlets and piping are located within Mullin Street. These drainage structures are piped through the City storm sewer system which discharges into the Black River and ultimately flows to Lake Ontario.

The existing site drainage and runoff conditions were analyzed utilizing the Rational Method. HydroCAD calculations can be found in Appendix #2. Runoff calculations were completed for the 10, 25, 50 and 100 year, 24 hour storm events. Peak discharge from the 25, 24 hour, storm event has been utilized for design and discussion purposes. The existing conditions 25 year site discharge is 0.04 cfs.

4.2 Proposed Drainage

Site runoff from the office building, expanded driveway and parking lot, and lawn areas will sheet flow into the lawn areas in a similar manner to that of the existing conditions.

The proposed conditions 25 year, 24 hour storm, peak discharge is 0.05 cfs. This minor increase in peak runoff from the existing condition of the project site is due primarily to the 0.14 acre increase in impervious area resulting from the larger office building and necessary parking are expansion.

4.3 Proposed Storm Sewer Piping

No additional drainage piping is proposed.

5.0 ROADS / DRIVEWAYS

5.1 Existing Roads / Driveways

The property gains access from Mullin Street through an existing driveway.

5.2 Proposed Roads / Driveways

No new roads are proposed for this project.

Parking availability for use by the office will be provided by on-site parking. The minimum number of spaces calculated per City regulations is 15 spaces (per Section 310-47 parking for Business and Commercial Properties).

6.0 PRIVATE UTILITIES

6.1 Gas, Electric, Telephone and Cable

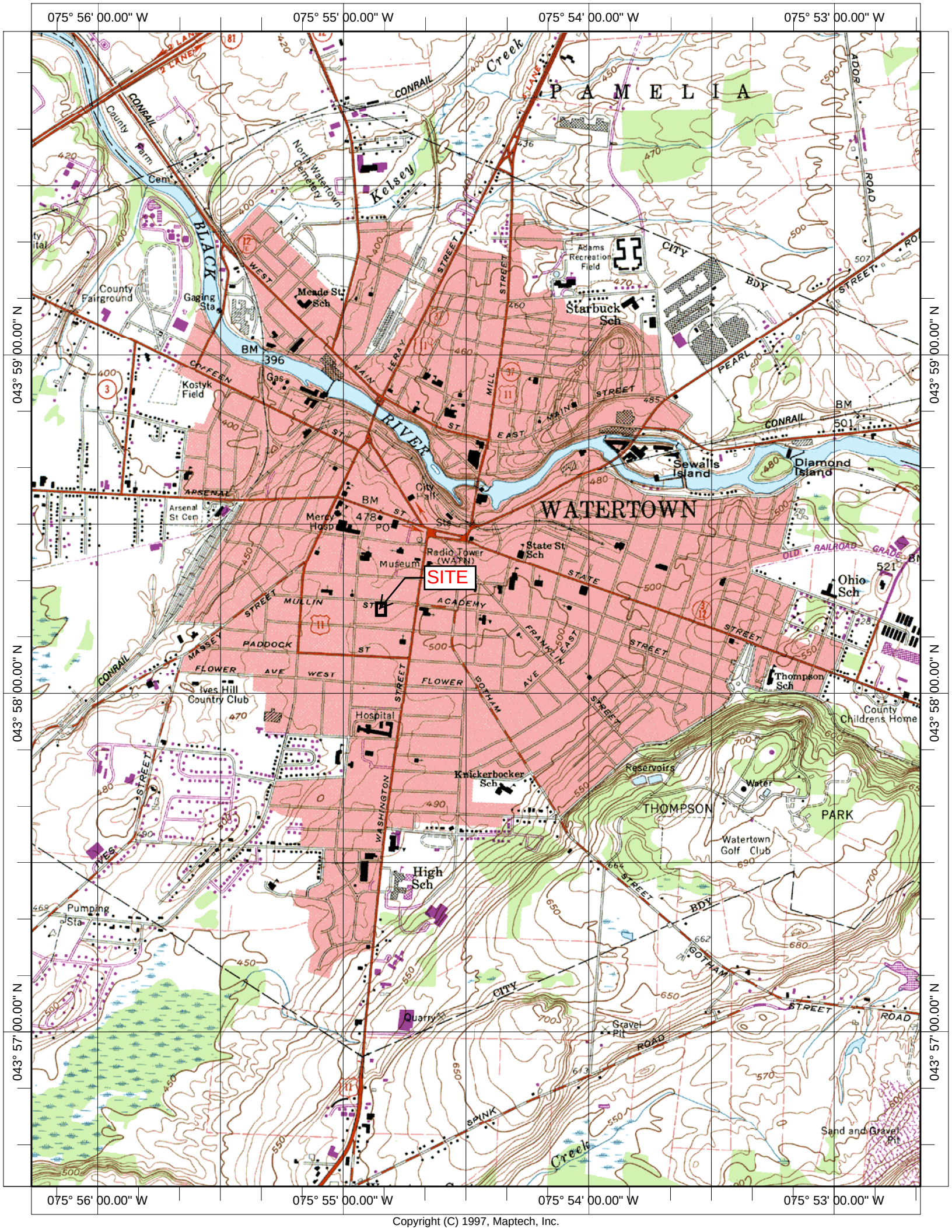
The existing electric, gas, cable, and telephone services will be brought up within the new basement.

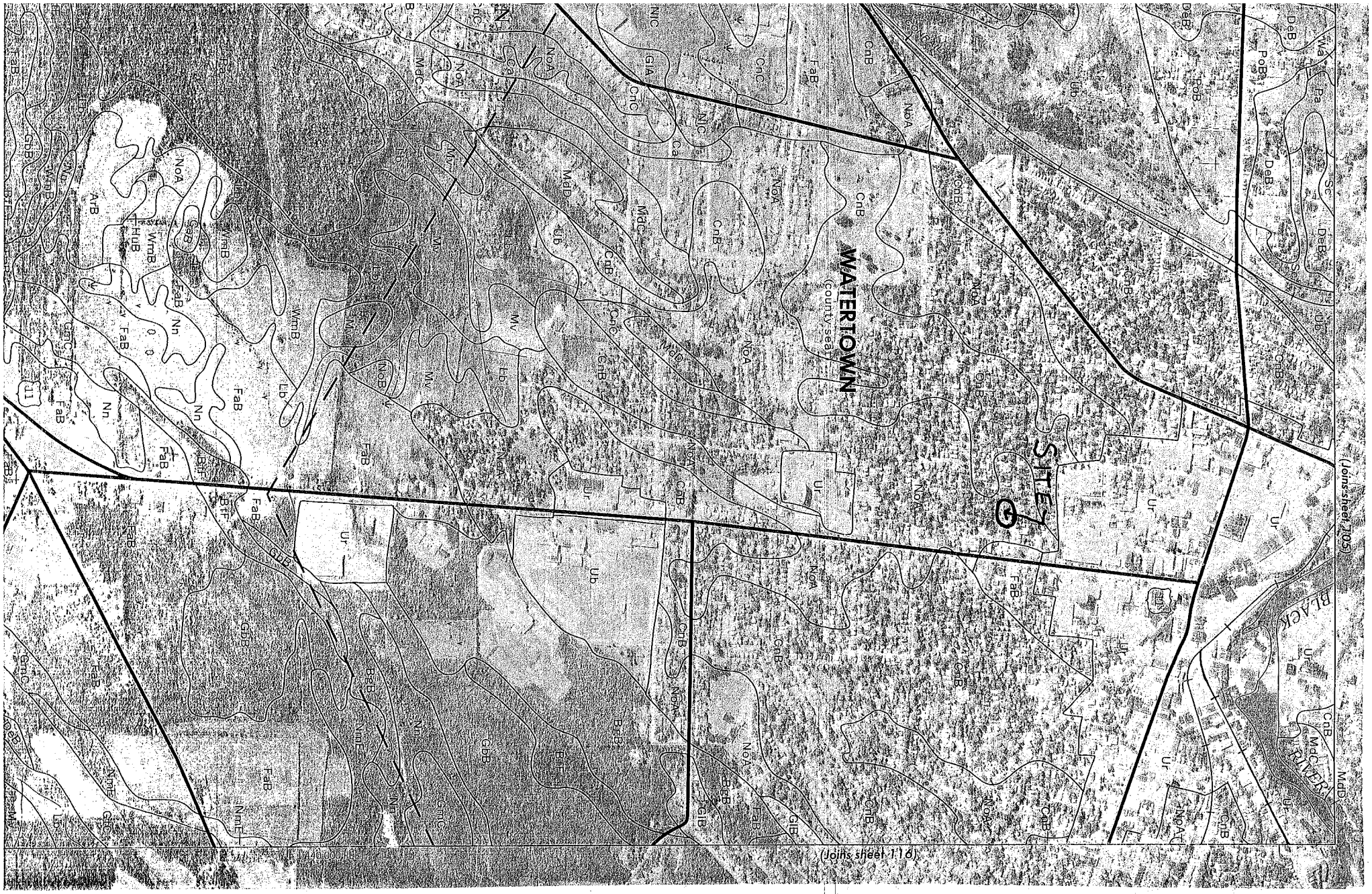
Sincerely,
Aubertine and Currier Architects, Engineers & Land Surveyors, P.L.L.C.

Patrick J. Currier, RA
Architect

APPENDIX #1

USGS Location Map
Soils Map
Soils Description


075° 56' 00.00" W
075° 55' 00.00" W
075° 54' 00.00" W
075° 53' 00.00" W
043° 59' 00.00" N
043° 58' 00.00" N
043° 57' 00.00" N
PAMELIA
WATERTOWN
SITE
RIVER
Black
Kelsey
Creek
CONRAIL
Sewalls Island
Diamond Island
Starbuck Sch
Meade St Sch
Mercy Hosp
City Hall
Radio Tower (WATN)
Museum
State St Sch
Ohio Sch
Thompson Sch
County Childrens Home
Knickerbocker Sch
High Sch
Hospital
Ives Hill Country Club
Watertown Golf Club
THOMPSON PARK
Reservoirs
Water
Adams Recreation Field
County Fairground
Gaging Sta
Kostyk Field
Arsenal St Cem
North Watertown Cemetery
Pumping Sta
Quarry
Gravel Pit
Sand and Gravel Pit
Copyright (C) 1997, Maptech, Inc.



Scale 1:15,840

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Nn---------- Newstead	0-8	Silt loam--------	ML, SM	A-2, A-4, A-1	0-5	80-100	75-95	45-95	20-85	25-40	2-10
	8-22	Silt loam, loam, gravelly sandy loam.	ML, GM, SM, CL-ML	A-1, A-2, A-4	0-5	55-100	50-95	30-95	15-85	15-25	2-7
	22-30	Flaggy sandy loam, very gravelly loam, flaggy silt loam.	CL-ML, ML, SM, GM	A-1, A-2, A-4	5-30	30-90	25-80	15-75	10-70	15-25	2-7
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
NoA, NoB---------- Niagara	0-13	Silt loam--------	ML	A-4, A-7, A-6, A-5	0	95-100	95-100	70-100	55-90	30-45	5-15
	13-35	Silt loam, silty clay loam, very fine sandy loam.	ML, CL, CL-ML	A-4, A-6	0	95-100	95-100	90-100	70-100	25-35	3-13
	35-75	Silt loam, very fine sandy loam, silty clay loam.	ML, CL, CL-ML	A-4, A-6	0	95-100	95-100	90-100	70-100	25-35	3-13
NpB---------- Niagara	0-13	Silt loam--------	ML	A-4, A-7, A-6, A-5	0	95-100	95-100	70-100	55-90	30-45	5-15
	13-29	Silt loam, silty clay loam, very fine sandy loam.	ML, CL, CL-ML	A-4, A-6	0	95-100	95-100	90-100	70-100	25-35	3-13
	29-48	Silt loam, very fine sandy loam, silty clay loam.	ML, CL, CL-ML	A-4, A-6	0	95-100	95-100	90-100	70-100	25-35	3-13
	48	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pa---------- Palms	0-45	Muck----------	PT	A-8	---	---	---	---	---	---	---
	45-65	Clay loam, silty clay loam, fine sandy loam.	CL-ML, CL	A-4, A-6	0	85-100	80-100	70-95	50-90	25-40	5-20
PhA, PhB---------- Phelps	0-7	Gravelly loam----	ML, SM, GM, CL-ML	A-2, A-4, A-1	0-25	50-80	45-75	25-75	15-70	20-35	2-10
	7-30	Gravelly loam, gravelly clay loam, silt loam.	ML, SM, GM, CL-ML	A-2, A-4	0-25	50-95	45-90	35-90	25-70	20-35	2-10
	30-36	Gravelly loam, gravelly sandy loam, silt loam.	ML, SM, GM, CL-ML	A-1, A-2, A-4	0-25	50-95	45-90	25-90	15-70	20-35	2-10
	36-60	Stratified very gravelly sand to loamy sand.	GW, GP, GM, GW-GM	A-1	5-30	15-55	10-50	5-40	0-15	<20	NP-2
PkB*: Pinckney--------	0-7	Silt loam--------	ML, SM	A-4	0-5	80-100	75-100	65-100	40-90	20-30	1-6
	7-22	Silt loam, loam, channery very fine sandy loam.	ML, SM	A-4	0-10	75-100	70-100	60-100	35-90	20-30	1-6
	22-64	Loam, channery fine sandy loam.	ML, SM, GM, CL-ML	A-4, A-2, A-1	5-10	55-90	50-85	35-80	20-65	15-25	1-6
	64-72	Loam, channery fine sandy loam.	ML, SM, GM, CL-ML	A-4, A-2, A-1	5-15	50-90	45-85	30-80	20-65	15-25	1-6

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock		Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness		Uncoated steel	Concrete
					Ft			In				
NbF*:												
Nassau	C	None	---	---	>6.0	---	---	10-20	Hard	Moderate	Low	High.
Manlius	C	None	---	---	>6.0	---	---	20-40	Hard	Moderate	Low	Moderate.
N1A, N1B, N1C, N1D Nellis	B	None	---	---	>6.0	---	---	>60	---	Moderate	Low	Low.
NmE*:												
Nellis	B	None	---	---	>6.0	---	---	>60	---	Moderate	Low	Low.
Madrid	B	None	---	---	>6.0	---	---	>60	---	Moderate	Low	Moderate.
Nn Newstead	C	None	---	---	0.5-1.0	Perched	Dec-May	20-40	Hard	High	High	Low.
NoA, NoB Niagara	C	None	---	---	0.5-1.5	Apparent	Dec-May	>60	---	High	High	Low.
NpB Niagara	C	None	---	---	0.5-1.5	Apparent	Dec-May	40-60	Hard	High	High	Low.
Pa Palms	A/D	None	---	---	+1-1.0	Apparent	Nov-May	>60	---	High	High	Moderate.
PhA, PhB Phelps	B	None	---	---	1.5-2.0	Apparent	Mar-May	>60	---	High	Moderate	Low.
PkB*:												
Pinckney	C	None	---	---	1.5-2.0	Perched	Feb-May	>60	---	Moderate	Low	Moderate.
Ensley	B/D	None	---	---	+1-1.0	Apparent	Nov-Jun	>60	---	High	High	Low.
Pm*, Pn*. Pits												
PoB, PoC Plainfield	A	None	---	---	>6.0	---	---	>60	---	Low	Low	High.
PpD*:												
Plainfield	A	None	---	---	>6.0	---	---	>60	---	Low	Low	High.
Windsor	A	None	---	---	>6.0	---	---	>60	---	Low	Low	High.
Ps Pootatuck	B	Frequent	Brief	Nov-Apr	1.5-2.5	Apparent	Nov-Apr	>60	---	Moderate	Moderate	Moderate.

See footnote at end of table.

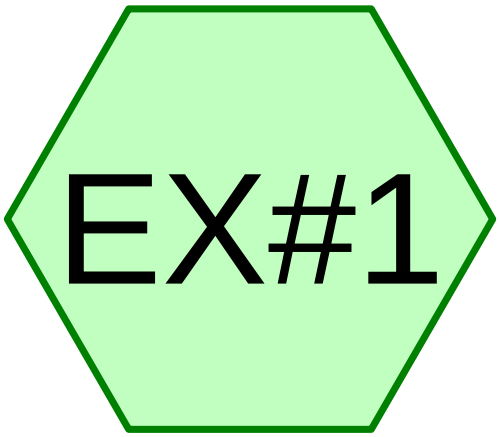
APPENDIX #2

EXISTING DRAINAGE AREA SUMMARY TABLE
EXISTING CONDITIONS HYDROCAD CALCULATIONS
PROPOSED DRAINAGE AREA SUMMARY TABLE
EXISTING VERSES PROPOSED COMPARISON TABLE
PROPOSED CONDITIONS HYDROCAD CALCULATIONS

Aubertine & Currier Architects, Engineers & Land Surveyors, PLLC
522 Bradley Street Watertown, New York 13601 TELE: (315) 782-2005 FAX: (315) 782-1472

EXISTING DRAINAGE AREA SUMMARY TABLE
MORGIA GROUP, OFFICE BUILDING
9/17/2011

Drainage Area	Surface Description	Soil Type	c	Area (Acre)	Composite c	Composite Area (Acre)	Tc (Min.)
EX#1	Meadow, Grass, Non-Grazed	C	0.25	0.470	0.40	0.61	22.0
	Paved Parking, Roads, Roofs		0.90	0.140			
DRAINAGE AREA TOTAL					**0.40**	**0.61**	



EX DA #1

Subcat Reach Pond Link

Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.470	0.25	Meadow, non-grazed, HSG C (EX#1)
0.140	0.90	Paved parking & roofs (EX#1)
0.610	0.40	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.470	HSG C	EX#1
0.000	HSG D	
0.140	Other	EX#1
0.610		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX#1: EX DA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>0.76"
Flow Length=130' Slope=0.0100 '/' Tc=22.0 min C=0.40 Runoff=0.02 cfs 0.039 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.039 af Average Runoff Depth = 0.76"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX#1: EX DA #1

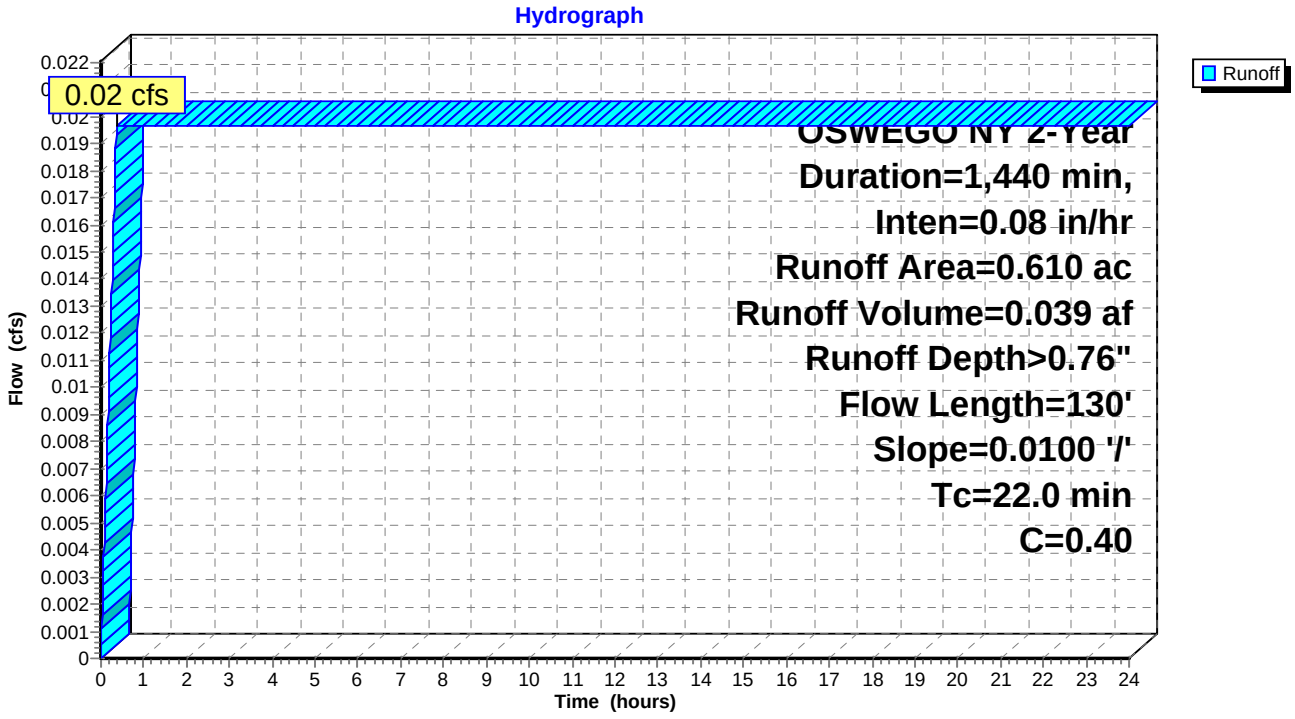
Runoff = 0.02 cfs @ 0.37 hrs, Volume= 0.039 af, Depth> 0.76"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 2-Year Duration=1,440 min, Inten=0.08 in/hr

Area (ac)	C	Description
0.140	0.90	Paved parking & roofs
0.470	0.25	Meadow, non-grazed, HSG C
0.610	0.40	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"
0.7	30	0.0100	0.70		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
22.0	130	Total			

Subcatchment EX#1: EX DA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX#1: EX DA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.01"
Flow Length=130' Slope=0.0100 '/' Tc=22.0 min C=0.40 Runoff=0.03 cfs 0.052 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.052 af Average Runoff Depth = 1.01"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX#1: EX DA #1

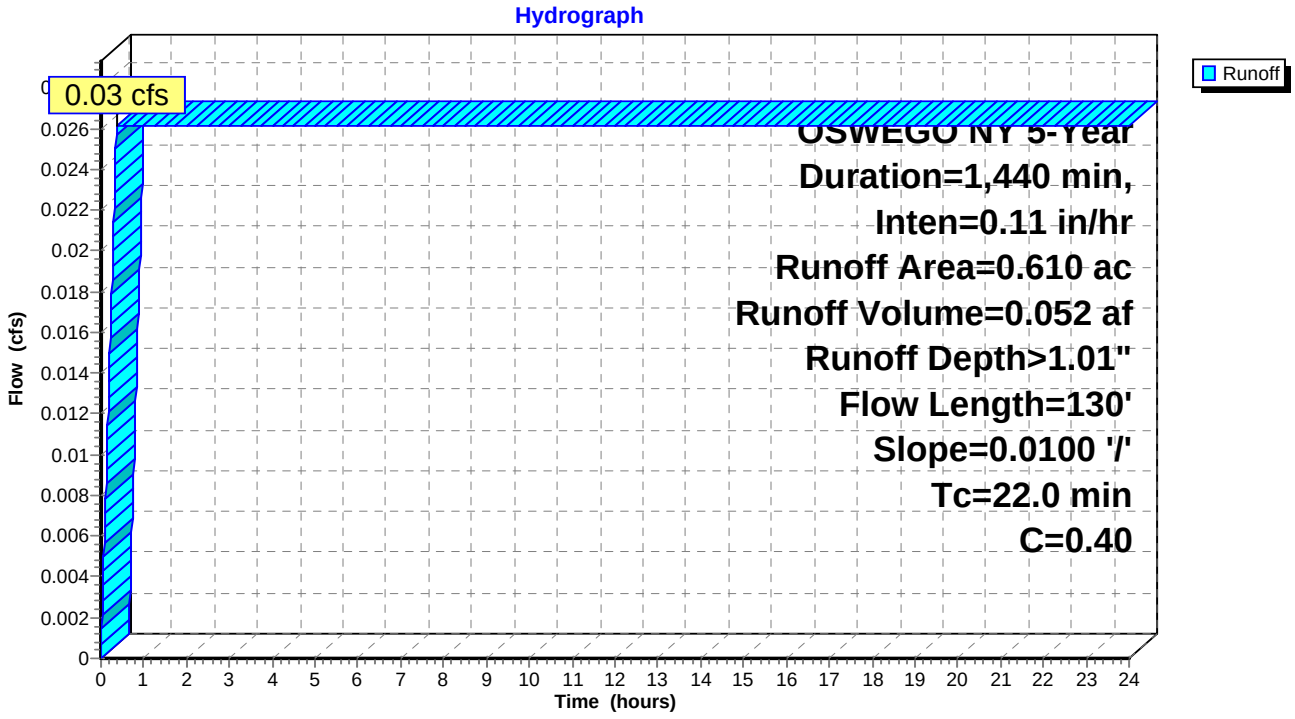
Runoff = 0.03 cfs @ 0.37 hrs, Volume= 0.052 af, Depth> 1.01"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 5-Year Duration=1,440 min, Inten=0.11 in/hr

Area (ac)	C	Description
0.140	0.90	Paved parking & roofs
0.470	0.25	Meadow, non-grazed, HSG C
0.610	0.40	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"
0.7	30	0.0100	0.70		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
22.0	130	Total			

Subcatchment EX#1: EX DA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX#1: EX DA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.20"
Flow Length=130' Slope=0.0100 '/' Tc=22.0 min C=0.40 Runoff=0.03 cfs 0.061 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.061 af Average Runoff Depth = 1.20"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX#1: EX DA #1

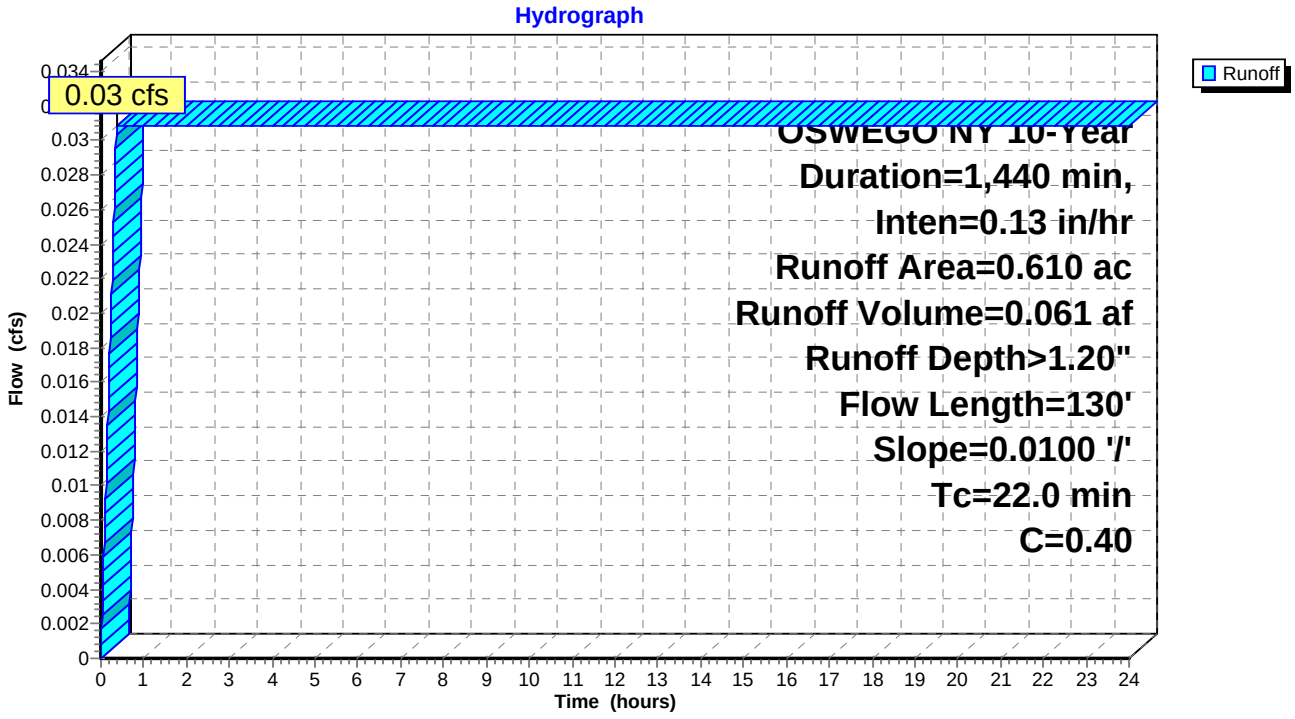
Runoff = 0.03 cfs @ 0.37 hrs, Volume= 0.061 af, Depth> 1.20"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 10-Year Duration=1,440 min, Inten=0.13 in/hr

Area (ac)	C	Description
0.140	0.90	Paved parking & roofs
0.470	0.25	Meadow, non-grazed, HSG C
0.610	0.40	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"
0.7	30	0.0100	0.70		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
22.0	130	Total			

Subcatchment EX#1: EX DA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX#1: EX DA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.42"
Flow Length=130' Slope=0.0100 '/' Tc=22.0 min C=0.40 Runoff=0.04 cfs 0.072 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.072 af Average Runoff Depth = 1.42"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX#1: EX DA #1

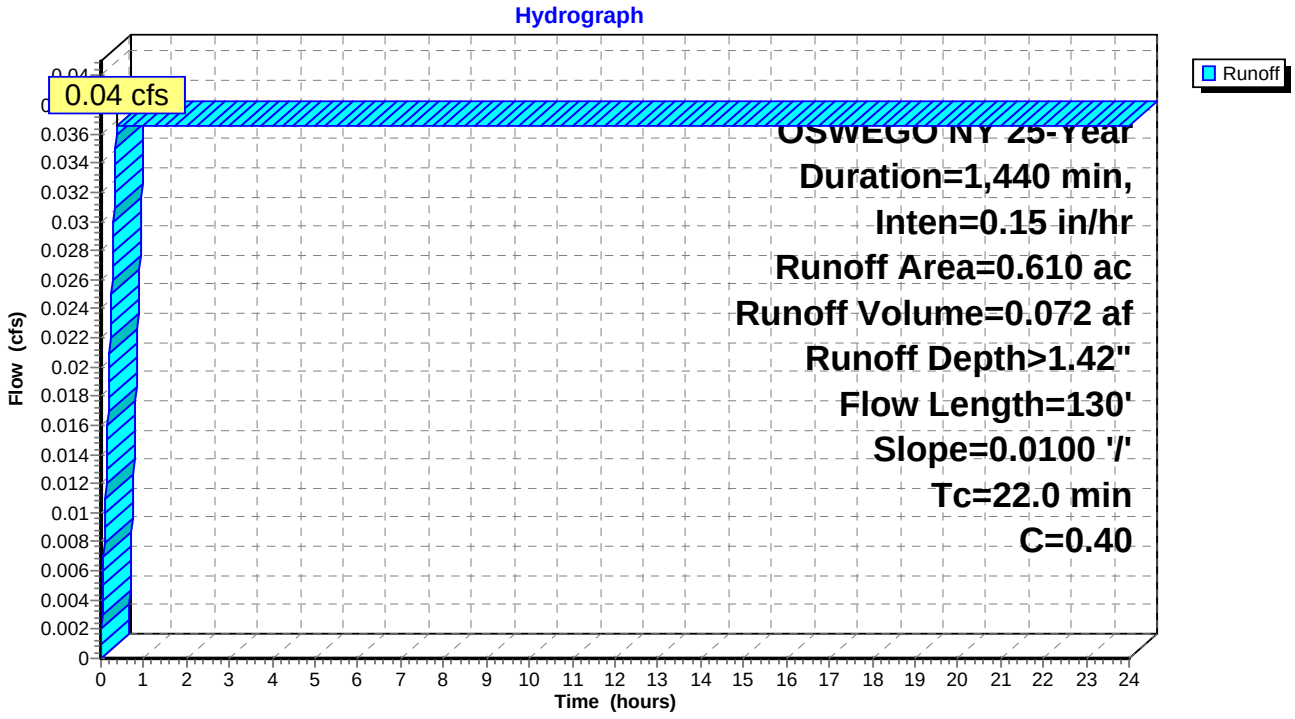
Runoff = 0.04 cfs @ 0.37 hrs, Volume= 0.072 af, Depth> 1.42"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 25-Year Duration=1,440 min, Inten=0.15 in/hr

Area (ac)	C	Description
0.140	0.90	Paved parking & roofs
0.470	0.25	Meadow, non-grazed, HSG C
0.610	0.40	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"
0.7	30	0.0100	0.70		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
22.0	130	Total			

Subcatchment EX#1: EX DA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX#1: EX DA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.50"
Flow Length=130' Slope=0.0100 '/' Tc=22.0 min C=0.40 Runoff=0.04 cfs 0.076 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.076 af Average Runoff Depth = 1.50"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX#1: EX DA #1

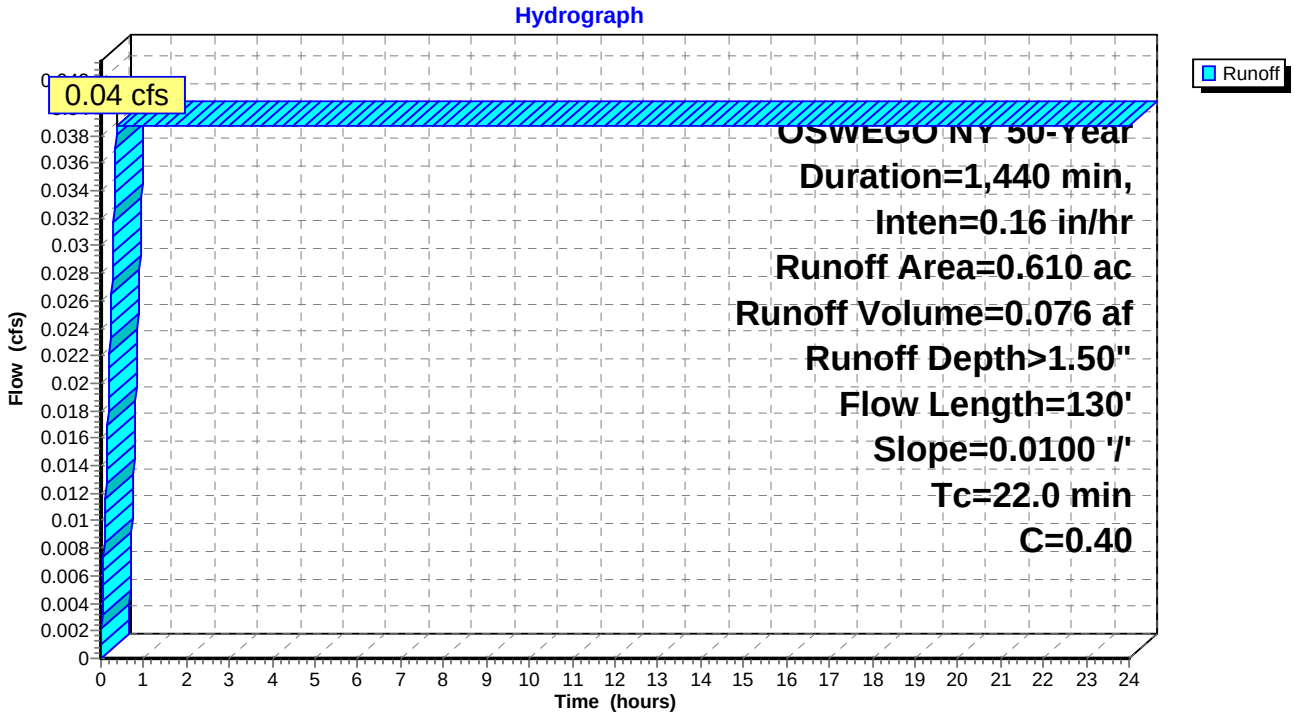
Runoff = 0.04 cfs @ 0.37 hrs, Volume= 0.076 af, Depth> 1.50"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 50-Year Duration=1,440 min, Inten=0.16 in/hr

Area (ac)	C	Description
0.140	0.90	Paved parking & roofs
0.470	0.25	Meadow, non-grazed, HSG C
0.610	0.40	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"
0.7	30	0.0100	0.70		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
22.0	130	Total			

Subcatchment EX#1: EX DA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX#1: EX DA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.73"
Flow Length=130' Slope=0.0100 '/' Tc=22.0 min C=0.40 Runoff=0.04 cfs 0.088 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.088 af Average Runoff Depth = 1.73"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX#1: EX DA #1

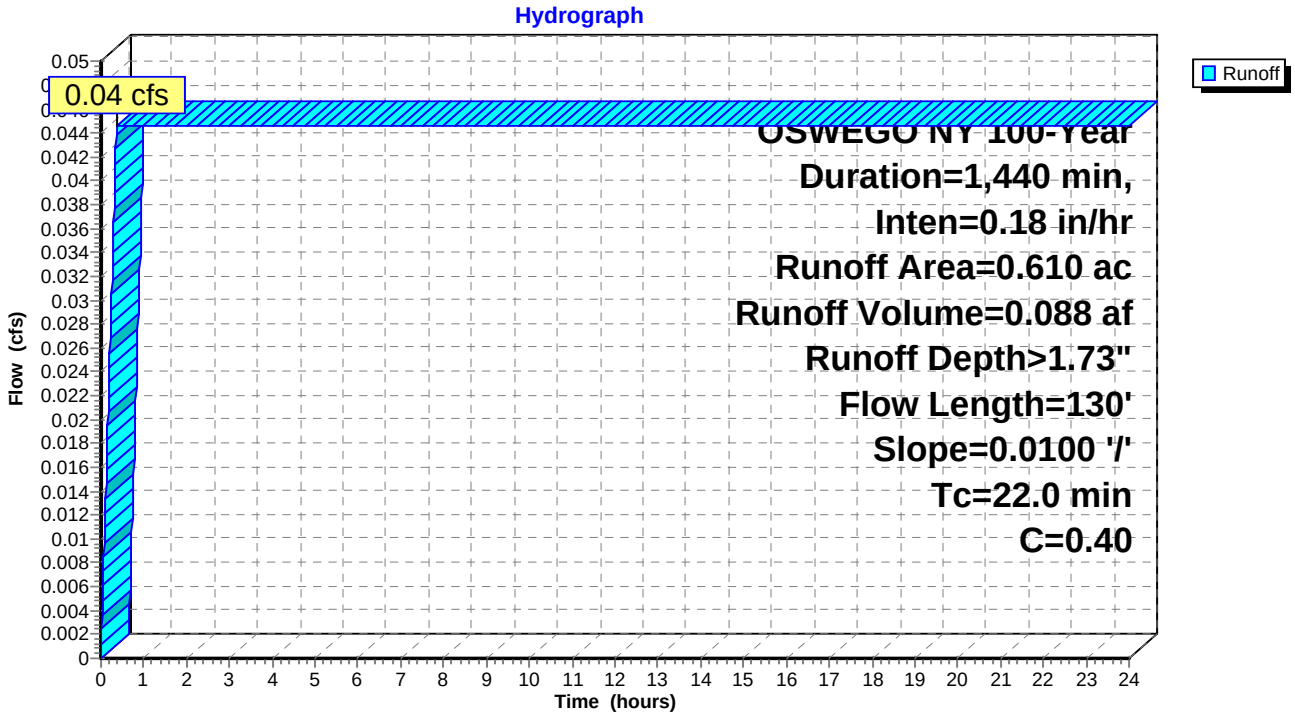
Runoff = 0.04 cfs @ 0.37 hrs, Volume= 0.088 af, Depth> 1.73"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 100-Year Duration=1,440 min, Inten=0.18 in/hr

Area (ac)	C	Description
0.140	0.90	Paved parking & roofs
0.470	0.25	Meadow, non-grazed, HSG C
0.610	0.40	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"
0.7	30	0.0100	0.70		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
22.0	130	Total			

Subcatchment EX#1: EX DA #1



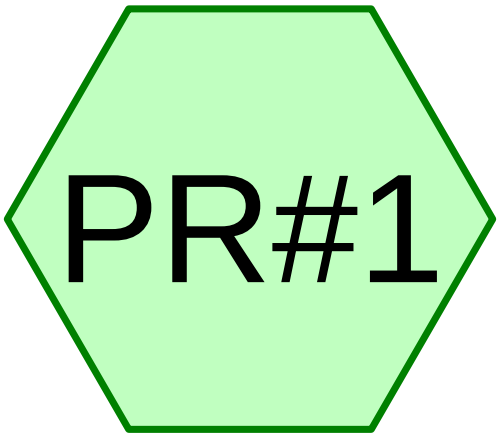
PROPOSED DRAINAGE AREA SUMMARY TABLE
MORGIA GROUP, OFFICE BUILDING
9/17/2011

Drainage Area	Surface Description	Soil Type	c	Area (Acre)	Composite c	Composite Area (Acre)	Tc (Min.)
PR#1	Meadow, Grass, Non-Grazed	C	0.25	0.330	0.55	0.61	14.2
	Paved Parking, Roads, Roofs		0.90	0.280			
DRAINAGE AREA TOTAL					**0.55**	**0.61**	

EXISTING VS. PROPOSED RUNOFF COMPARISON
MORGIA GROUP, OFFICE BUILDING

9/17/2011

	24 HOUR STORM EVENT PEAK DISCHARGE - (CFS)							
DRAINAGE AREAS	EXIST. 10 YR	PROP. 10 YR	EXIST. 25 YR	PROP. 25 YR	EXIST. 50 YR	PROP. 50 YR	EXIST. 100 YR	PROP. 100 YR
#1	0.03	0.04	0.04	0.05	0.04	0.05	0.04	0.06
DESIGN POINT, SITE TOTAL	**0.03**	**0.04**	**0.04**	**0.05**	**0.04**	**0.05**	**0.04**	**0.06**



PRDA #1

Subcat Reach Pond Link

Drainage Diagram for Morgia Group-Proposed-Rational
Prepared by Aubertine and Currier, PLLC, Printed 9/17/2011

Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.330	0.25	Meadow, non-grazed, HSG C (PR#1)
0.280	0.90	Paved parking & roofs (PR#1)
0.610	0.55	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.330	HSG C	PR#1
0.000	HSG D	
0.280	Other	PR#1
0.610		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PR#1: PRDA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.05"
Flow Length=60' Slope=0.0100 '/' Tc=14.2 min C=0.55 Runoff=0.03 cfs 0.053 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.053 af Average Runoff Depth = 1.05"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment PR#1: PRDA #1

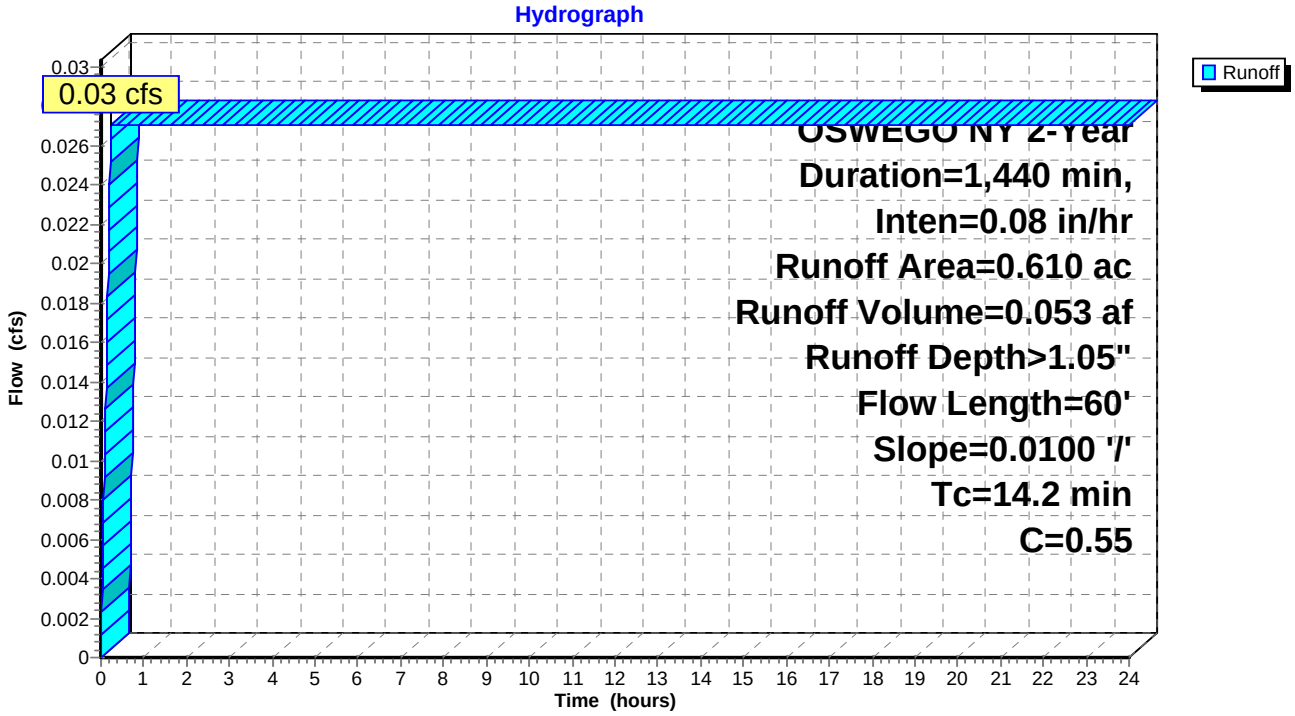
Runoff = 0.03 cfs @ 0.24 hrs, Volume= 0.053 af, Depth> 1.05"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 2-Year Duration=1,440 min, Inten=0.08 in/hr

Area (ac)	C	Description
0.280	0.90	Paved parking & roofs
0.330	0.25	Meadow, non-grazed, HSG C
0.610	0.55	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	60	0.0100	0.07		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment PR#1: PRDA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PR#1: PRDA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.40"
Flow Length=60' Slope=0.0100 '/' Tc=14.2 min C=0.55 Runoff=0.04 cfs 0.071 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.071 af Average Runoff Depth = 1.40"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment PR#1: PRDA #1

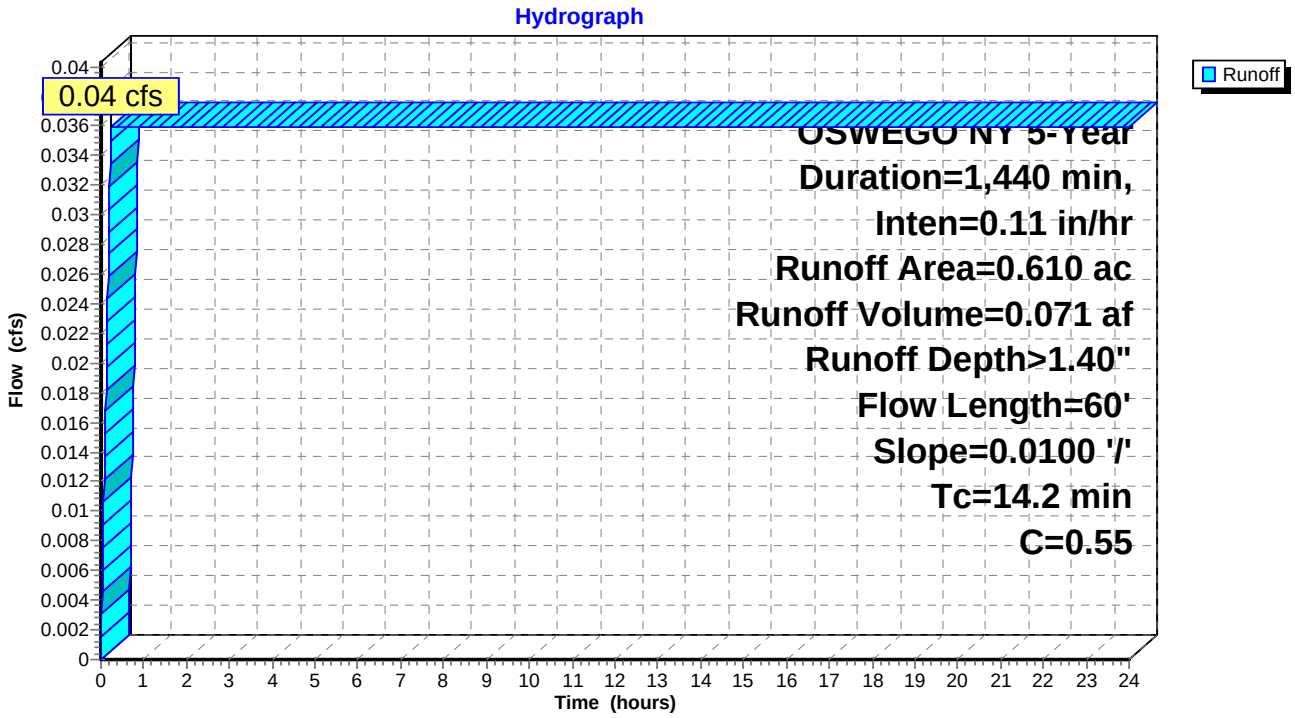
Runoff = 0.04 cfs @ 0.24 hrs, Volume= 0.071 af, Depth> 1.40"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 5-Year Duration=1,440 min, Inten=0.11 in/hr

Area (ac)	C	Description
0.280	0.90	Paved parking & roofs
0.330	0.25	Meadow, non-grazed, HSG C
0.610	0.55	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	60	0.0100	0.07		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment PR#1: PRDA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PR#1: PRDA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.65"
Flow Length=60' Slope=0.0100 '/' Tc=14.2 min C=0.55 Runoff=0.04 cfs 0.084 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.084 af Average Runoff Depth = 1.65"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment PR#1: PRDA #1

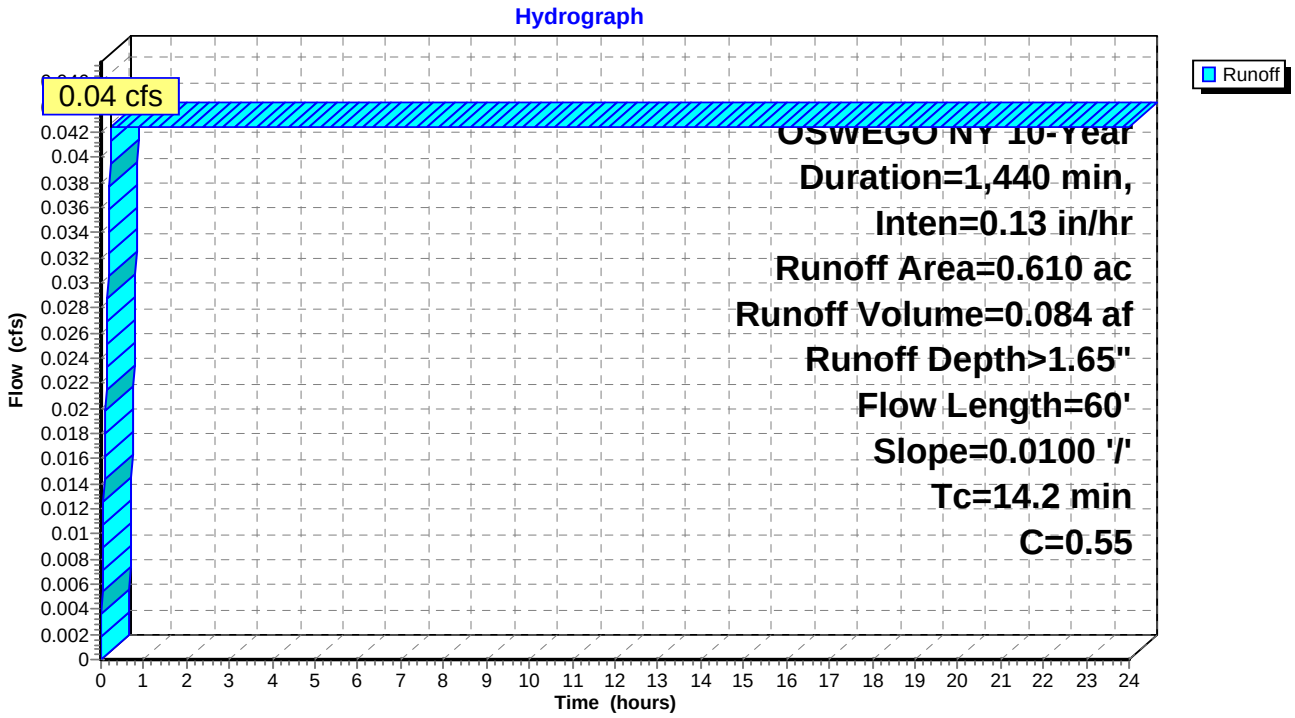
Runoff = 0.04 cfs @ 0.24 hrs, Volume= 0.084 af, Depth> 1.65"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 10-Year Duration=1,440 min, Inten=0.13 in/hr

Area (ac)	C	Description
0.280	0.90	Paved parking & roofs
0.330	0.25	Meadow, non-grazed, HSG C
0.610	0.55	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	60	0.0100	0.07		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment PR#1: PRDA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PR#1: PRDA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>1.95"
Flow Length=60' Slope=0.0100 '/' Tc=14.2 min C=0.55 Runoff=0.05 cfs 0.099 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.099 af Average Runoff Depth = 1.95"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment PR#1: PRDA #1

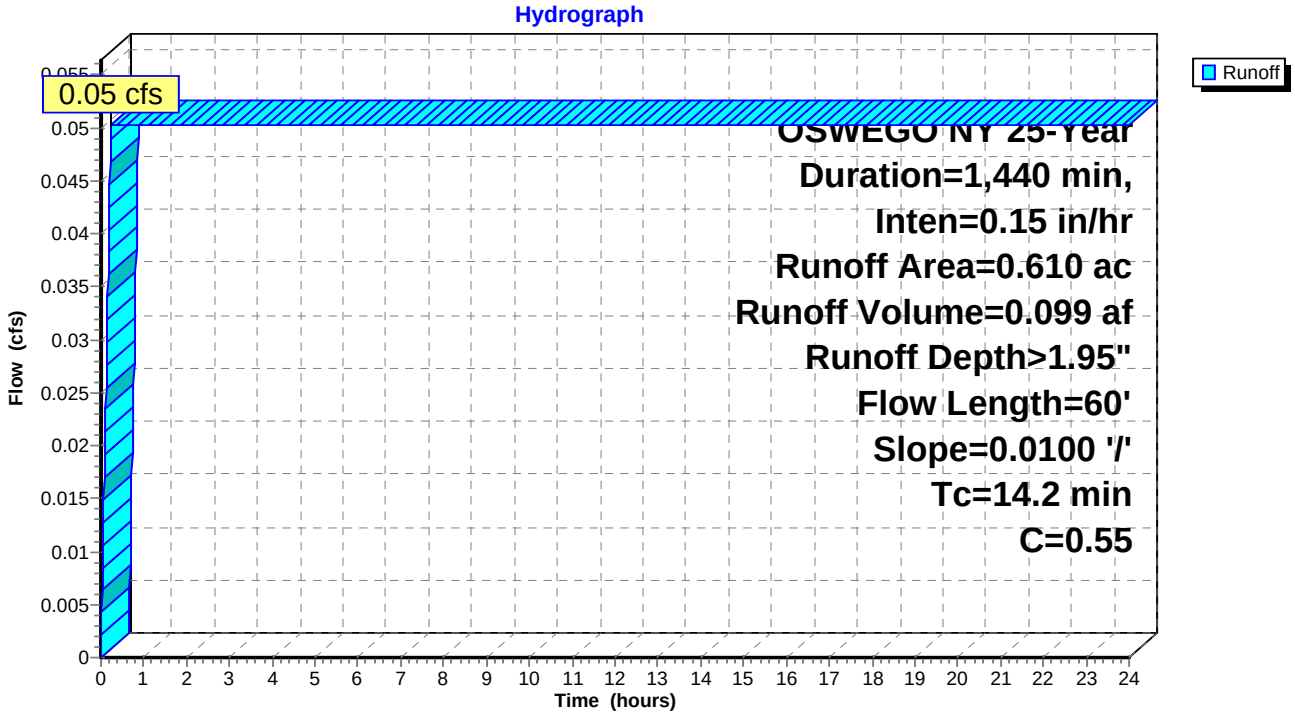
Runoff = 0.05 cfs @ 0.24 hrs, Volume= 0.099 af, Depth> 1.95"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 25-Year Duration=1,440 min, Inten=0.15 in/hr

Area (ac)	C	Description
0.280	0.90	Paved parking & roofs
0.330	0.25	Meadow, non-grazed, HSG C
0.610	0.55	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	60	0.0100	0.07		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment PR#1: PRDA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PR#1: PRDA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>2.07"
Flow Length=60' Slope=0.0100 '/' Tc=14.2 min C=0.55 Runoff=0.05 cfs 0.105 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.105 af Average Runoff Depth = 2.07"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment PR#1: PRDA #1

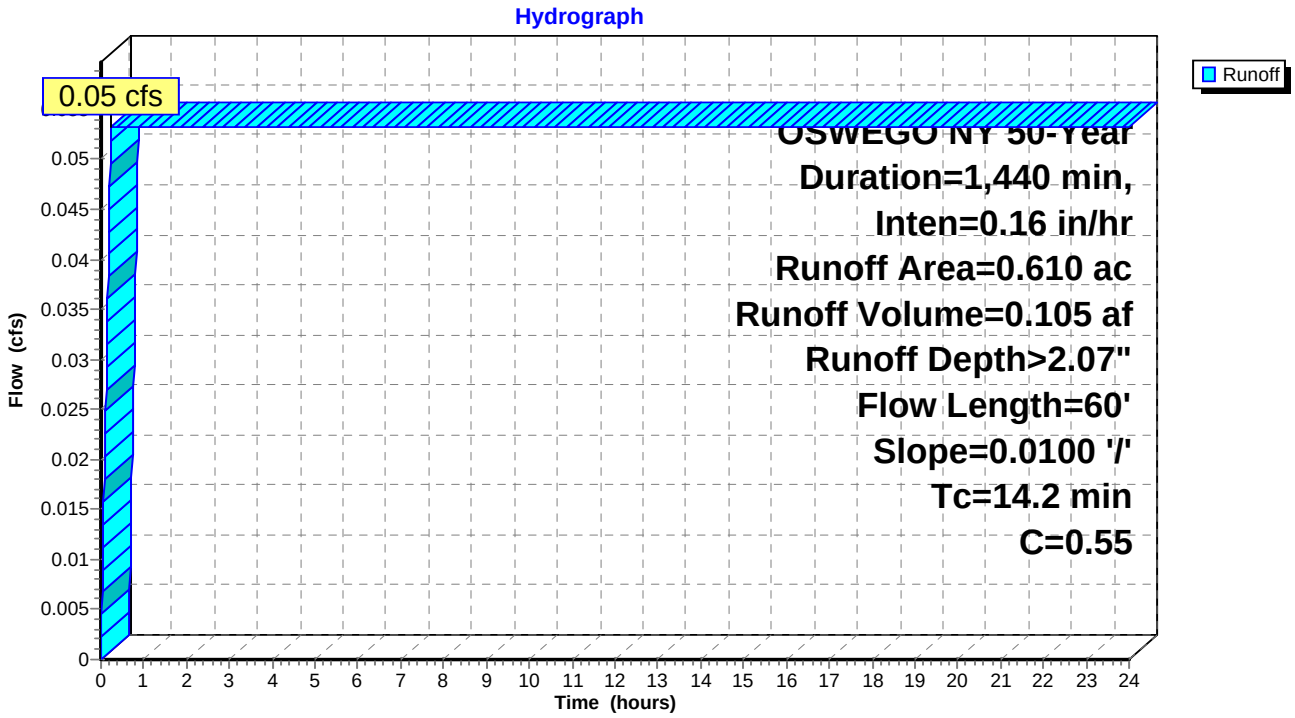
Runoff = 0.05 cfs @ 0.24 hrs, Volume= 0.105 af, Depth> 2.07"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 50-Year Duration=1,440 min, Inten=0.16 in/hr

Area (ac)	C	Description
0.280	0.90	Paved parking & roofs
0.330	0.25	Meadow, non-grazed, HSG C
0.610	0.55	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	60	0.0100	0.07		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment PR#1: PRDA #1



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PR#1: PRDA #1 Runoff Area=0.610 ac 0.00% Impervious Runoff Depth>2.39"
Flow Length=60' Slope=0.0100 '/' Tc=14.2 min C=0.55 Runoff=0.06 cfs 0.121 af

Total Runoff Area = 0.610 ac Runoff Volume = 0.121 af Average Runoff Depth = 2.39"
100.00% Pervious = 0.610 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment PR#1: PRDA #1

Runoff = 0.06 cfs @ 0.24 hrs, Volume= 0.121 af, Depth> 2.39"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
OSWEGO NY 100-Year Duration=1,440 min, Inten=0.18 in/hr

Area (ac)	C	Description
0.280	0.90	Paved parking & roofs
0.330	0.25	Meadow, non-grazed, HSG C
0.610	0.55	Weighted Average
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	60	0.0100	0.07		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.50"

Subcatchment PR#1: PRDA #1