



# PORTLAND MAINE

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Planning & Development Department  
Lee D. Urban, Director

Planning Division  
Alexander Jaegerman, Director

October 14, 2004

Mr. Peter Holmes  
424 Warren Avenue LLC  
401 Warren Avenue  
Portland, ME 04103

RE: Warehouse/Office Proposal, 429 Warren Avenue  
ID #2003-0105, CBL #304-B-032

Dear Mr. Holmes:

This letter is to summarize the current status of your site buildout at 429 Warren Avenue. Currently, your amended site plan to add pavement and parking has not been approved. This is because the City had requested additional information with regards to impervious surface calculations. This information has not been provided to the City to date.

OK 11-15  
Corrected at 11-15

Also, it is important to document the issue of additional parking spaces in the center of the parking lot. You had requested verbally in a telephone conversation last week to add parking. My response was that it would need to be reflected on your pending amended site plan, and would need to be reviewed by the City.

Today's site visit verified that this change of 20 additional spaces (+/-) has already been made on your site. For this reason, the City requests that you file for a separate, after-the-fact, amended site plan. If you do not wish to apply for this unapproved change, you may opt to remove the recently striped spaces.

Failure to address these items by November 30, 2004, will result in the Planning Office referring this matter to the City of Portland Corporation Counsel for legal action and possible civil penalties, as provided for in Section 1-15 of the Code and in Title 30-A M.R.S.A. Ss 4452.

Sincerely,

Jay Reynolds  
Development Review Coordinator

(over 75 spaces = P.S.D.)

cc: Lee D. Urban, Planning and Development Department Director  
Alexander Jaegerman, Planning Division Director  
Sarah Hopkins, Development Review Services Manager  
Kandice Talbot, Planner  
Marge Schmuckal, Zoning Administrator  
Penny Littell, Associate Corporation Counsel





**SYTDesign Consultants**  
CIVIL ENGINEERS & LAND SURVEYORS

**PRINCIPALS:**

Saucier, Thomas W., P.E.  
Young, David W., P.E., P.L.S.  
Tubbs, Peter B., P.E., P.L.S.  
Decker, W. Scott, P.E.

August 20, 2004

Mr. Peter Holmes  
c/o Harbour Auto Body  
401 Warren Avenue  
Portland, ME 04103

**RE: Commercial Development  
Warren Avenue, Portland**

Dear Peter:

This transmittal letter addresses the proposed plan changes requested by you as listed below. As you are aware, these changes must be approved by the City of Portland prior to implementation.

**Change #1: Elimination of the drainage swale to the north and west of building #1.**

We revised the stormwater model to include the ponding effect of the 8" of crushed stone beneath the roof drip line and changing the grassed area between the crushed stone and property line to a dense unmaintained vegetated area. We have assumed that this areas will revegetate to match species and density of the adjacent vegetation. We also moved the analysis point to the north side of the 40 foot drainage easement instead of the property.

Since I understand there is underdrain along the northerly foundation footing, we also included the infiltration capability of the underdrain backfill material. This further reduces the peak rate of runoff to the north.

I have attached the computer printout of the model which supports my assertion that even with the increased impervious area (approximately 5225 S.F.) that directs runoff to the detention pond your proposed changes do not have any significant impact on the stormwater management plan approved by the Planning Board.

I should stress that this change reduces the cover over the wall footings. It may be necessary, depending on the depth of footings, to place Styrofoam insulation over the footings to prevent frost from penetrating below the bottom of the footing. Also the proposed additional paved areas should be sloped to drain to the detention basin.

80% MAX  
in B-4

P:\2002-PROJECTS\02-28100\Word\holmes 082004.doc

**P.O. Box 86A, 160 Longwoods Road, Cumberland, ME 04021**  
Tel: (207) 829-6994 • Fax: (207) 829-2231 • Email: info@syt design.com

**Change #2: Extension of paved parking to the northwest and to the east.**

This increase in impervious area to the northwest is acceptable since it does not significantly impact the stormwater management plan.

**Change #3: Revised location of guard rail.**

In my opinion, moving the guard rail closer to the pond to avoid damaging the underground electric services makes sense and does not cause any problems with guard rail function.

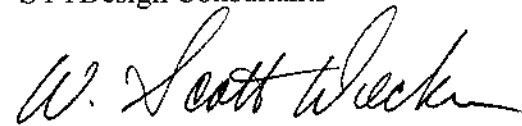
**Change #4: Extending the riprap along the south side of building #2 to the westerly property line to included all disturbed areas.**

In my opinion, this extension is acceptable.

Please give me a call if you have any questions concerning my assessment of your proposed changes.

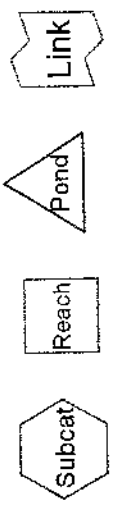
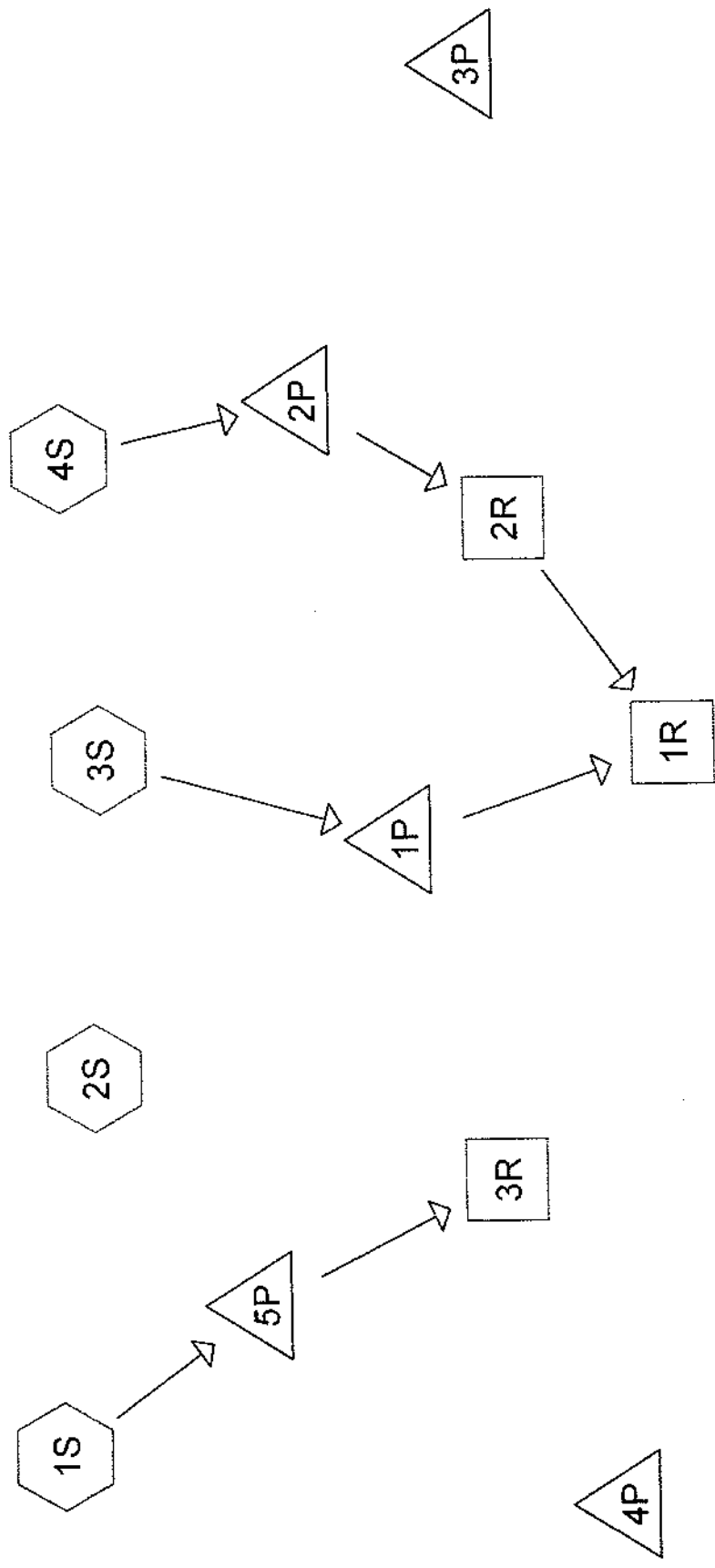
Very truly yours,

SYTDesign Consultants



W. Scott Decker, P.E.  
Principal

WSD/cms



Drainage Diagram for 02-28101, Warren Ave. proposed 081804  
 Prepared by SYTDesign Consultants 8/19/2004  
 HydroCAD® 6.00 s/n 000813 © 1986-2001 Applied Microcomputer Systems

Analysis Point #	Storm Event	Peak Flow Rate (cfs) EXISTING Conditions	Peak Flow Rate (cfs) PROPOSED Conditions
1	2-yr	0.46	0.35
	10-yr	1.68	1.70
	25-yr	2.37	2.29
2	2-yr	0.12	0.09
	10-yr	0.87	0.50
	25-yr	1.33	0.75
3	2-yr	0.20	0.21
	Pond 1 10-yr	0.53	0.49
R1	25-yr	0.71	0.79

### Quality Standards

The proposed project is not in a watershed most at risk from development, and therefore is not subject to quality standards, as outlined by the Maine Department of Environmental Protection, beyond the standard erosion control details that are required during construction and post-construction.

On-site treatment of contaminants from the drive and parking areas of the buildings is being provided within of Pond 2 and with seeded buffers for the both sides of the lower drive. The plug-flow detention time in Pond 2 is approximately 12 hours in the one, two and ten-year, 24-hour design storms. See attached summaries of the post-development model. In addition, there is over 100 feet of swale/buffer that will be planted in the limited maintenance grass/wildflower mix to filter stormwater runoff from the lower west side of the entrance drive before it reaches the forested wetland. See Landscape Drawing C-104, revision C. There is a similarly planted 50-foot seeded buffer along the lower east side of the entrance drive.

A conservative weighted TSS removal rate is 43%. The calculations for this removal rate are attached to this report.

### MAINTENANCE

Maintenance of the stormwater infrastructure is the responsibility of the owner. A City of Portland "Drainage Maintenance Agreement" will be filed upon approval of this application.

**Subcatchment 1S: SC-1**

Runoff = 1.38 cfs @ 12.08 hrs, Volume= 0.097 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
18,000	98	Paved parking & roofs
5,813	61	Pasture/grassland/range, Good, HSG B
4,176	80	Pasture/grassland/range, Good, HSG D
27,989	88	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.2		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 3.00"
5.0					Direct Entry, direct entry, stone apron
5.8	60	Total			

**Subcatchment 2S: SC-2**

Runoff = 0.10 cfs @ 12.28 hrs, Volume= 0.016 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
2,155	98	1/2 paved drive
22,873	56	Brush, Fair, HSG B
25,028	60	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	64	0.0200	0.1		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.00"

**Subcatchment 3S: SC-3**

Runoff = 1.99 cfs @ 12.07 hrs, Volume= 0.137 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
24,293	79	Woods, Fair, HSG D presumed pond
23,875	69	50-75% Grass cover, Fair, HSG B
12,200	98	lower drive, portion of bldg 2
60,368	79	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	370	0.0080	1.3		<b>Shallow Concentrated Flow, A-B</b> Grassed Waterway Kv= 15.0 fps

**Subcatchment 4S: SC-4**

Runoff = 5.75 cfs @ 12.04 hrs, Volume= 0.408 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr Rainfall=3.00"

Area (sf)	CN	Description
77,113	98	Paved parking, pond 2, part bldg 2

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	130	0.0120	1.1		<b>Sheet Flow, A-B</b> Smooth surfaces n= 0.011 P2= 3.00"
0.6	166	0.0050	4.4	5.40	<b>Circular Channel (pipe), B-C</b> Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.011
0.4	110	0.0050	5.0	8.78	<b>Circular Channel (pipe), C-D</b> Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011
2.9	406	Total			

**Reach 1R: Summary reach**

Inflow = 0.21 cfs @ 13.42 hrs, Volume= 0.156 af  
Outflow = 0.21 cfs @ 13.42 hrs, Volume= 0.156 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 2R: from outlet structure to city system**

Inflow = 0.03 cfs @ 24.00 hrs, Volume= 0.033 af  
Outflow = 0.03 cfs @ 24.00 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Max. Velocity= 2.0 fps, Min. Travel Time= 0.4 min

Avg. Velocity = 1.9 fps, Avg. Travel Time= 0.4 min

Peak Depth= 0.05'

Capacity at bank full= 18.35 cfs

Inlet Invert= 68.80', Outlet Invert= 67.50'

18.0" Diameter Pipe n= 0.012 Length= 50.0' Slope= 0.0260 '/'



**Reach 3R: Analysis Point 1**

Inflow = 1.40 cfs @ 12.11 hrs, Volume= 0.012 af  
 Outflow = 0.35 cfs @ 12.44 hrs, Volume= 0.012 af, Atten= 75%, Lag= 19.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Max. Velocity= 0.1 fps, Min. Travel Time= 10.8 min  
 Avg. Velocity = 0.1 fps, Avg. Travel Time= 19.3 min

Peak Depth= 0.01'  
 Capacity at bank full= 149.99 cfs  
 Inlet Invert= 0.66', Outlet Invert= 0.00'  
 300.00' x 0.50' deep channel, n= 0.100 Length= 58.0' Slope= 0.0114 '/'  
 Side Slope Z-value= 3.0 '/'

**Pond 1P: Pond 1**

Inflow = 1.99 cfs @ 12.07 hrs, Volume= 0.137 af  
 Outflow = 0.18 cfs @ 13.28 hrs, Volume= 0.123 af, Atten= 91%, Lag= 72.3 min  
 Primary = 0.18 cfs @ 13.28 hrs, Volume= 0.123 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 70.07' Storage= 2,696 cf  
 Plug-Flow detention time= 208.2 min calculated for 0.123 af (90% of inflow)  
 Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.80	193	0	0
69.90	3,604	190	190
70.00	17,981	1,079	1,269
70.50	24,293	10,569	11,838

**Primary OutFlow (Free Discharge)**

↑1=Culvert

#	Routing	Invert	Outlet Devices
1	Primary	69.80'	8.0" x 16.0' long Culvert CMP, projecting, no headwall, Ke= 0.900 Outlet Invert= 69.00' S= 0.0500 '/ n= 0.016 Cc= 0.900

**Pond 2P: Pond 2**

Inflow = 5.75 cfs @ 12.04 hrs, Volume= 0.408 af  
 Outflow = 0.03 cfs @ 24.00 hrs, Volume= 0.033 af, Atten= 99%, Lag= 717.5 min  
 Primary = 0.03 cfs @ 24.00 hrs, Volume= 0.033 af  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 70.78' Storage= 16,334 cf  
 Plug-Flow detention time= 698.2 min calculated for 0.033 af (8% of inflow)  
 Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	1,280	0	0
69.00	6,080	3,680	3,680
70.00	7,200	6,640	10,320
71.00	8,160	7,680	18,000
72.00	9,760	8,960	26,960

**Primary OutFlow (Free Discharge)**

- ↑1=Orifice/Grate 4 in.
- ↓2=Orifice/Grate 1 in.

**Secondary OutFlow (Free Discharge)**

- ↑3=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	71.40'	4.0" Vert. Orifice/Grate 4 in. C= 0.600
2	Primary	69.00'	1.0" Vert. Orifice/Grate 1 in. C= 0.600
3	Secondary	71.90'	10.0' long x 8.0' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.0			
Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66			

**Pond 3P: emergency spillway**

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.00' Storage= 0 cf  
 Plug-Flow detention time= (not calculated)  
 Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	1,280	0	0
69.00	6,080	3,680	3,680
70.00	7,200	6,640	10,320
71.00	8,160	7,680	18,000
72.00	9,760	8,960	26,960

**Primary OutFlow (Free Discharge)**

- ↑1=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	71.90'	10.0' long x 8.0' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.0			
Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66			

**Pond 4P: (new node)**

Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.00' Storage= 0 cf

Plug-Flow detention time= (not calculated)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,800	0	0
0.01	1,800	18	18

Discarded OutFlow (Free Discharge)

↑-1=Exfiltration

#	Routing	Invert	Outlet Devices
1	Discarded	0.00'	0.010000 fpm Exfiltration over entire Surface area

**Pond 5P: stone splash pad**

Inflow = 1.38 cfs @ 12.08 hrs, Volume= 0.097 af

Outflow = 1.70 cfs @ 12.11 hrs, Volume= 0.097 af, Atten= 0%, Lag= 1.7 min

Discarded = 0.30 cfs @ 11.77 hrs, Volume= 0.085 af

Primary = 1.40 cfs @ 12.11 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.68' Storage= 487 cf

Plug-Flow detention time= 6.9 min calculated for 0.097 af (100% of inflow)

Elevation (feet)	Cum.Store (cubic-feet)
0.00	0
0.67	482

Discarded OutFlow (Free Discharge)

↑-2=Exfiltration

Primary OutFlow (Free Discharge)

↑-1=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	0.66'	300.0' 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	Discarded	0.00'	0.30 cfs Exfiltration at all elevations

**Subcatchment 1S: SC-1**

Runoff = 2.52 cfs @ 12.08 hrs, Volume= 0.181 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
18,000	98	Paved parking & roofs
5,813	61	Pasture/grassland/range, Good, HSG B
4,176	80	Pasture/grassland/range, Good, HSG D
27,989	88	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.2		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 3.00"
5.0					Direct Entry, direct entry, stone apron
5.8	60	Total			

**Subcatchment 2S: SC-2**

Runoff = 0.57 cfs @ 12.16 hrs, Volume= 0.054 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
2,155	98	1/2 paved drive
22,873	56	Brush, Fair, HSG B
25,028	60	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	64	0.0200	0.1		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.00"

**Subcatchment 3S: SC-3**

Runoff = 4.35 cfs @ 12.07 hrs, Volume= 0.294 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
24,293	79	Woods, Fair, HSG D presumed pond
23,875	69	50-75% Grass cover, Fair, HSG B
12,200	98	lower drive, portion of bldg 2
60,368	79	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	370	0.0080	1.3		<b>Shallow Concentrated Flow, A-B</b> Grassed Waterway Kv= 15.0 fps

**Subcatchment 4S: SC-4**

Runoff = 9.09 cfs @ 12.04 hrs, Volume= 0.658 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr Rainfall=4.70"

Area (sf)	CN	Description
77,113	98	Paved parking, pond 2, part bldg 2

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	130	0.0120	1.1		<b>Sheet Flow, A-B</b> Smooth surfaces n= 0.011 P2= 3.00"
0.6	166	0.0050	4.4	5.40	<b>Circular Channel (pipe), B-C</b> Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.011
0.4	110	0.0050	5.0	8.78	<b>Circular Channel (pipe), C-D</b> Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011
2.9	406	Total			

**Reach 1R: Summary reach**

Inflow = 0.49 cfs @ 15.31 hrs, Volume= 0.387 af  
Outflow = 0.49 cfs @ 15.31 hrs, Volume= 0.387 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 2R: from outlet structure to city system**

Inflow = 0.17 cfs @ 17.07 hrs, Volume= 0.127 af  
Outflow = 0.17 cfs @ 17.08 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.3 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 2.7 fps, Avg. Travel Time= 0.3 min

Peak Depth= 0.10'

Capacity at bank full= 18.35 cfs

Inlet Invert= 68.80', Outlet Invert= 67.50'

18.0" Diameter Pipe n= 0.012 Length= 50.0' Slope= 0.0260 '/'

**Reach 3R: Analysis Point 1**

Inflow = 2.22 cfs @ 12.08 hrs, Volume= 0.049 af  
 Outflow = 1.70 cfs @ 12.24 hrs, Volume= 0.049 af, Atten= 23%, Lag= 9.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Max. Velocity= 0.2 fps, Min. Travel Time= 5.8 min  
 Avg. Velocity = 0.1 fps, Avg. Travel Time= 16.6 min

Peak Depth= 0.03'  
 Capacity at bank full= 149.99 cfs  
 Inlet Invert= 0.66', Outlet Invert= 0.00'  
 300.00' x 0.50' deep channel, n= 0.100 Length= 58.0' Slope= 0.0114 '/'  
 Side Slope Z-value= 3.0 '/'

**Pond 1P: Pond 1**

Inflow = 4.35 cfs @ 12.07 hrs, Volume= 0.294 af  
 Outflow = 0.42 cfs @ 12.97 hrs, Volume= 0.260 af, Atten= 90%, Lag= 53.9 min  
 Primary = 0.42 cfs @ 12.97 hrs, Volume= 0.260 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 70.23' Storage= 6,141 cf  
 Plug-Flow detention time= 217.2 min calculated for 0.260 af (89% of inflow)  
 Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.80	193	0	0
69.90	3,604	190	190
70.00	17,981	1,079	1,269
70.50	24,293	10,569	11,838

**Primary OutFlow (Free Discharge)**

↑1=Culvert

#	Routing	Invert	Outlet Devices
1	Primary	69.80'	8.0' x 16.0' long Culvert CMP, projecting, no headwall, Ke= 0.900 Outlet Invert= 69.00' S= 0.0500 '/' n= 0.016 Cc= 0.900

**Pond 2P: Pond 2**

Inflow = 9.09 cfs @ 12.04 hrs, Volume= 0.658 af  
 Outflow = 0.17 cfs @ 17.07 hrs, Volume= 0.127 af, Atten= 98%, Lag= 301.9 min  
 Primary = 0.17 cfs @ 17.07 hrs, Volume= 0.127 af  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 71.67' Storage= 23,982 cf

Plug-Flow detention time= 622.7 min calculated for 0.127 af (19% of inflow)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	1,280	0	0
69.00	6,080	3,680	3,680
70.00	7,200	6,640	10,320
71.00	8,160	7,680	18,000
72.00	9,760	8,960	26,960

**Primary OutFlow** (Free Discharge)

↑1=Orifice/Grate 4 in.

↳2=Orifice/Grate 1 in.

**Secondary OutFlow** (Free Discharge)

↑3=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	71.40'	4.0" Vert. Orifice/Grate 4 in. C= 0.600
2	Primary	69.00'	1.0" Vert. Orifice/Grate 1 in. C= 0.600
3	Secondary	71.90'	10.0' long x 8.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.0 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66

**Pond 3P: emergency spillway**

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.00' Storage= 0 cf

Plug-Flow detention time= (not calculated)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	1,280	0	0
69.00	6,080	3,680	3,680
70.00	7,200	6,640	10,320
71.00	8,160	7,680	18,000
72.00	9,760	8,960	26,960

**Primary OutFlow** (Free Discharge)

↑1=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	71.90'	10.0' long x 8.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.0 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66

**Pond 4P: (new node)**

Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.00' Storage= 0 cf

Plug-Flow detention time= (not calculated)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,800	0	0
0.01	1,800	18	18

**Discarded OutFlow** (Free Discharge)

↑1=Exfiltration

#	Routing	Invert	Outlet Devices
1	Discarded	0.00'	0.010000 fpm Exfiltration over entire Surface area

**Pond 5P: stone splash pad**

Inflow = 2.52 cfs @ 12.08 hrs, Volume= 0.181 af

Outflow = 2.52 cfs @ 12.08 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.1 min

Discarded = 0.30 cfs @ 11.61 hrs, Volume= 0.132 af

Primary = 2.22 cfs @ 12.08 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.68' Storage= 492 cf

Plug-Flow detention time= 6.1 min calculated for 0.181 af (100% of inflow)

Elevation (feet)	Cum.Store (cubic-feet)
0.00	0
0.67	482

**Discarded OutFlow** (Free Discharge)

↑2=Exfiltration

**Primary OutFlow** (Free Discharge)

↑1=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	0.66'	300.0' 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	Discarded	0.00'	0.30 cfs Exfiltration at all elevations



**Subcatchment 1S: SC-1**

Runoff = 3.06 cfs @ 12.08 hrs, Volume= 0.222 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
18,000	98	Paved parking & roofs
5,813	61	Pasture/grassland/range, Good, HSG B
4,176	80	Pasture/grassland/range, Good, HSG D
27,989	88	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.2		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 3.00"
5.0					Direct Entry, direct entry, stone apron
5.8	60	Total			

**Subcatchment 2S: SC-2**

Runoff = 0.86 cfs @ 12.16 hrs, Volume= 0.077 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
2,155	98	1/2 paved drive
22,873	56	Brush, Fair, HSG B
25,028	60	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	64	0.0200	0.1		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.00"

**Subcatchment 3S: SC-3**

Runoff = 5.53 cfs @ 12.07 hrs, Volume= 0.373 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
24,293	79	Woods, Fair, HSG D presumed pond
23,875	69	50-75% Grass cover, Fair, HSG B
12,200	98	lower drive, portion of bldg 2
60,368	79	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	370	0.0080	1.3		<b>Shallow Concentrated Flow, A-B</b> Grassed Waterway Kv= 15.0 fps

**Subcatchment 4S: SC-4**

Runoff = 10.65 cfs @ 12.04 hrs, Volume= 0.776 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr Rainfall=5.50"

Area (sf)	CN	Description
77,113	98	Paved parking, pond 2, part bldg 2

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	130	0.0120	1.1		<b>Sheet Flow, A-B</b> Smooth surfaces n= 0.011 P2= 3.00"
0.6	166	0.0050	4.4	5.40	<b>Circular Channel (pipe), B-C</b> Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.011
0.4	110	0.0050	5.0	8.78	<b>Circular Channel (pipe), C-D</b> Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011
2.9	406	Total			

**Reach 1R: Summary reach**

Inflow = 0.79 cfs @ 13.80 hrs, Volume= 0.560 af  
 Outflow = 0.79 cfs @ 13.80 hrs, Volume= 0.560 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

**Reach 2R: from outlet structure to city system**

Inflow = 0.29 cfs @ 15.28 hrs, Volume= 0.229 af  
 Outflow = 0.29 cfs @ 15.29 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.8 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.1 fps, Avg. Travel Time= 0.3 min

Peak Depth= 0.13'

Capacity at bank full= 18.35 cfs

Inlet Invert= 68.80', Outlet Invert= 67.50'

18.0" Diameter Pipe n= 0.012 Length= 50.0' Slope= 0.0260 'f'

**Reach 3R: Analysis Point 1**

Inflow = 2.75 cfs @ 12.08 hrs, Volume= 0.068 af  
 Outflow = 2.29 cfs @ 12.22 hrs, Volume= 0.068 af, Atten= 17%, Lag= 8.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Max. Velocity= 0.2 fps, Min. Travel Time= 5.1 min  
 Avg. Velocity = 0.1 fps, Avg. Travel Time= 15.7 min

Peak Depth= 0.04'  
 Capacity at bank full= 149.99 cfs  
 Inlet Invert= 0.66', Outlet Invert= 0.00'  
 300.00' x 0.50' deep channel, n= 0.100 Length= 58.0' Slope= 0.0114 '/'  
 Side Slope Z-value= 3.0 '/'

**Pond 1P: Pond 1**

Inflow = 5.53 cfs @ 12.07 hrs, Volume= 0.373 af  
 Outflow = 0.56 cfs @ 12.90 hrs, Volume= 0.331 af, Atten= 90%, Lag= 49.9 min  
 Primary = 0.56 cfs @ 12.90 hrs, Volume= 0.331 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 70.31' Storage= 7,890 cf  
 Plug-Flow detention time= 214.5 min calculated for 0.331 af (89% of inflow)  
 Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
69.80	193	0	0
69.90	3,604	190	190
70.00	17,981	1,079	1,269
70.50	24,293	10,569	11,838

**Primary OutFlow (Free Discharge)**

↑=Culvert

#	Routing	Invert	Outlet Devices
1	Primary	69.80'	8.0" x 16.0' long Culvert CMP, projecting, no headwall, Ke= 0.900 Outlet Invert= 69.00' S= 0.0500 '/ n= 0.016 Cc= 0.900

**Pond 2P: Pond 2**

Inflow = 10.65 cfs @ 12.04 hrs, Volume= 0.776 af  
 Outflow = 0.34 cfs @ 15.28 hrs, Volume= 0.233 af, Atten= 97%, Lag= 194.6 min  
 Primary = 0.29 cfs @ 15.28 hrs, Volume= 0.229 af  
 Secondary = 0.05 cfs @ 15.28 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 71.91' Storage= 26,190 cf

Plug-Flow detention time= 514.4 min calculated for 0.233 af (30% of inflow)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	1,280	0	0
69.00	6,080	3,680	3,680
70.00	7,200	6,640	10,320
71.00	8,160	7,680	18,000
72.00	9,760	8,960	26,960

**Primary OutFlow** (Free Discharge)

1=Orifice/Grate 4 in.

2=Orifice/Grate 1 in.

**Secondary OutFlow** (Free Discharge)

3=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	71.40'	<b>4.0" Vert. Orifice/Grate 4 in.</b> C= 0.600
2	Primary	69.00'	<b>1.0" Vert. Orifice/Grate 1 in.</b> C= 0.600
3	Secondary	71.90'	<b>10.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.0 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.64 2.65 2.65 2.66

**Pond 3P: emergency spillway**

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.00' Storage= 0 cf

Plug-Flow detention time= (not calculated)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	1,280	0	0
69.00	6,080	3,680	3,680
70.00	7,200	6,640	10,320
71.00	8,160	7,680	18,000
72.00	9,760	8,960	26,960

**Primary OutFlow** (Free Discharge)

1=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	71.90'	<b>10.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.0 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.64 2.65 2.65 2.66

**Pond 4P: (new node)**

Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.00' Storage= 0 cf  
 Plug-Flow detention time= (not calculated)  
 Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,800	0	0
0.01	1,800	18	18

**Discarded OutFlow** (Free Discharge)

↑1=Exfiltration

#	Routing	Invert	Outlet Devices
1	Discarded	0.00'	0.010000 fpm Exfiltration over entire Surface area

**Pond 5P: stone splash pad**

Inflow = 3.06 cfs @ 12.08 hrs, Volume= 0.222 af  
 Outflow = 3.05 cfs @ 12.08 hrs, Volume= 0.222 af, Atten= 0%, Lag= 0.1 min  
 Discarded = 0.30 cfs @ 11.54 hrs, Volume= 0.154 af  
 Primary = 2.75 cfs @ 12.08 hrs, Volume= 0.068 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 0.69' Storage= 496 cf  
 Plug-Flow detention time= 5.9 min calculated for 0.222 af (100% of inflow)

Elevation (feet)	Cum.Store (cubic-feet)
0.00	0
0.67	482

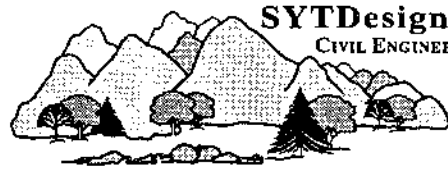
**Discarded OutFlow** (Free Discharge)

↑2=Exfiltration

**Primary OutFlow** (Free Discharge)

↑1=Broad-Crested Rectangular Weir

#	Routing	Invert	Outlet Devices
1	Primary	0.66'	300.0' 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	Discarded	0.00'	0.30 cfs Exfiltration at all elevations



**SYTDesign Consultants**  
CIVIL ENGINEERS & LAND SURVEYORS

P.O. Box 86A, 160 Longwoods Road  
Cumberland, ME 04021

PROJECT	COMP. BY	JOB NO.
	CHK. BY	DATE

stone swale 40% voids

$L=300'$   $W=6'$   $D=0.67$  BOTTOM OF "POND" - 71.33  
CAPACITY OF STONE  $0.4(300)(6)(0.67) = 482.4 ft^3$

OUTLET 300' WIER @ 72  $W=1'$   
2 contractions

EXFILTRATION BELGRACE (p55 Cumberland Cty)  
0.63 in./hr.

REACH 3 - BUFFER

BUFFER 18' WIDE  $L=300'$

modeled as wide shallow TRAPEZOIDAL/RECTANGULAR CHANNEL

$W=300'$   $D=0.5'$   $S=3:1$   
 $L=18'$   $n=0.1$  dense brush

SC-2 TOTAL  $A=25,028 \#$

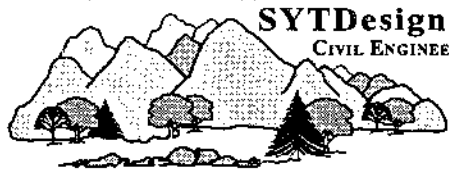
IMP  $2155 + 2850 = 5005 \#$

BRUSH -  $22873 - 2850 = 20023 \#$

TL A-B  $L=45'$   $S=0.02$  SHEET-PAVED

B-C  $L=109' - 45=64'$  GRASS DENSE

$S = \frac{73-71.5}{64}$



**SYTDesign Consultants**  
CIVIL ENGINEERS & LAND SURVEYORS

P.O. Box 86A, 160 Longwoods Road  
Cumberland, ME 04021

PROJECT
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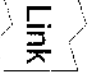
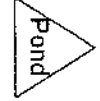
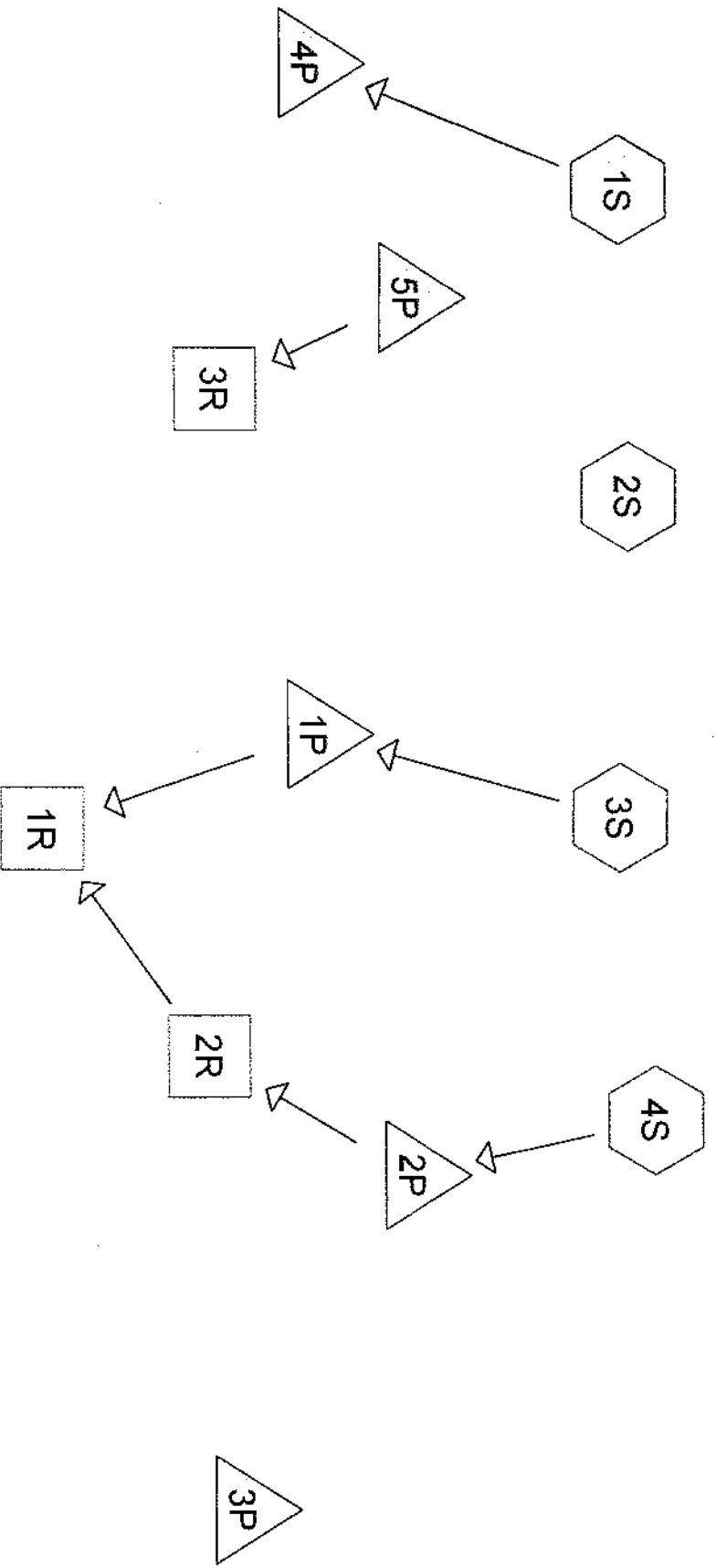
COMP. BY
CHK. BY

JOB NO.
DATE

SC-4 Add 2850 + 2374  $\phi$  map =

ADD 2850  $\phi$  to total A

71889 + 2850 + 2374  $\phi$  = 77113  $\phi$



**Drainage Diagram for 02-28101, Warren Ave. proposed 081804**  
 Prepared by SYTTDesign Consultants 8/19/2004  
 HydroCAD® 6.00 s/n 000813 © 1986-2001 Applied Microcomputer Systems



**Pond 4P: (new node)**

Inflow = 3.06 cfs @ 12.08 hrs, Volume= 0.222 af  
 Outflow = 0.30 cfs @ 11.53 hrs, Volume= 0.222 af, Atten= 90%, Lag= 0.0 min  
 Discarded = 0.30 cfs @ 11.53 hrs, Volume= 0.222 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 1.91' Storage= 3,441 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Storage and wetted areas determined by Prismatic sections

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	1,800	0	0
0.01	1,800	18	18

**Discarded OutFlow (Free Discharge)**

↑1=Exfiltration

#	Routing	Invert	Outlet Devices
1	Discarded	0.00'	0.010000 fpm Exfiltration over entire Surface area



225 Douglass St. • P.O. Box 3553 • Portland, ME 04104-3553

(207) 774-5961  
FAX (207) 761-8307  
www.pwd.org

August 12, 2003

Mr. W. Scott Decker  
SYTDesign Consultants  
P.O. Box 86A  
160 Longwoods Road  
Cumberland Center, Maine 04021

Re: 424 Warren Ave LLC, Portland

Dear Sir:

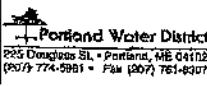
The Portland Water District has a 20" water main in Warren Avenue, Portland, near the proposed site. A test on a nearby hydrant produced the following results: static pressure 83 psi; pito pressure 70 psi; with a flow of 1403 gpm. With these results in mind, the District feels we have sufficient capacity available to serve this proposed project and meet all normal fire protection and domestic water service demands. **Please notify your plumber of these results so that they can design your system to best fit the available pressure.**

With certification by the developer that all required permits have been received, we look forward to serving this project.

Sincerely,

PORTLAND WATER DISTRICT

*David W Coffin*  
David W. Coffin, PLS  
Engineering Supervisor

To: <i>SCOTT DECKER</i>	Date: <i>8/12</i>	 Portland Water District 225 Douglass St. • Portland, ME 04102 (207) 774-5961 • Fax (207) 761-8307
Co. <i>SYTDESIGN</i>	# of Pgs. <i>1</i>	
Dept.	From: <i>D Coffin</i>	
Fax No. <i>829-2231</i>	Phone #	Fax #

2001 Governor's Award for Environmental Excellence

27134 (90)

BOOK 4505  
219

# Know all Men by these Presents,

That YOUR HOME, INC.

a corporation organized and existing under the laws of the State  
of Maine and located at Portland  
in the County of Cumberland and State of Maine  
in consideration of One (\$1.00) Dollar and other valuable  
consideration

paid by GOODWILL OF MAINE, INC., a corporation organized and  
existing under the laws of the State of Maine and located at  
Portland in the County of Cumberland and State of Maine,  
~~XXXXXXXXXXXXXXXXXXXX~~

the receipt whereof it does hereby acknowledge, does hereby give,  
grant, bargain, sell and convey, unto the said GOODWILL OF MAINE, INC.

its Successors ~~XXXX~~ and assigns forever.

~~XXXXXXXXXXXXXXXXXXXX~~

## PARCEL A

A certain lot or parcel of land situated on the northerly  
side of Warren Avenue in the City of Portland, County of Cumberland  
and State of Maine, bounded and described as follows:

Beginning at an iron on the northerly sideline of Warren  
Avenue at the easterly corner of land conveyed by Margaret O'Connor  
to Frank Sangillo (Sangillo) by deed dated July 15, 1920 and re-  
corded in Cumberland County Registry of Deeds in Book 1057, Page 98;  
thence North 47° 44' 25" West by said Sangillo land five hundred  
eighty-eight and thirty hundredths (588.30) feet to a granite  
monument at the southerly corner of land conveyed by Edith M. Toft  
to Portland Broadcasting System, Inc. by deed dated November 18,  
1937 and recorded in said Registry of Deeds in Book 1537, Page 244;  
thence North 47° 52' 35" East by said land of Portland Broadcasting  
System, Inc. three hundred sixteen and two hundredths (316.02)  
feet to an iron at the westerly corner of land conveyed by The  
Federal Land Bank of Springfield to Portland Broadcasting System,  
Inc. by deed dated September 9, 1940 and recorded in said Registry  
of Deeds in Book 1616, Page 82; thence South 42° 7' 25" East by  
said land of Portland Broadcasting System, Inc. three hundred  
thirty (330) feet to an iron at the southerly corner thereof;  
thence South 13° 12' 25" West three hundred sixty-three and forty  
hundredths (363.40) feet to the point of beginning.

## PARCEL B

A certain lot or parcel of land situated on the northerly  
side of Warren Avenue in said City of Portland, bounded and  
described as follows:

Beginning on the northerly sideline of Warren Avenue at the  
southeasterly corner of Parcel A; thence North 3° 12' 25" East by  
the easterly sideline of Parcel A, two hundred eighty (280) feet  
to an iron; thence South 86° 47' 35" East fifty (50) feet to an  
iron; thence South 3° 12' 25" West parallel with and fifty (50)  
feet easterly from the easterly sideline of Parcel A, two hundred  
eighty-six and forty-nine hundredths (286.49) feet to an iron on  
the northerly sideline of Warren Avenue; thence North 79° 24' West  
by the northerly sideline of Warren Avenue fifty and forty-two

hundredths (50.42) feet to the point of beginning.

The above described courses are magnetic as of the year 1937.

Reserving, however, to the Grantor, its Successors and Assigns, the right to use, improve and maintain Parcel B, for all purposes for which a public street might be used, including the right to construct, erect and maintain utilities therein, and the right to offer it to the City of Portland for acceptance as a public street. The Grantee, for itself, its Successors and Assigns, agrees to convey Parcel B or such part thereof as may be accepted as a public street at the time of such acceptance to the City of Portland without additional consideration.

Being a portion of the premises conveyed to this Grantor by Frank L. Worden, et al. by deed dated January 31, 1970 and recorded in said Registry of Deeds in Book 3117, Page 618.

**To have and to hold**, the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said

GOODWILL OF MAINE, INC., its Successors

~~and~~ and assigns, to its and <sup>their</sup> ~~the~~ use and behoof forever.

**And** the said Grantor Corporation does hereby COVENANT with the said Grantee, its ~~Successors~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances; except as aforesaid

that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee, its <sup>Successors</sup> ~~Successors~~ and assigns forever, against the lawful claims and demands of all persons, except as aforesaid.

221

In Witness Whereof, the said YOUR HOME, INC.  
has caused this instrument to be sealed with its corporate seal  
and signed in its corporate name by Alfred J. Waxler  
, its President,  
thereunto duly authorized, this 2nd day of October  
in the year one thousand nine hundred and seventy-nine.

Signed, Sealed and Delivered  
in presence of

YOUR HOME INC.  
(CORPORATE NAME)

*Paul M. White*  
By *Alfred J. Waxler*  
Its President



State of Maine

County of CUMBERLAND ss. October 2, 1979

Then personally appeared the above named Alfred J. Waxler  
President of said Grantor  
Corporation as aforesaid, and acknowledged the foregoing instrument  
to be his free act and deed in his said capacity, and the free act  
and deed of said corporation.

Before me,

*Paul M. White*  
Justice of the Peace.  
Notary Public.  
Attorney at Law.

OCT 3 1979  
REGISTRY OF DEEDS CUMBERLAND COUNTY, MAINE  
Received at 9:35 AM, and recorded in  
BOOK 4505 PAGE 219 *Edward J. Gunther* Register

BOOK 6161

98

QUITCLAIM DEED  
With Covenant

12778

**Know all Men by these Presents,**

That GOODWILL OF MAINE, INC., a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine

in consideration of one dollar (\$1.00) and other valuable considerations

paid by GUY GANNETT BROADCASTING SERVICES, formerly Portland Broadcasting System, Inc., a Maine corporation organized and existing under the laws of the State of Maine and located at Portland, in the County of Cumberland and State of Maine whose mailing address is Broadcast Center-Northport Plaza, Portland, Maine 04104.

the receipt whereof it <sup>es</sup> do/ hereby acknowledge, do/ hereby remise, release, bargain, sell and convey, and forever quitclaim unto the said GUY GANNETT BROADCASTING SERVICES, its successors

~~and~~ and assigns forever,

The right perpetually to enter a certain strip of land being twenty (20) feet in width for the purpose of the passage of vehicles and pedestrians to be used only in connection with the maintenance and repair of the Grantee's antenna, located on land conveyed to the Grantee by the Federal Land Bank by deed dated September 9, 1940 and recorded in the Cumberland County Registry of Deeds in Book 1616, Page 82. Said strip is located in the City of Portland, County of Cumberland, State of Maine and is bounded and described as follows:

Beginning at an iron on the Northerly sideline of Warren Avenue on the boundary line between Grantor's land and land conveyed by Frank L. Worden et al to Your Home, Inc. by deed recorded in said Registry in Book 3117, Page 618; thence North 3°-12'-25" East by said Your Home, Inc. land two hundred eighty-six and forty-nine hundredths feet (286.49), more or less to an iron pipe, thence North 86°-47'-35" West by said Your Home, Inc. land fifty (50) feet to a point; thence North 3°-12'-25" East by said Your Home, Inc. land eighty-three and forty hundredths feet (83.40) to an iron pipe; thence North 42°-7'-25" West by the Grantor's land twenty-eight (28) feet, more or less, to a point marking the intersection of a line twenty (20) feet westerly of and parallel with the last described course; thence South 3°-12'-25" West by land of the Grantee one hundred twenty (120) feet more or less to a point; thence South 86°-47'-35" East twenty (20) feet to a point; thence South 3°-12'-25" West two hundred sixty (260) feet more or less to the sideline of Warren Avenue; thence South 79°-24" East by said Warren Avenue twenty (20) feet more or less to the point of beginning.

Being a portion of the premises conveyed to the Grantor by Your Home, Inc. by deed recorded in said Registry of Deeds.

To have and to hold the same, together with all the privileges and appurtenances thereunto belonging, to the said GOODWILL OF MAINE, INC., its successors

And it shall and will warrant and defend the premises to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under it.

In Witness Whereof, the said GOODWILL OF MAINE, INC. has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Robert C. Robinson, its President, thereunto duly authorized,

Witness my hand and seal this 28th day of the month of April, A.D. 1983.

Signed, Sealed and Delivered in presence of [Signature] By [Signature] Its President (Seal) GOODWILL OF MAINE, INC.

State of Maine, County of Cumberland ss. April 28, 1983. Then personally appeared the above named of said Grantor corporation Robert C. Robinson, President

and acknowledged the foregoing instrument to be his free act and deed, in his said capacity. Before me, [Signature] Justice of the Peace Notary Public Attorney at Law

MAY 4 1983 REGISTRY OF DEEDS CUMBERLAND COUNTY, MAINE Received at 9:37 AM, and recorded in BOOK 6161 PAGE 98 James J. Walsh Register

(101)  
12779  
Know all Men by these Presents,

That GUY GANNETT BROADCASTING SERVICES, formerly Portland Broadcasting System, Inc., a Maine corporation organized and existing under the laws of the State of Maine and located at Portland, in the County of Cumberland and State of Maine.

in consideration of one dollar (\$1.00) and other valuable considerations

paid by GOODWILL OF MAINE, INC., a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine

and whose mailing address is P. O. Box 8600, Portland, Maine

the receipt whereof it <sup>es</sup> do/hereby acknowledge, do/hereby <sup>es</sup> remit, release, bargain, sell and convey and forever quit-claim unto the said GOODWILL OF MAINE, INC., its successors

~~and~~ and assigns forever,

a certain lot or parcel of land located northerly, but not adjacent to Warren Avenue in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a monument located at the westerly corner of the lot conveyed to the Grantee by Your Home, Inc. by deed dated October 3, 1979 and recorded in the Cumberland County Registry of Deeds in Book 4505, Page 219; thence North 47°-52'-35" East by said Grantee's land, three hundred sixteen and two hundredths feet (316.02), more or less, to an iron pipe; thence North 78°-27'-5" West by other land of the Grantor two hundred seventy-nine and thirty-six hundredths feet (279.36), more or less, to an iron pipe and land now or formerly of the A.H. Chapman Land Co.; thence South 37°-2'-35" West by said Chapman land one hundred seventy-two and fifty-five hundredths feet (172.55), more or less, to an iron pipe and land now or formerly of Frank Sangollo; thence South 47°-44'-25" East by said Sangollo land one hundred ninety-three and fifty-six hundredths feet (193.56), more or less, to said monument and the point of beginning.

The courses herein contained are magnetic 1937.

Reference is made to a deed to the Grantor under its name, Portland Broadcasting System, Inc. from Edith M. Toft dated November 18, 1937 and recorded in said Registry in Book 1537, Page 244.

There is reserved to the Grantor for its own uses an easement for the purposes of constructing and maintaining a subsurface ground system to be used in connection with the Grantor's broadcasting activity. Such easement shall be over a strip fifteen (15) feet in width and adjoining the second course as described in the above lot.







ABANDONED TRACK LINE

Maine Mall Motors

Scale: 1" = 40'

Date: 2-17-04

N/F  
PAUL S. DAVIS  
2251/360

N/F  
EMILY J. NICHOLS  
MICHAEL M. ABERLE  
15616/224

N/F  
EDWARD M.  
NEEDHAM III  
6822/165

N/F  
ALBERT BRESSETTE  
11607/194

N/F  
SIDNEY C. COY  
GRACE N. COY  
1914/374

CB  
RIM 69.00  
INV IN 64.13  
INV OUT 63.93

273'-15" PIPE  
S=0.005

CB  
RIM 66.85  
INV IN 62.50  
INV OUT 62.40

106'-15" PIPE  
S=0.005

POSSIBLE  
CATCH BASIN

N/F  
TIRE WAREHOUSE CENTRAL INC.  
10741/121

RIP-RAP  
INV. 64.74  
HEADWALL-T.W. 66.75

INV. 61.93  
CB 2

CB 16

CB 11

HIGH POINT  
INV. 64.25

TOP OF FOUNDATION = 70.33  
FINISH GRADE = 69.80

LEXUS

F.F.E.  
70.00

SERVICE BAYS

CAR WASH BLDG.

STREET

CAMPBELL ROAD

TIRE WAREHOUSE

CONC. PAD

STABILIZED CONSTRUCTION ENTRANCE

HP  
71.2X

SEE PLAN ENLARGEMENT

CONTRACTOR SHALL TIE EXISTING F.D. INTO NEW 6" LATERAL

RELOCATED F.D.

PIPE INLET LOCATIONS MADE PERMANENT AT THIS TIME

