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Project: Walnut St
Portland, ME
By: MSG
Job ID: 2008-281
Date: 08/04/08
Page: {1} of {1}

August 4, 2008

Fred Panico
Planning/Design Associates
9 Alexander Dr
Windham, ME
04062

SUBJECT - Walnut Street

Dear Fred,

The following package includes a printout of our HydroCad pre and post-development models for the proposed Walnut Street site.

The analysis completed is for a 5.5 inch rainfall resultant from a Type III 24 hour storm. The comparison of the pre and post- development models reveals that the post development peak run-off rate (0.12 cfs) will be significantly less than the pre-development peak run-off rate (0.44 cfs) as required by the City of Portland.

In order to acheive a lower post-development peak run-off rate, a detention pond will be needed at the rear of the property. A prismatic detention pond ($z = 2.5$) with surface dimensions of 14' x 15' and a depth of 3' is recommended.

Should you have any questions, please let us know.

Sincerely,

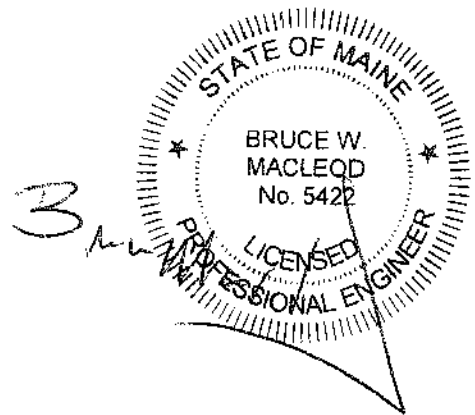
MacLeod Structural Engineers, PA

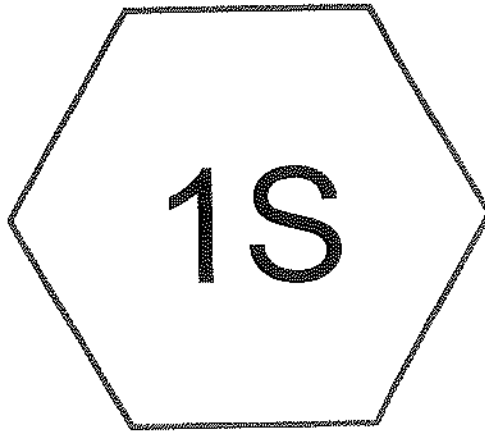
Bruce W. MacLeod P.E.

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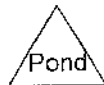


Site

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Drainage Diagram for Walnut-Pre
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Walnut-Pre

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.079	85	Gravel roads, HSG B (1S)
0.006	98	Paved parking & roofs (1S)
0.085		TOTAL AREA

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8/4/2008
8:00 AM

Walnut-Pre

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Soil Listing (all nodes)

Area (acres)	Soil Goup	Subcatchment Numbers
0.000	HSG A	
0.079	HSG B	1S
0.000	HSG C	
0.000	HSG D	
0.006	Other	1S
0.085		TOTAL AREA

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Walnut-Pre

Type III 24-hr 25-year Rainfall=5.50"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Site

Runoff Area=3,688 sf 6.53% Impervious Runoff Depth>3.71"

Flow Length=90' Slope=0.2200 '/' Tc=0.4 min CN=86 Runoff=0.44 cfs 0.026 af

Total Runoff Area = 0.085 ac Runoff Volume = 0.026 af Average Runoff Depth = 3.71"
93.47% Pervious = 0.079 ac 6.53% Impervious = 0.006 ac

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Summary for Subcatchment 1S: Site

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.44 cfs @ 12.01 hrs, Volume= 0.026 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.50"

Area (sf)	CN	Description
241	98	Paved parking & roofs
3,447	85	Gravel roads, HSG B
3,688	86	Weighted Average
3,447		Pervious Area
241		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	90	0.2200	3.40		Sheet Flow, Front Smooth surfaces n= 0.011 P2= 3.00"

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Walnut-Pre

Type III 24-hr 25-year Rainfall=5.50"

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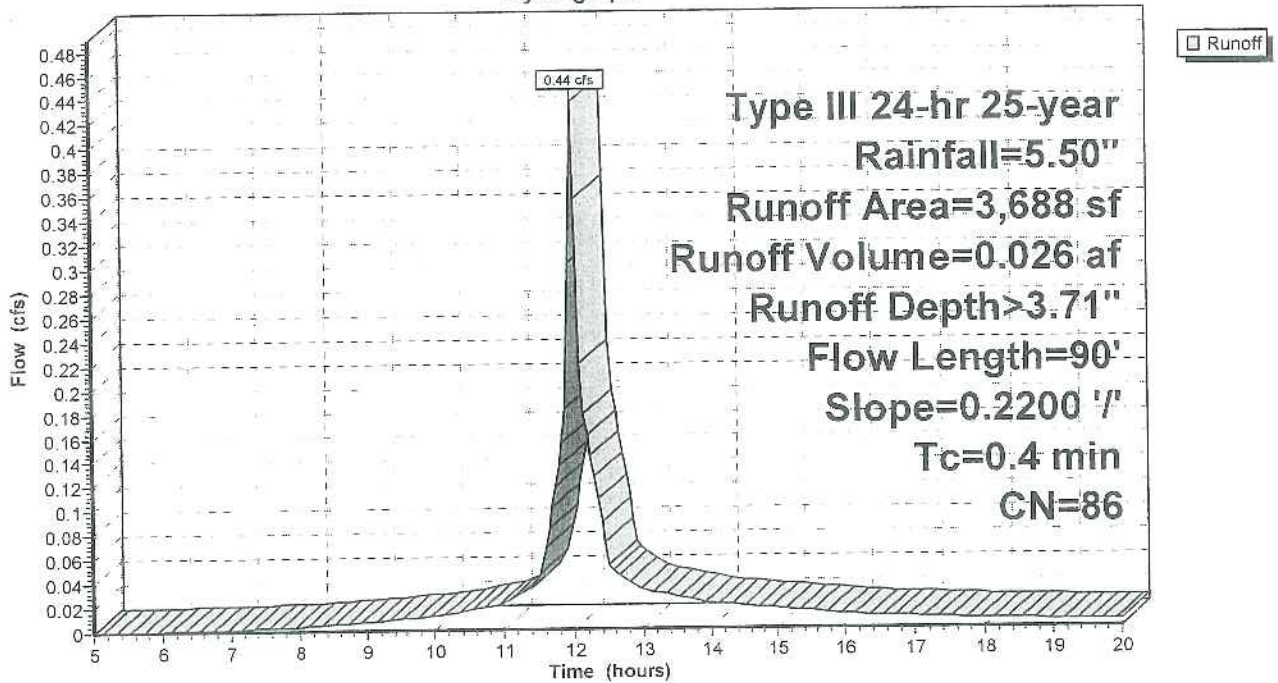
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Subcatchment 1S: Site

Hydrograph



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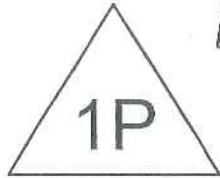
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Front



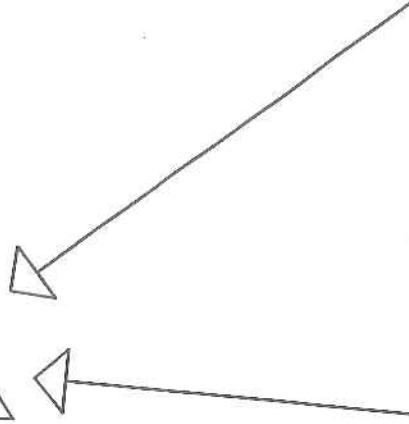
House



Detention Pond



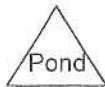
Swale & Back



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Drainage Diagram for Walnut-Post

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Walnut-Post

Type III 24-hr 25 year Rainfall=5.50"

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Summary for Pond 1P: Detention Pond

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.064 ac, 59.24% Impervious, Inflow Depth > 3.47" for 25 year event
Inflow = 0.25 cfs @ 12.01 hrs, Volume= 0.019 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min

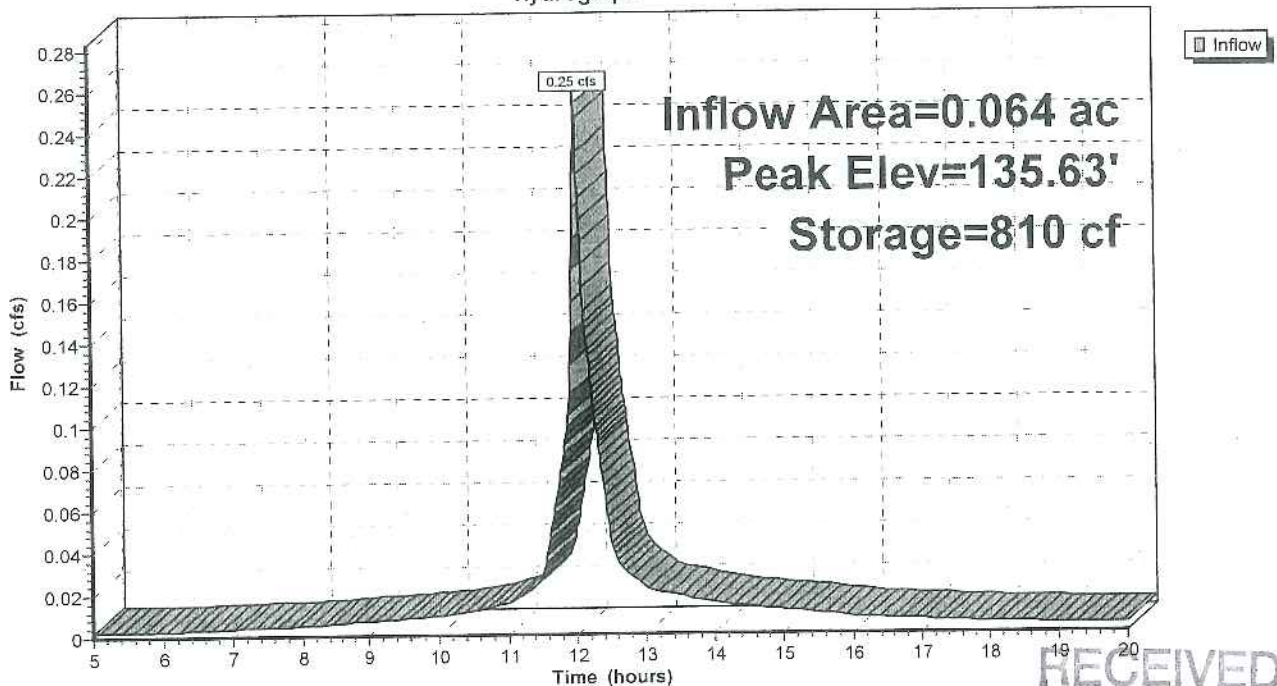
Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.01 hrs
Peak Elev= 135.63' @ 20.00 hrs Surf.Area= 568 sf Storage= 810 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	133.00'	1,035 cf	7.00'W x 15.00'L x 3.00'H Prismatic Z=2.5

Pond 1P: Detention Pond

Hydrograph



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.026	61	>75% Grass cover, Good, HSG B (2S)
0.017	85	Gravel roads, HSG B (1S)
0.044	98	Paved parking & roofs (1S,2S,3S)
0.087		TOTAL AREA

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Walnut-Post

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.043	HSG B	1S, 2S
0.000	HSG C	
0.000	HSG D	
0.044	Other	1S, 2S, 3S
0.087		TOTAL AREA

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Walnut-Post

Type III 24-hr 25 year Rainfall=5.50"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Front

Runoff Area=988 sf 26.82% Impervious Runoff Depth>3.92"

Flow Length=64' Slope=0.0900 '/ Tc=0.5 min CN=88 Runoff=0.12 cfs 0.007 af

Subcatchment 2S: Swale & Back

Runoff Area=1,290 sf 11.47% Impervious Runoff Depth>1.83"

Flow Length=105' Slope=0.0300 '/ Tc=8.9 min CN=65 Runoff=0.06 cfs 0.005 af

Subcatchment 3S: House

Runoff Area=1,512 sf 100.00% Impervious Runoff Depth>4.87"

Flow Length=80' Slope=0.0200 '/ Tc=0.3 min CN=98 Runoff=0.21 cfs 0.014 af

Pond 1P: Detention Pond

Peak Elev=136.34' Storage=810 cf Inflow=0.24 cfs 0.019 af

Outflow=0.00 cfs 0.000 af

Total Runoff Area = 0.087 ac Runoff Volume = 0.026 af Average Runoff Depth = 3.59"
49.21% Pervious = 0.043 ac 50.79% Impervious = 0.044 ac

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PHOTOS OF ADJACENTS

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BORROWER'S WARRANTIES AND REPRESENTATIONS

From: Shopov Properties, I.L.C (hereinafter, the "Borrower")

To: Lincoln Capital, LLC (hereinafter "Lender")

The undersigned Borrower, in consideration for a **TWO HUNDRED FIFTY THOUSAND U.S. DOLLARS (\$250,000.00)** Term Loan (the "Loan") to be made by Lender to Borrower hereby affirms that there have been no unremedied adverse changes in the financial, business or any other condition of the Borrower or Personal Guarantor since the date of application for said Loan, and in addition, hereby makes the following warranties and representations to the Lender, which warranties and representations shall survive the closing and shall continue until the Loan is satisfied in full.

1. Borrower shall not in any way alter its form of organization without the prior written consent of Lender.

2. Borrower agrees that it shall not declare, pay or make any distribution to its beneficiaries without the prior written consent of Lender.

3. Borrower acknowledges that the proceeds of this Loan are to be used for commercial or business purposes, more specifically to be used exclusively for the acquisition and improvement of investment property located at *72 Walnut Street, Portland, Maine.*

4. Borrower shall purchase federal flood insurance in amounts and coverage satisfactory to Lender if, at any time during the term of the Loan, the area in which any Loan collateral is located is designated a flood prone area by the Federal Emergency Management Agency (FEMA) and federal flood insurance can be purchased.

5. Borrower shall provide and maintain hazard insurance in such amounts and for such coverage as shall be satisfactory in all respects to Lender. Policy coverage shall designate

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Promissory Note and in all Loan Documents for the breach of any said warranty or representation, which remedies are incorporated by reference herein.

Dated this 21st day of August, 2007.

Witness to All:

Steven W. Reed

By:

SHOPOV PROPERTIES, LLC

R. Shopov

Rumen I. Shopov
Its: President

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City of Portland
Building Department

PLANNING / DESIGN ASSOCIATES
ENGINEERS / SITE PLANNERS/ REAL ESTATE DEVELOPMENT CONSULTANTS
9 Alexander Drive, Windham, ME p/f 892-2640

INFRASTRUCTURE COST ESTIMATES
SHOPOV RESIDENCE

PROPERTY LINE RETAINING WALL
80' OF 10 HIGH WALL
ALTERNATE A—INTERLOCKING BLOCK
\$25,000.00
ALTERNATE B—POURED CONCRETE
\$18,500.00

RETENTION POND
\$8,000.00

BRICK SIDEWALK
\$2,500.00

UTILITY CONNECTIONS
\$3,000.00

TOTAL—\$32,000.00-\$38,000.00

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