

360-A-4

#1999-0065

1000 Riverside St.

Building Expansion

Tüchenhogen - Zajac, LLC.

1359-74

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990065

I. D. Number

Tuchenhagen - Zajac, LLC
Applicant

1000 Riverside St, Portland, ME 04103

Applicant's Mailing Address

Environmental Engineering & Re

Consultant/Agent

828-1272 774-6907

Applicant or Agent Daytime Telephone, Fax

5/21/99

Application Date

Dld. Expansion

Project Name/Description

1000 Riverside St.

Address of Proposed Site

3100-A-4

Assessor's Reference: Chart-Block-Lot

- Proposed Development (check all that apply):
- Office
 - Retail
 - Manufacturing
 - Warehouse/Distribution
 - Parking Lot
 - Other (specify) _____
 - New Building
 - Building Addition
 - Change Of Use
 - Residential

Proposed Building square Feet or # of Units	Acreage of Site	Zoning
---	-----------------	--------

Check Review Required:

- Site Plan (major/minor)
- Flood Hazard
- Zoning Conditional Use (ZBA/PB)
- Subdivision # of lots _____
- Shoreland
- Zoning Variance
- PAD Review
- Historic Preservation
- 14-403 Streets Review
- DEP Local Certification
- Other _____

Fees Paid: Site Plan \$500.00 Subdivision _____ Engineer Review _____ Date: 5/21/99

DRC Approval Status:

- Reviewer _____
- Approved
 - Approved w/Conditions see attached
 - Denied
- Approval Date _____ Approval Expiration _____ Extension to _____ Additional Sheets Attached
- Condition Compliance _____ signature _____ date _____

Performance Guarantee Required* Not Required

* No building permit may be issued until a performance guarantee has been submitted as indicated below

<input type="checkbox"/> Performance Guarantee Accepted	_____	_____	_____
	date	amount	expiration date
<input type="checkbox"/> Inspection Fee Paid	_____	_____	
	date	amount	
<input type="checkbox"/> Building Permit	_____		
	date		
<input type="checkbox"/> Performance Guarantee Reduced	_____	_____	_____
	date	remaining balance	signature
<input type="checkbox"/> Temporary Certificate Of Occupancy	_____	<input type="checkbox"/> Conditions (See Attached)	
	date		
<input type="checkbox"/> Final Inspection	_____	_____	
	date	signature	
<input type="checkbox"/> Certificate Of Occupancy	_____		
	date		
<input type="checkbox"/> Performance Guarantee Released	_____	_____	
	date	signature	
<input type="checkbox"/> Defect Guarantee Submitted	_____	_____	_____
	submitted date	amount	expiration date

**WRITTEN STATEMENTS
FOR
TUCHENHAGEN-ZAJAC LLC**

Submitted to:

**City of Portland
City Hall
389 Congress Street
Portland, Maine 04101**

Submitted by:

**Environmental Engineering & Remediation, Inc.
222 St. John Street
Suite 314
Portland, Maine 04102**

May 21, 1999

**Written Statements
For
Tuchenhagen-Zajac, LLC**

Plan Narrative

Tuchenhagen-Zajac, LLC (formerly Zajac) is located at 1000 Riverside Street in Portland adjacent to the Riverside Golf Course. The company is a light industrial/manufacturing facility concentrating in the food and pharmaceutical industries. Their business has increased dramatically with the recent Tuchenhagen merge. The existing facility is approximately 18,000 SF and sits on a 3.87 acre parcel. The building consists of office space and manufacturing and employs about 60 people. The proposed 17,500 SF expansion will provide additional manufacturing area as well as employment for another 20 people.

All rights of ways, easements and encumbrances of record are noted in the attached deed. Solid waste disposal is currently contracted out and will continue in that fashion. There are two trash receptacles located at the back of the facility.

The applicant has requested "capacity to serve" letters from the City of Portland (sewer), Portland Water District, Central Maine Power and Northern Utilities. These letters have not yet been received but will be forwarded to the City when they are.

An attached Stormwater Management Report discusses the pre and post drainage conditions. There are no drainage or topography problems associated with the site.

The project is anticipated to be constructed within six months. The project schedule will be to start construction on July 1st and complete construction by the end of the year.

There are no state or federal permits required. There are no other pending applications.

The applicant's evidence of financial capability to undertake and complete this development is attached. The applicant's technical capability to undertake this project is evident in their selection of Environmental Engineering & Remediation, Inc. of Portland for the site engineering and Cimino Construction of Scarborough for construction of the building addition.

QUITCLAIM DEED WITH COVENANT

915 FOREST AVENUE ASSOCIATES ("Grantor"), a Maine general partnership whose mailing address is c/o William M. Zajac, 413 Old Ocean House Road, Cape Elizabeth, Maine 04107, for full value and consideration paid, hereby grants to TUCHENHAGEN-ZAJAC, LLC, ("Grantee"), a Maryland limited liability company whose mailing address at 9160 Red Branch Road, Columbia, Maryland 21202, with QUITCLAIM COVENANT, the following real estate in the City of Portland, County of Cumberland, and State of Maine:

A certain lot or parcel of land with the buildings situated thereon on the northwesterly side of Riverside Street, in the City of Portland, County of Cumberland and State of Maine, and being further bounded and described as follows:

Beginning at an iron pin in a maple tree on said Northwesterly side of Riverside Street at the point of beginning of a parcel of land conveyed to the City of Portland by deed dated June 16, 1965, and recorded in the Cumberland County Registry of Deeds in Book 2901, Page 527; thence running Northwesterly by said City of Portland land six hundred sixty (660) feet to a point; thence running Southwesterly parallel with said Riverside Street three hundred (300) feet to a point; thence running Southeasterly parallel with the first described course six hundred sixty (660) feet to a point on the Northwesterly sideline of said Riverside Street; thence running Northeasterly by said Riverside Street three (300) feet to the point of beginning.

Excepting and reserving from the above-described parcel of land the parcel of land conveyed by deed from Earl J. Wahl and Gail C. Wahl to Portland Valve, Inc. dated April 9, 1975 and recorded in the Cumberland County Registry of Deeds in Book 3666, Page 211.

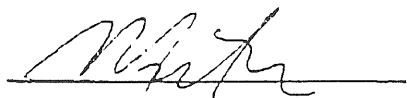
The above-described premises are conveyed subject to all rights of way, easements and encumbrances of record, including but not limited to the terms and conditions of an Agreement with the City of Portland relative to any excavations referenced in a deed of Hamlin Seed & Gravel Co., Inc. to the City of Portland dated June 16, 1965 and recorded in the Cumberland County Registry of Deeds in Book 2901, Page 527.

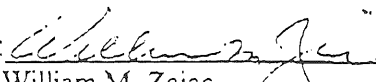
The above-described premises were conveyed by Riverside 1000 to the Grantor herein by Deed dated November 17, 1995, and recorded in the Cumberland County Registry of Deeds in Book 12218, Page 338.

IN WITNESS WHEREOF, the said 915 Forest Avenue Associates has caused this instrument to be signed this 7 of January, 1999.

Signed, Sealed and Delivered
in the presence of:

915 FOREST AVENUE
ASSOCIATES




By: 
William M. Zajac
Its General Partner

STATE OF MAINE
CUMBERLAND, ss

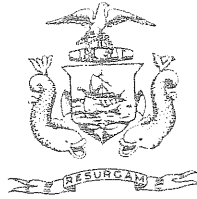
January 7, 1999

Personally appeared the above-named William M. Zajac, General Partner of 915 Forest Avenue Associates, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of 915 Forest Avenue Associates.

Before me,


Notary Public/Attorney At Law
Print Name: GREGORY L. FOSTER
My Commission Expires: _____

F:\REP\Zajac\Deed.wpd



CITY OF PORTLAND

August 6, 1999

Steve Bradstreet
EER
222 St. John Street, suite 314
Portland, ME 04102

RE: Tuchenhagen-Zajac at 1000 Riverside Street.

Dear Mr. Bradstreet

This letter is to confirm the revision to the approved site plan of the Tuchenhagen project located at 1000 Riverside Street. The approved revision includes the planting of new trees along the new driveway instead of relocating existing trees. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments.

If you have any questions regarding the revision please contact the planning staff at 874-8720.

Sincerely,

Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Sarah Hopkins, Senior Planner
P. Samuel Hoffses, Building Inspector
Jeff Tarling, City Arborist
William Bray, Director of Public Works
Tony Lombardo, Project Engineer
Lt. Gaylen McDougall, Fire Prevention
Penny Littell, Associate Corporation Counsel
Inspection Department
Development Review Coordinator
Kathleen Brown, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File

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CITY OF PORTLAND

July 19, 1999

Steve Bradstreet
EER
222 St. John Street, suite 314
Portland, ME 04102

RE: Tuchenhagen-Zajac at 1000 Riverside Street.

Dear Mr. Bradstreet

This letter is to confirm the revision to the approved site plan of the Tuchenhagen project located at 1000 Riverside Street. The approved revision includes the use of a non-woven geotextile with a crushed stone ballast for the construction of the wet pond. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments.

If you have any questions regarding the revision please contact the planning staff at 874-8720.

Sincerely,

Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Sarah Hopkins, Senior Planner
P. Samuel Hoffses, Building Inspector
Jeff Tarling, City Arborist
William Bray, Director of Public Works
Tony Lombardo, Project Engineer
Lt. Gaylen McDougall, Fire Prevention
Penny Littell, Associate Corporation Counsel
Inspection Department
Development Review Coordinator
Kathleen Brown, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File

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Department of Planning and Urban Development
SUBDIVISION/SITE DEVELOPMENT

COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

DRAFT

Date _____

Name of Project Tuchentagen - Zajac

Address/Location 1000 Riverside Street

Developer _____

Form of Performance Guarantee _____

Type of Development: _____ Subdivision _____ Site Plan (Major/Minor)

TO BE FILLED OUT BY APPLICANT:

Item	PUBLIC			PRIVATE		
	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
1. STREET/SIDEWALK						
Road				<u>4</u>		
Granite Curbing	<u>47</u>	<u>30</u>	<u>1410</u>	<u>0</u>		
Sidewalks				<u>0</u>		
Esplanades				<u>0</u>		
Monuments				<u>0</u>		
Street Lighting				<u>0</u>		
Other				<u>0</u>		
2. SANITARY SEWER						
Manholes				<u>1</u>	<u>1900</u>	<u>1900</u>
Piping				<u>56</u>	<u>28</u>	<u>1568</u>
Connections						
Other				<u>375</u>	<u>20</u>	<u>7500</u>
3. STORM DRAINAGE						
Manholes						
Catchbasins				<u>2</u>	<u>1750</u>	<u>3500</u>
Piping				<u>250'</u>	<u>30</u>	<u>7500</u>
Detention Basin				<u>1</u>		<u>1750</u>
Other				<u>10 cy</u>	<u>50</u>	<u>500</u>
4. SITE LIGHTING						
	<u>N/A</u>					
5. EROSION CONTROL						
				<u>400'</u>	<u>2,50</u>	<u>1000'</u>
				<u>30</u>	<u>3200</u>	<u>960'</u>
6. RECREATION AND OPEN SPACE AMENITIES						
	<u>N/A</u>					

Item	PUBLIC			PRIVATE		
	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
7 LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)			<u>7125</u>	<u>25</u>	<u>285</u>	<u>7125</u>
8 MISCELLANEOUS				<u>36000 SF</u>	<u>.25</u>	<u>9000</u>
TOTAL:						<u>145785</u>
GRAND TOTAL:						<u>189,498</u>

1/20/11
CUT/Y...
ER

INSPECTION FEE (to be filled out by City)

	PUBLIC	PRIVATE	TOTAL
A: 1.7% of totals:	_____	_____	_____
or			
B: Alternative Assessment:	_____	_____	_____
Assessed by:	_____ (name)	_____ (name)	_____

Fee 3222'' ?

CIMINO CONSTRUCTION CO.
Mailing Address: P. O. Box 1627
Portland, Maine 04104-1627

Tel. (207) 883-5138 125 Pleasant Hill Road, Scarborough, Maine 04074 Fax (207) 883-1163

Fax Transmittal Sheet

Date: July 13, 1999

To: Deluca-Hoffman

Attention: Jim Wendell

Total Number of Pages (including this cover sheet) 3

From: Santo Cimino

Item: _____ Shop Drawings _____ Prints _____ Specifications
_____ Letter _____ XXX Other

Purpose:

_____ For Approval _____ For Your Use
_____ XXX Review & Comment _____ For Your Information
_____ Other

Message:

Jim, please review and let me know if you have concerns. The numbers were provided by Bob St. Clair at White Bros. (854-9173) . He will be happy to clarify any issues.

Thanks,

Santo



CITY OF PORTLAND

June 29, 1999

Steve Bradstreet
EER
222 St. John Street, Suite 314
Portland, ME 04102

RE: Tuchenhagen-Zajac LLC at 1000 Riverside Street

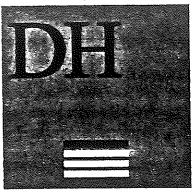
Dear Mr. Bradstreet:

On June 29, 1999, the Portland Planning Authority granted minor site plan approval for the Tuchenhagen addition at 1000 Riverside Street.

The approval is based on the submitted site plan. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

Please note the following provisions and requirements for all site plan approvals:

1. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. A one year extension may be granted by this department if requested by the applicant in writing prior to the expiration date of the site plan.
2. A performance guarantee in a form acceptable to the City of Portland and an inspection fee equal to 1.7% of the performance guarantee will have to be posted before beginning any site construction or issuance of a building permit.
3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
4. Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.
5. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)



DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207 775 1121
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

MEMORANDUM

TO: Sarah Hopkins, Senior Planner

FROM: Jim Wendel, P.E. Development Review Coordinator

DATE: June 29, 1999

RE: Site Plan Review
Tuchenhagen-Zajac LLC
1000 Riverside Street

A review of the revised site plan submission dated 6/17/99, rev. C, has been completed. We offer the following comment:

1. The wet pond calculations are appropriate. However, coordination with the applicant's engineer has indicated that he will provide another revised plan with some additional details of the wet pond.

Based on the above submitted plans and item one above, all technical design issues are addressed.

Should you have any questions please call.



EER ENVIRONMENTAL
ENGINEERING &
REMEDICATION, INC.

222 St. John Street, Suite 314, Portland, Maine 0410
Tel 207/828-1272

Post-It® Fax Note	7671	Date	# of pages
To	Jim Wendell	From	Sarah Hopkins
Co./Dept.		Co.	
Phone #		Phone #	
Fax #	879 0896	Fax #	

June 18, 1999

Ms. Sarah Hopkins
Senior Planner
City Hall
389 Congress Street
Portland, ME 04112

Subject: Tuchenhagen-Zajac Development

Dear Sarah:

Attached are 7 sets of plans and 3 sets of supporting wet pond calculations. This submission addresses the comments in your June 11, 1999 letter. There have been a couple of additional changes to the plans resulting from a meeting with the State Fire Marshall and receipt of S.W. Cole Engineering's geotechnical report. The changes do not change the layout or overall concept of the project, but need to be brought to your attention. The following discussion addresses the comments in your letter:

1. A note has been shown on sheet C100 regarding the installation of circular granite curb for both entrances. The existing entrance has circular granite curb into the property which will be replaced or reset by the contractor for the Riverside Street reconstruction. The new entrance will be the responsibility of the site contractor. Either way, the installation will be coordinated with the Riverside Street reconstruction.
2. The parking spaces were mistakenly shown as 9'x18'. These have been revised on the layout plan (C100) and the striping plan (C102).
3. A note has been modified on sheet C100 to clearly note the Riverside Street reconstruction work as it applies to granite curb at the entrances and sidewalk.
4. A wet pond has been designed incorporating the design of the detention basin. The volume above the permanent pool elevation has remained constant, therefore not changing the detention basin design. The pond has been reoriented to provide a longer axis for total suspended solids to settle out. The wet pond design required deepening the pond depth by 5 feet. This is shown on sheet C101. The wet pond design calculations are attached (3 copies).

Ms. Sarah Hopkins
June 18, 1999
Page 2

5. With the design of the wet pond came the regrading of the detention pond which appears on sheet C101.
6. An erosion control plan and narrative is shown on sheet C101 with accompanying details on sheet C103.

Two other plan modifications that are shown on the attached plans are addressed below:

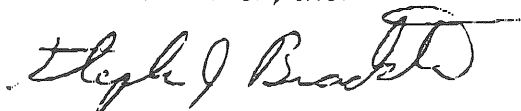
In meeting with the State Fire Marshall and Code Enforcement it was determined that a sprinkler system is required for the building expansion. This requires the installation of a 6-inch fire service from the main in Riverside Street to the utility room of the new addition. I have discussed this with Jim Pandiscio of the Portland Water District (PWD) and he indicated that a fire service is acceptable without the need of a separate capacity letter. The only thing he requested is that the water main tap be done by a PWD certified contractor. This has been noted on sheet C100.

The second plan modification is the lowering of the floor elevation of the proposed addition. S.W. Cole Engineering's borings revealed soft clays that would be compressed with the fill under the slab and building loads. By lowering the proposed finish floor by 2.4 feet, we have minimized building settlement. This required minor grading revisions to the parking lot, the most evident being a foot drop in elevation at the catch basin. The revised design did not change the watershed areas so the stormwater calculations are still valid.

I trust that the above discussion satisfactorily addresses the City's comments. Should you have any additional questions, please feel free to give me a call. I appreciate the planning staff's responsiveness in reviewing this project in a very timely manner.

Very truly,

ENVIRONMENTAL ENGINEERING
& REMEDIATION, INC.



Stephen J. Bradstreet, P.E.

Enclosure

TSS Removal Efficiencies for Wet Ponds

1 Pond	L:W > 4:1	Depth	1/2 V	1V	2V	3V
		3	84	90	93	94
		5	86	93	95	96
		7	88	94	96	97
1 Pond	2:1 < L:W < 4:1	Depth	1/2 V	1V	2V	3V
		3	78	85	89	90
		5	82	88	92	93
		7	83	89	93	94
1 Pond	1:1 < L:W < 2:1	Depth	1/2 V	1V	2V	3V
		3	73	79	83	84
		5	75	83	87	88
		7	76	84	89	90
2 Ponds	L:W > 4:1	Depth	1/2 V	1V	2V	3V
		3	86	93	95	96
		6	88	94	97	97
		7	88	94	97	99
2 Ponds	2:1 < L:W < 4:1	Depth	1/2 V	1V	2V	3V
		3	84	90	93	95
		6	85	93	95	96
		7	86	93	96	97
2 Ponds	1:1 < L:W < 2:1	Depth	1/2 V	1V	2V	3V
		3	81	88	92	93
		5	82	89	93	94
		7	83	90	94	95
3 Ponds	L:W > 4:1	Depth	1/2 V	1V	2V	3V
		3	88	93	96	97
		6	88	94	97	98
		7	89	95	97	98
3 Ponds	2:1 < L:W < 4:1	Depth	1/2 V	1V	2V	3V
		3	86	93	95	96
		5	86	93	96	97
		7	87	94	97	97
3 Ponds	1:1 < L:W < 2:1	Depth	1/2 V	1V	2V	3V
		3	84	90	94	95
		5	84	92	95	96
		7	85	93	95	97

Project Zajac
Location _____
Subject _____

By SJR Date 6/15/99
Checked _____ Date _____ Sheet _____ Of _____
Revised _____ Date _____ Job No. _____



Stormwater Treatment

Based on Stormwater Best Management Practices Training (November 1995) w/ TSS removal efficiency update faxed to EER by Jim Wendel
TSS removal efficiency required (%) based on post-development impervious (%)

Sliding scale:

Subarea	Area	Description	Total Area
1	.35 A	Bldg, Pav't	.48
2	.95		1.10
3	.68		.75
4	.47		1.00
5	.03		.50
	2.48 A		3.92 A

$$2.48 / 3.92 = .63 \text{ or } 63\% \text{ impervious}$$

Sliding scale: 63% imp. \approx 60% TSS removal

Design wet pond for TSS removal. Pond will be 1:1 to 2:1 length: width ratio

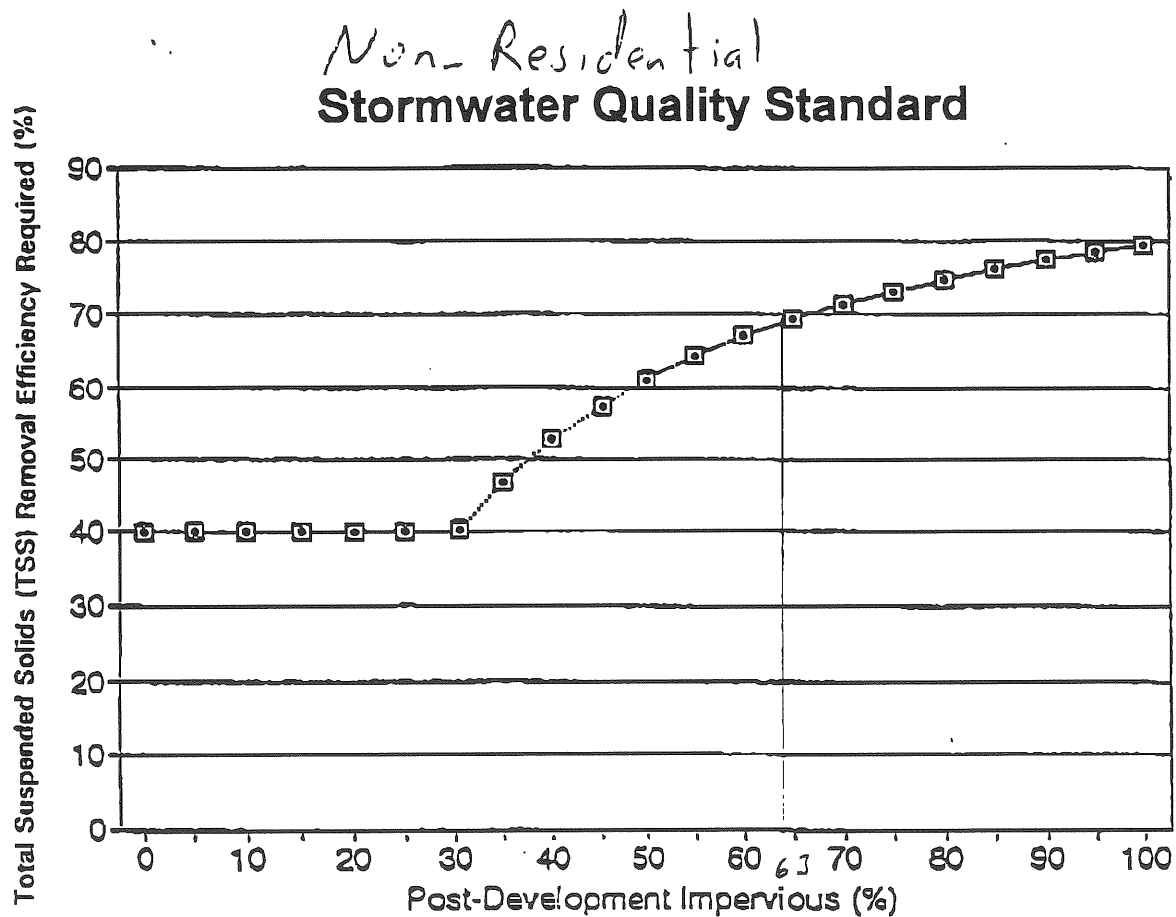


Figure 5.1.

For the purposes of this manual, *impervious surface* is fully defined as a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam, or other surfaces which similarly impede the natural infiltration of stormwater.

This BMP manual is not regulatory. However, the practices described in this manual are designed to ensure that stormwater runoff from a development site not adversely affect the physical, biological, and chemical properties of the receiving water or of associated aquatic habitats. As such, use of this manual may assist compliance with applicable statutes, regulations, and ordinances. Other equivalent techniques of stormwater treatment, of course, will also assist with compliance.

Alternatively, the criterion of reducing post development TSS loadings to predevelopment levels may be applied. This criterion is not intended to be used as an alternative to achieving adequate control where existing high sediment loadings are the result of poor management of "developed" sites such as farmlands where appropriate erosion control components of a USDA conservation management plan are not being used, or sites where land disturbed by previous development (e.g., gravel pits or log yards) was not permanently stabilized (EPA, 1993.)

Project Zajac
 Location _____
 Subject _____

By SJB DATE 6/15/99
 Checked _____ DATE _____ SHEET _____ Of _____
 Revised _____ DATE _____ Job No. _____



Stormwater Treatment

1. Pool Volume

MDEP recommends the permanent pool be equivalent to the volume of a 2.5 inch storm (\pm 2 yr storm)

For design purpose the 2 yr storm (3.0 inches) is used.

Subarea 1	Volume =	.05 AF
2		.16 AF
3		.12 AF
4		.04 AF
5		0 AF
		<u>.37 AF</u>

Based on a 1 Pond design for $1:1 < L:W < 2:1$ a $\frac{1}{2}$ V storm has a removal efficiency of 73% for a 3 foot depth.

The use of a 3.0 inch event allows for MDEP's recommendation of using 125% V to account for sediment accumulation

2. Pool Depth

The 3 foot mean depth is the pond volume measured one foot below permanent pool elevation divided by the surface area at that elevation

3. Pond Shape - Due to site constraints a 1:1 length to width is being used.

4. Drainage Area - The recommended drainage area for wet ponds are greater than 20 acres. This is \pm 4 acres but should be effective.

Project Zajac
Location _____
Subject _____

By SJB
Checked _____
Revised _____

DATE 6/15/95
DATE _____
DATE _____

SHEET _____ Of _____
Job No. _____



5. Side slopes - Due to the industrial area with no residential areas around, and site constraints, 3:1 side slopes are proposed.
6. Pond is not in clay soils, though clay is encountered 12 to 15 feet below existing grade.
7. Pond is not in high permeable soils
8. Pond outlet is matching existing pond outlet. There is no indication of the outlet being below groundwater table.
9. The pipe inlet to the pond is within one foot of the permanent pool elevation.
10. Pond outlet design is the same design as for the detention pond. Riprap protection will be placed around the outlet structure's inlet pipe.
11. The paved driveway at elevation 66 will act as a 100 foot level spillway.
12. Fill embankment design is not required since pond is being excavated.

Project Zajac
 Location _____
 Subject _____

By SJB
 Checked _____
 Revised _____

DATE 6/15/99
 DATE _____
 DATE _____

SHEET _____ Of _____
 Job No. _____



Pond Design

Based on a 2:1 length:width ratio and a mean depth of ± 3 feet, a $\frac{1}{2} V$ removes 73% of TSS

$3.0 \text{ inches} = .37 \text{ AF} = V$

$\frac{1}{2} V = .185 \text{ AF} = 8,060 \text{ CF}$

Elev	Area	Inc Storage
57	0 SF	650
58	1300 SF	1600
59	1900 SF	2250
60	2600 SF	2950
61	3300 SF	3700
62	4100 SF	<u>71,150 CF One foot below permanent pool level.</u>
63	5000 SF	

Mean depth = $\frac{11,150}{3300 \text{ SF}} = 3.4 \text{ ft}$

Average depth = 4 ft



CITY OF PORTLAND

June 11, 1999

Steve Bradstreet
EER
222 St. John Street
Portland ME 04102

RE: Tuckenhagen-Zajac Development

Dear Steve:

Representatives from Public Works, Planning, Fire, Traffic, Corporation Counsel and Building Inspections have reviewed the Tuckenhagen submission dated 5-20-99.

We have made the following comments:

- Granite curb radii must be placed at the driveway opening.
- Parking spaces should measure 9 x 19 ft. with an aisle width of 24 feet.
- A note should be added to the plan regarding the road construction work along Riverside.
- We will need to see a treatment plan for the stormwater leaving the site.
- Please submit the elevation/grading of the expanded detention basin.
- Please submit an erosion control plan.

These are the final comments regarding the proposed plan.

We anticipate approving the site plan when we receive the requested items.

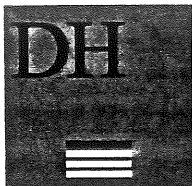
Please call if you have any questions.

Sincerely,

Sarah Hopkins
Senior Planner

cc: Alexander Jaegerman, Chief Planner
Jim Wendel, Development Review Coordinator

O:\PLANDEVREV\WRIV1000\LETTERS\BRADSTRT.JMD



MEMORANDUM

TO: Sarah Hopkins, Senior Planner

FROM: Jim Wendel, P.E., Development Review Coordinator

DATE: June 8, 1999

RE: Site Plan Review
Tuchenhagen-Zajac LLC
1000 Riverside Street

A review of the site plan dated 5/20/99 has been completed. We offer the following comments:

1. The parking layout reflects a layout with parking space dimensions other than 9' x 19' and an aisle width of 24'.
2. The narrative suggests that the entrance is based on the road reconstruction work in Riverside Street; recommend the plan note this detail for clarity. If the curb from the road reconstruction ends at the right-of-way line, we suggest that the curb be extended through the radius of the entrance curb with appropriate tip-down curb pieces. This recommendation would apply to both curb cuts.
3. The stormwater management report is satisfactory. However, water quality measures are required since the expanded parking is greater than the minimum 25 cars or 10 trucks criteria. This standard can be waived if the applicant can demonstrate that the runoff will receive treatment before it enters the receiving waters.
4. The elevation and/or grading of the bottom of the expanded detention basin is not clear.
5. Erosion control notes in conformance with the technical standards manual are needed. An appropriate temporary erosion control BMP should be shown for the detention basin outlet pipe.

Should you have any questions, please call.

June 18, 1999

Ms. Sarah Hopkins
Senior Planner
City Hall
389 Congress Street
Portland, ME 04112

Subject: Tuchenhagen-Zajac Development

Dear Sarah:

Attached are 7 sets of plans and 3 sets of supporting wet pond calculations. This submission addresses the comments in your June 11, 1999 letter. There have been a couple of additional changes to the plans resulting from a meeting with the State Fire Marshall and receipt of S.W. Cole Engineering's geotechnical report. The changes do not change the layout or overall concept of the project, but need to be brought to your attention. The following discussion addresses the comments in your letter:

1. A note has been shown on sheet C100 regarding the installation of circular granite curb for both entrances. The existing entrance has circular granite curb into the property which will be replaced or reset by the contractor for the Riverside Street reconstruction. The new entrance will be the responsibility of the site contractor. Either way, the installation will be coordinated with the Riverside Street reconstruction.
2. The parking spaces were mistakenly shown as 9'x18'. These have been revised on the layout plan (C100) and the striping plan (C102).
3. A note has been modified on sheet C100 to clearly note the Riverside Street reconstruction work as it applies to granite curb at the entrances and sidewalk.
4. A wet pond has been designed incorporating the design of the detention basin. The volume above the permanent pool elevation has remained constant, therefore not changing the detention basin design. The pond has been reoriented to provide a longer axis for total suspended solids to settle out. The wet pond design required deepening the pond depth by 5 feet. This is shown on sheet C101. The wet pond design calculations are attached (3 copies).

5. With the design of the wet pond came the regrading of the detention pond which appears on sheet C101.
6. An erosion control plan and narrative is shown on sheet C101 with accompanying details on sheet C103.

Two other plan modifications that are shown on the attached plans are addressed below:

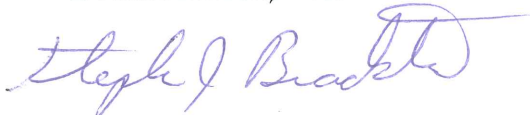
In meeting with the State Fire Marshall and Code Enforcement it was determined that a sprinkler system is required for the building expansion. This requires the installation of a 6-inch fire service from the main in Riverside Street to the utility room of the new addition. I have discussed this with Jim Pandiscio of the Portland Water District (PWD) and he indicated that a fire service is acceptable without the need of a separate capacity letter. The only thing he requested is that the water main tap be done by a PWD certified contractor. This has been noted on sheet C100.

The second plan modification is the lowering of the floor elevation of the proposed addition. S.W. Cole Engineering's borings revealed soft clays that would be compressed with the fill under the slab and building loads. By lowering the proposed finish floor by 2.4 feet, we have minimized building settlement. This required minor grading revisions to the parking lot, the most evident being a foot drop in elevation at the catch basin. The revised design did not change the watershed areas so the stormwater calculations are still valid.

I trust that the above discussion satisfactorily addresses the City's comments. Should you have any additional questions, please feel free to give me a call. I appreciate the planning staff's responsiveness in reviewing this project in a very timely manner.

Very truly,

ENVIRONMENTAL ENGINEERING
& REMEDIATION, INC.



Stephen J. Bradstreet, P.E.

Enclosure

Project Zajac
Location _____
Subject _____

By SJB DATE 6/15/99
Checked _____ DATE _____ SHEET _____ Of _____
Revised _____ DATE _____ Job No. _____



Stormwater Treatment

Based on Stormwater Best Management Practices Training (November 1995) w/ TSS removal efficiency update faxed to EER by Jim Wendel
TSS removal efficiency required (%) based on post-development impervious (%)

Sliding scale:

			Total Area
Subarea 1	.35 A	Bldg, Pav't	.48
2	.95		1.10
3	.68		.75
4	.47		1.00
5	<u>.03</u>		<u>.59</u>
	2.48 A		3.92 A

$$2.48 / 3.92 = .63 \text{ or } 63\% \text{ impervious}$$

Sliding scale: 63% imp. \approx 69% TSS removal

Design wet pond for TSS removal. Pond will be 1:1 to 2:1 length: width ratio

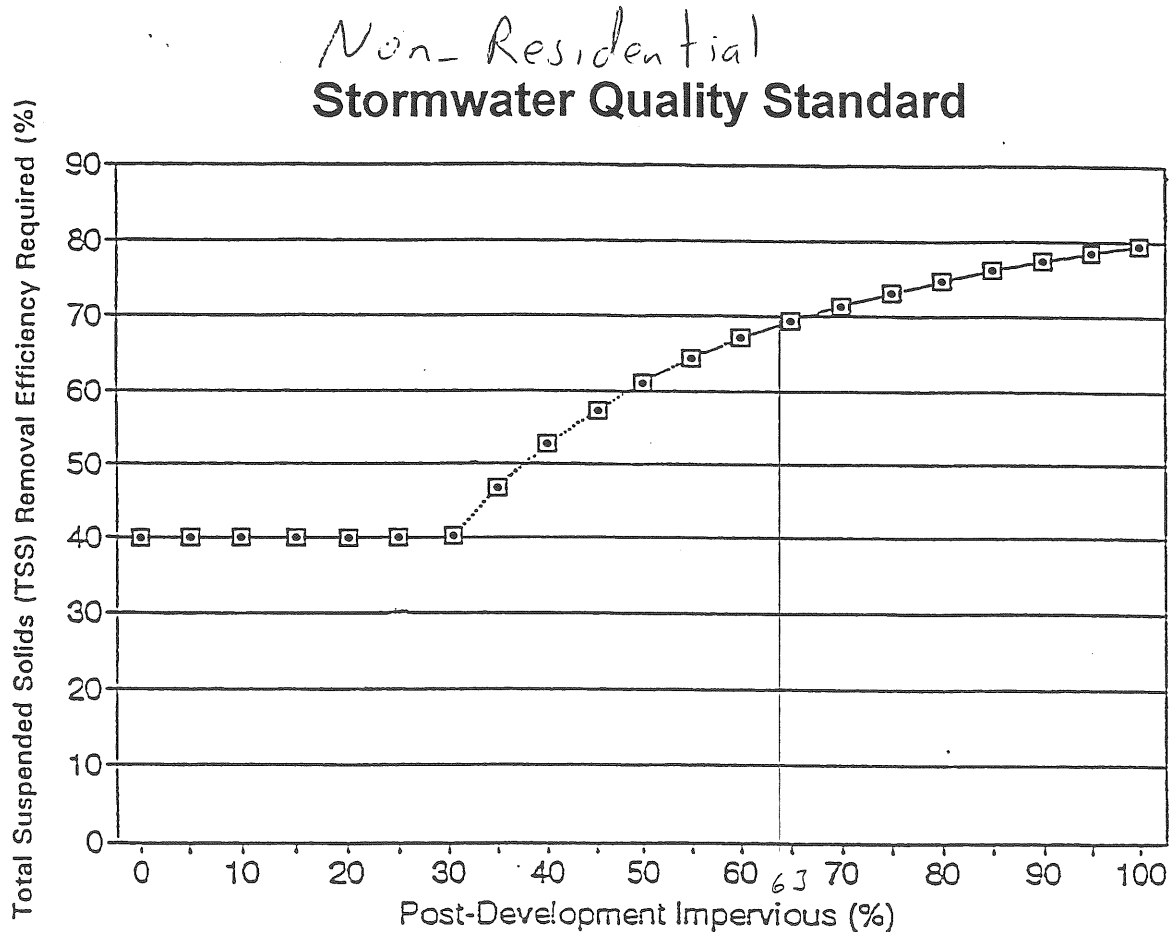


Figure 5.1.

For the purposes of this manual, *impervious surface* is fully defined as a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam, or other surfaces which similarly impede the natural infiltration of stormwater.

This BMP manual is not regulatory. However, the practices described in this manual are designed to ensure that stormwater runoff from a development site not adversely affect the physical, biological, and chemical properties of the receiving water or of associated aquatic habitats. As such, use of this manual may assist compliance with applicable statutes, regulations, and ordinances. Other equivalent techniques of stormwater treatment, of course, will also assist with compliance.

Alternatively, the criterion of reducing post development TSS loadings to predevelopment levels may be applied. This criterion is not intended to be used as an alternative to achieving adequate control where existing high sediment loadings are the result of poor management of "developed" sites such as farmlands where appropriate erosion control components of a USDA conservation management plan are not being used, or sites where land disturbed by previous development (e.g., gravel pits or log yards) was not permanently stabilized (EPA, 1993.)

TSS Removal Efficiencies for Wet Ponds

1 Pond	L:W > 4:1	Depth	1/2 V	1V	2V	3V
		3	84	90	93	94
		5	86	93	95	96
		7	88	94	96	97
1 Pond	2:1 < L:W < 4:1	Depth	1/2 V	1V	2V	3V
		3	78	85	89	90
		5	82	88	92	93
		7	83	89	93	94
1 Pond	1:1 < L:W < 2:1	Depth	1/2 V	1V	2V	3V
		3	73	79	83	84
		5	75	83	87	88
		7	76	84	89	90
2 Ponds	L:W > 4:1	Depth	1/2 V	1V	2V	3V
		3	86	93	95	96
		5	88	94	97	97
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2 Ponds	2:1 < L:W < 4:1	Depth	1/2 V	1V	2V	3V
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		5	82	89	93	94
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Stormwater Treatment

1. Pool Volume

MDEP recommends the permanent pool be equivalent to the volume of a 2.5 inch storm (\pm 2 yr storm)

For design purpose the 2 yr storm (3.0 inches) is used.

Subarea 1	Volume =	.05 AF
2		.16 AF
3		.12 AF
4		.04 AF
5		0 AF
		<hr/>
		.37 AF

Based on a 1 Pond design for $1:1 < L:W < 2:1$ a $\frac{1}{2} V$ storm has a removal efficiency of $\approx 73\%$ for a 3 foot depth.

The use of a 3.0 inch event allows for MDEP's recommendation of using $125\% V$ to account for sediment accumulation

2. Pool Depth

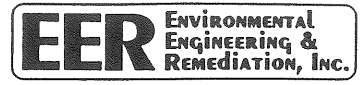
The 3 foot mean depth is the pond volume measured one foot below permanent pool elevation divided by the surface area at that elevation

3. Pond Shape - Due to site constraints a 1:1 length to width is being used.

4. Drainage Area - The recommended drainage area for wet ponds are greater than 20 acres. This is \pm 4 acres but should be effective



5. Side slopes - Due to the industrial area with no residential areas around, and site constraints, 3:1 side slopes are proposed.
6. Pond is not in clay soils, though clay is encountered 12 to 15 feet below existing grade.
7. Pond is not in high permeable soils
8. Pond outlet is matching existing pond outlet. There is no indication of the outlet being below groundwater table.
9. The pipe inlet to the pond is within one foot of the permanent pool elevation.
10. Pond outlet design is the same design as for the detention pond. Riprap protection will be placed around the outlet structure's inlet pipe.
11. The paved driveway, at elevation 66 will act as a 100 foot level spillway.
12. Fill embankment design is not required since pond is being excavated.



Pond Design

Based on a 2:1 length:width ratio and a mean depth of ± 3 feet, a $\frac{1}{2} V$ removes $\approx 3\%$ of TSS

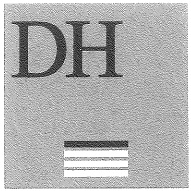
$$3.0 \text{ inches} = 1.37 \text{ AF} = V$$

$$\frac{1}{2} V = 1.85 \text{ AF} = 8,060 \text{ CF}$$

Elev	Area	Inc Storage
57	0 SF	650
58	1300 SF	1600
59	1900 SF	2250
60	2600 SF	2950
61	3300 SF	3700
62	4100 SF	71,150 CF One foot below permanent pool level.
63	5000 SF	

$$\text{Mean depth} = \frac{11,150 \text{ CF}}{3300 \text{ SF}} = 3.4 \text{ ft}$$

$$\text{Average depth} = 4 \text{ ft}$$



MEMORANDUM

TO: Sarah Hopkins, Senior Planner

FROM: Jim Wendel, P.E., Development Review Coordinator

DATE: June 8, 1999

RE: Site Plan Review
Tuchenhagen-Zajac LLC
1000 Riverside Street

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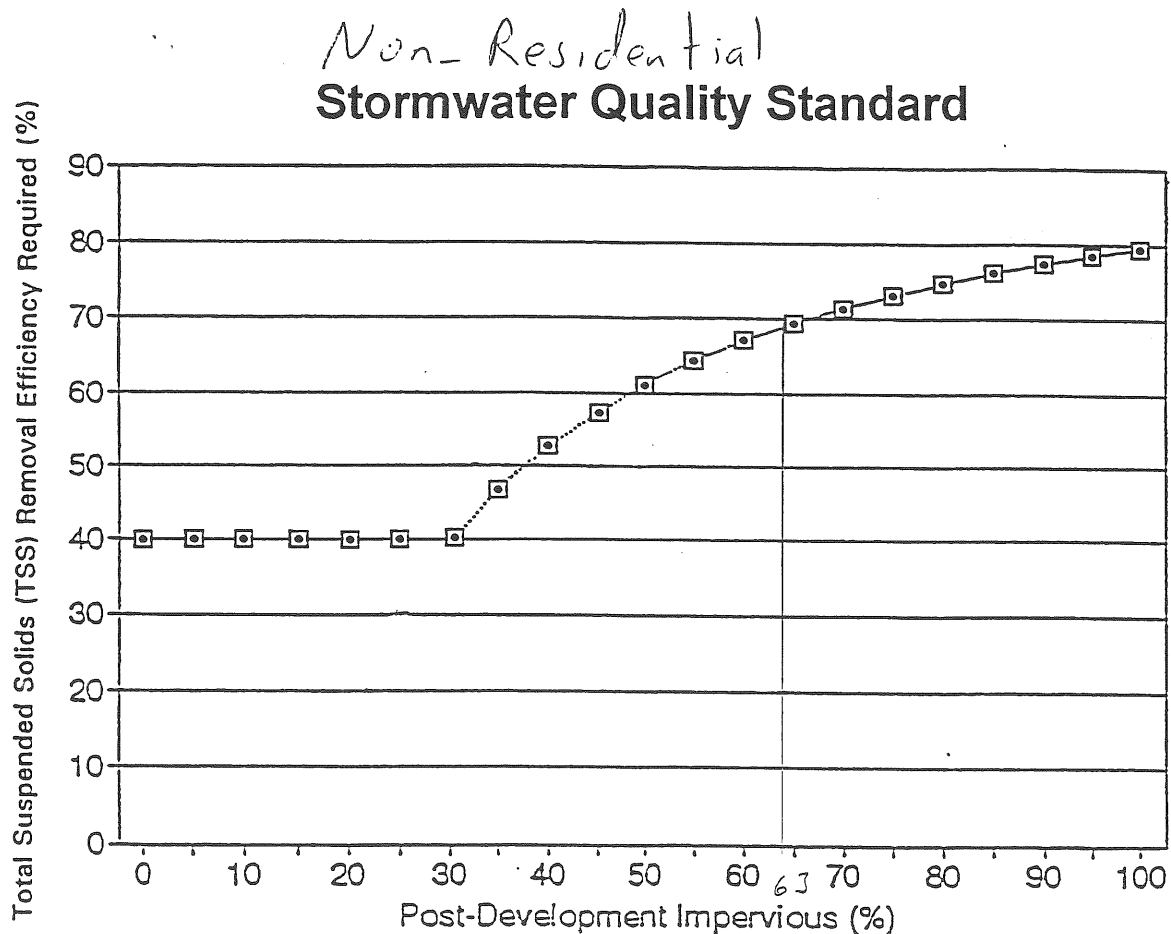


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The 3 foot mean depth is the pond volume measured one foot below permanent pool elevation divided by the surface area at that elevation

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4. Drainage Area - The recommended drainage area for wet ponds are greater than 20 acres. This is ± 4 acres but should be effective

Project Zajac
Location _____
Subject _____

By SJD
Checked _____
Revised _____

DATE 6/15/95
DATE _____
DATE _____

SHEET _____ Of _____
Job No. _____



5. Side slopes - Due to the industrial area with no residential areas around, and site constraints, 3:1 side slopes are proposed.
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Pond Design

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 and a mean depth of ± 3 feet, a $\frac{1}{2} V$
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3.0 inches = 1.37 AF = V

$\frac{1}{2} V = 1.185 AF = 8,060 CF$

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57	0 SF	650
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59	1900 SF	2250
60	2600 SF	2950
61	3300 SF	3700
62	4100 SF	71,150 CF One foot below permanent pool level.
63	5000 SF	

Mean depth = $\frac{11,150 CF}{3300 SF} = 3.4 ft$

Average depth = 4 ft

6/2/99

- How many vehicles/trucks turning radius
- Need 30ft radii on new driveway.
- Do we need to formalize agreement w/ city
- plant in 10ft setback.

**WRITTEN STATEMENTS
FOR**

TUCHENHAGEN-ZAJAC LLC

Submitted to:

**City of Portland
City Hall
389 Congress Street
Portland, Maine 04101**

Submitted by:

**Environmental Engineering & Remediation, Inc.
222 St. John Street
Suite 314
Portland, Maine 04102**

May 21, 1999

**Written Statements
For
Tuchenhagen-Zajac, LLC**

Plan Narrative

Tuchenhagen-Zajac, LLC (formerly Zajac) is located at 1000 Riverside Street in Portland adjacent to the Riverside Golf Course. The company is a light industrial/manufacturing facility concentrating in the food and pharmaceutical industries. Their business has increased dramatically with the recent Tuchenhagen merge. The existing facility is approximately 18,000 SF and sits on a 3.87 acre parcel. The building consists of office space and manufacturing and employs about 60 people. The proposed 17,500 SF expansion will provide additional manufacturing area as well as employment for another 20 people.

All rights of ways, easements and encumbrances of record are noted in the attached deed. Solid waste disposal is currently contracted out and will continue in that fashion. There are two trash receptacles located at the back of the facility.

The applicant has requested "capacity to serve" letters from the City of Portland (sewer), Portland Water District, Central Maine Power and Northern Utilities. These letters have not yet been received but will be forwarded to the City when they are.

An attached Stormwater Management Report discusses the pre and post drainage conditions. There are no drainage or topography problems associated with the site.

The project is anticipated to be constructed within six months. The project schedule will be to start construction on July 1st and complete construction by the end of the year.

There are no state or federal permits required. There are no other pending applications.

The applicant's evidence of financial capability to undertake and complete this development is attached. The applicant's technical capability to undertake this project is evident in their selection of Environmental Engineering & Remediation, Inc. of Portland for the site engineering and Cimino Construction of Scarborough for construction of the building addition.

QUITCLAIM DEED WITH COVENANT

915 FOREST AVENUE ASSOCIATES ("Grantor"), a Maine general partnership whose mailing address is c/o William M. Zajac, 413 Old Ocean House Road, Cape Elizabeth, Maine 04107, for full value and consideration paid, hereby grants to TUCHENHAGEN-ZAJAC, LLC, ("Grantee"), a Maryland limited liability company whose mailing address at 9160 Red Branch Road, Columbia, Maryland 21202, with QUITCLAIM COVENANT, the following real estate in the City of Portland, County of Cumberland, and State of Maine:

A certain lot or parcel of land with the buildings situated thereon on the northwesterly side of Riverside Street, in the City of Portland, County of Cumberland and State of Maine, and being further bounded and described as follows:

Beginning at an iron pin in a maple tree on said Northwesterly side of Riverside Street at the point of beginning of a parcel of land conveyed to the City of Portland by deed dated June 16, 1965, and recorded in the Cumberland County Registry of Deeds in Book 2901, Page 527; thence running Northwesterly by said City of Portland land six hundred sixty (660) feet to a point; thence running Southwesterly parallel with said Riverside Street three hundred (300) feet to a point; thence running Southeasterly parallel with the first described course six hundred sixty (660) feet to a point on the Northwesterly sideline of said Riverside Street; thence running Northeasterly by said Riverside Street three (300) feet to the point of beginning.

Excepting and reserving from the above-described parcel of land the parcel of land conveyed by deed from Earl J. Wahl and Gail C. Wahl to Portland Valve, Inc. dated April 9, 1975 and recorded in the Cumberland County Registry of Deeds in Book 3666, Page 211.

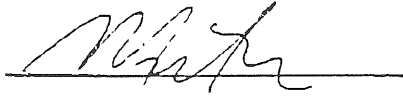
The above-described premises are conveyed subject to all rights of way, easements and encumbrances of record, including but not limited to the terms and conditions of an Agreement with the City of Portland relative to any excavations referenced in a deed of Hamlin Seed & Gravel Co., Inc. to the City of Portland dated June 16, 1965 and recorded in the Cumberland County Registry of Deeds in Book 2901, Page 527.

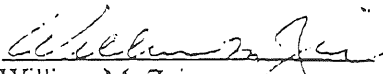
The above-described premises were conveyed by Riverside 1000 to the Grantor herein by Deed dated November 17, 1995, and recorded in the Cumberland County Registry of Deeds in Book 12218, Page 338.

IN WITNESS WHEREOF, the said 915 Forest Avenue Associates has caused this instrument to be signed this 7 of January, 1999.

Signed, Sealed and Delivered
in the presence of

915 FOREST AVENUE
ASSOCIATES



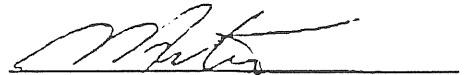
By: 
William M. Zajac
Its General Partner

STATE OF MAINE
CLUMBERLAND, ss

January 7 1999

Personally appeared the above-named William M. Zajac, General Partner of 915 Forest Avenue Associates, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of 915 Forest Avenue Associates.

Before me,


Notary Public/Attorney At Law
Print Name: Gregory L. Foster
My Commission Expires: _____

PARBPZajacDeed.wpd

June 7, 1999

Ms. Sarah Hopkins
Senior Planner
Planning Department
City of Portland
389 Congress Street
Portland, Maine 04101

**Subject: Tuchenhagen-Zajac LLC
Major Site Development**

Dear Sarah:

Attached are seven copies of "capacity to serve" letters from the utilities. Also attached are copies of their financial capability.

If you have any questions or need additional information, please feel free to give me a call.

Very truly,

ENVIRONMENTAL ENGINEERING
& REMEDIATION, INC.



Stephen J. Bradstreet, P.E.



Mail Code:
P.O. Box 1596
Baltimore, MD 21203

Tel: 410-244-4059

May 24, 1999

EER Incorporated
Suite 3154
222 St John Street
Portland, Maine 04102

Attention: Stephen Bradstreet

Re: Tuchenhagen-Zajac, LLC Permit Application

Mr. Bradstreet:

We have been advised that in connection with the permit application of Tuchenhagen-Zajac, LLC for expansion of its facility in Portland, Maine, you have requested certain information pertaining to its funding agreements. To the best of my knowledge, Tuchenhagen-Zajac, LLC, has been and is a wholly-owned limited liability company of Tuchenhagen North America. Tuchenhagen-Zajac, LLC is a part of a cash management borrowing pool of Tuchenhagen North America, Inc. and its affiliated U.S. companies. Over the past year, there has been at least a million dollar available in such cash management pool on a daily basis that could be borrowed. The actual amount available fluctuated greatly during the year and was often many multiples of that amount.

I hope that this letter provides you with the information which you seek, but should you have any questions, please don't hesitate to call me at 410-244-4059.

Regards
The First National Bank of Maryland

By: 
Eugene A. Sutter, VP

cc: Sandy Zajac, Tuchenhagen-Zajac, LLC



May 27, 1999

Mr. Stephen J. Bradstreet, P.E.
Environmental Engineering & Remediation, Inc.
222 St. John Street, Suite 314
Portland, ME 04102

RE: Capacity To Serve 1000 Riverside Street, Portland

Dear Mr. Bradstreet:

This letter is to advise that Central Maine Power Company has sufficient 3 phase electrical capacity in the area to serve the proposed 180,000 square foot project for Tuchenhagen-Zajac.

I have enclosed a Smart Power Contractor's Handbook to help answer questions that you may have on this project. Please refer to Section 900 on underground services.

I have made a site visit and Tuchenhagen-Zajac presently has a 3 phase, 3 wire feed to an existing radial 75 kVA transformer with a deep well base located in front of the building. I propose that CMP Co. set an additional pole, approximately 10 feet in an easterly direction and in line with existing Pole 103, on Riverside Street. The proposed new pole would be within road limits. The customer will provide the trench and material (per Contractor's Handbook) along property line to the proposed new site. This is just a proposal and when plans are available, please forward them to me so we can go over other alternatives to providing electrical service to this site that you may have.

Presently, CMP Co. is billing for all 3-phase installations.

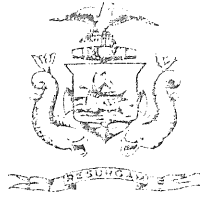
I hope you find this information helpful and look forward to hearing from you and all concerned parties on this project.

If you have any questions regarding this matter, please call me at 791-8025.

Sincerely,

Gary Crabtree
Energy Services Advisor

GC/rr
Enc.



CITY OF PORTLAND

2 June 1999

Mr. Stephen J. Bradstreet, PE,
Environmental Engineering & Remediation, Inc.,
222 St. John Street, Suite 314,
Portland, Maine 04102.

RE: Sanitary Sewer Capacity of the City Sewer System and the Portland Water District Sewage Treatment Facilities to Handle Anticipated Wastewater Flows, from the Expansion of the Tuchenhagen-Zajac LLC Facility.

Dear Mr. Bradstreet:

Both the existing eight inch diameter PVC sanitary sewer pipe, located in Riverside Street, and the Portland Water District sewage treatment facilities, located off Marginal Way, have adequate capacity to transport and treat the anticipated wastewater flows of 300 GPD, from your proposed expansion, at #1000 Riverside Street, City of Portland.

Anticipated Wastewater Flows from the Proposed Expansion

Twenty Additional Employees @ 15 GPD/Employee	= 300 GPD
Total Proposed Increase in Wastewater Flows for this Project	= 300 GPD

If I can be of further assistance, please call me at 874-8832.

Sincerely,
CITY OF PORTLAND

Frank Brancely
Frank J. Brancely, BA, MA
Senior Engineering Technician

FJB

cc: Joseph E. Gray, Director, Department of Planning & Urban Development, City of Portland
Sarah Hopkins, Senior Planner, Dept. of Planning & Urban Development, City of Portland
Katherine A. Staples, PE, City Engineer, City of Portland
Bradley A. Roland, PE, Environmental Projects Engineer, City of Portland
Anthony W. Lombardo, PE, Project Engineer, City of Portland
Stephen K. Harris, Assistant Engineer, City of Portland
Desk File



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

(207) 774-5961
FAX (207) 761-8307

May 25, 1999

Stephen J Bradstreet, PE
EER, Inc
222 St John St
Suite 314
Portland, Me 04102

Re: 1000 Riverside St- Portland

Dear Mr bradstreet

This letter is to confirm there should be an adequate supply of clean and healthful water to serve the needs of the proposed expansion at 1000 Riverside St. in Portland. Checking District records, I find there is a 12" water in Riverside. A map is enclosed indicating the water mains and hydrants in the general area of the site. Checking the usage history of the property, it currently averages 11,200 gallons per month for domestic water usage. Adding several bathrooms to the current line should not affect the current setup of a 2" service with a 1" meter. If it does the water meter can be up sized to 1 1/2" which is a 90 gallon a minute meter.

The current data from the nearest hydrant indicates there should be adequate capacity of water.

Riverside St @Evergreen Drive
Hydrant # 1764
Static pressure = 71 PSI
Flow = 1244GPM
Last Tested = 8/8/88

If the district can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Jim Pandiscio
Means Coordinator



Northern Utilities, Inc.

May 26, 1999

Mr. Stephen Bradstreet
EER, Inc.
222 St. John Street
Suite 314
Portland, ME 04102

Re: Natural Gas Service to 1000 Riverside Street

Dear Mr. Bradstreet:

This letter is in response to your letter dated May 19, 1999 to Northern Utilities requesting determination on whether there is sufficient capacity to serve a proposed 180,000 SF. expansion at Tuchenhagen-Zajac. Based on typical heating requirements of a facility of this size, Northern has sufficient capacity to serve the proposed facility with natural gas.

If you have any further questions or comments please call me at 800-924-8002.

Sincerely,

Michael T. Smith
Industrial Sales Engineer



Mail Code:
P.O. Box 1596
Baltimore, MD 21203

Tel: 410-244-4059

May 24, 1999

EER Incorporated
Suite 3154
222 St John Street
Portland, Maine 04102

Attention: Stephen Bradstreet

Re: Tuchenhagen-Zajac, LLC Permit Application

Mr. Bradstreet:

We have been advised that in connection with the permit application of Tuchenhagen-Zajac, LLC for expansion of its facility in Portland, Maine, you have requested certain information pertaining to its funding agreements. To the best of my knowledge, Tuchenhagen-Zajac, LLC has been and is a wholly-owned limited liability company of Tuchenhagen North America. Tuchenhagen-Zajac, LLC is a part of a cash management borrowing pool of Tuchenhagen North America, Inc. and its affiliated U.S. companies. Over the past year, there has been at least a million dollar available in such cash management pool on a daily basis that could be borrowed. The actual amount available fluctuated greatly during the year and was often many multiples of that amount.

I hope that this letter provides you with the information which you seek, but should you have any questions, please don't hesitate to call me at 410-244-4059.

Regards
The First National Bank of Maryland

By: 
Eugene A. Sutter, VP

cc: Sandy Zajac, Tuchenhagen-Zajac, LLC



May 27, 1999

Mr. Stephen J. Bradstreet, P.E.
Environmental Engineering & Remediation, Inc.
222 St. John Street, Suite 314
Portland, ME 04102

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Sincerely,

Gary Crabtree
Energy Services Advisor

GC/rr
Enc.



CITY OF PORTLAND

2 June 1999

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Environmental Engineering & Remediation, Inc.,
222 St. John Street, Suite 314,
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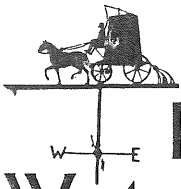
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Sincerely,
CITY OF PORTLAND

Frank Brancely
Frank J. Brancely, BA, MA
Senior Engineering Technician

FJB

- cc: Joseph E. Gray, Director, Department of Planning & Urban Development, City of Portland
Sarah Hopkins, Senior Planner, Dept. of Planning & Urban Development, City of Portland
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Desk File



Portland Water District

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

(207) 774-5961
FAX (207) 761-8307

May 25, 1999

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222 St John St
Suite 314
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Riverside St @Evergreen Drive
Hydrant # 1764
Static pressure = 71 PSI
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Sincerely,
Portland Water District

Jim Pandiscio
Means Coordinator



Northern Utilities, Inc.

May 26, 1999

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EER, Inc.
222 St. John Street
Suite 314
Portland, ME 04102

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If you have any further questions or comments please call me at 800-924-8002.

Sincerely,

Michael T. Smith
Industrial Sales Engineer



CITY OF PORTLAND

2 June 1999

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Environmental Engineering & Remediation, Inc.,
222 St. John Street, Suite 314,
Portland, Maine 04102.

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Sincerely,
CITY OF PORTLAND

Frank Brancely
Frank J. Brancely, BA, MA
Senior Engineering Technician

FJB

- cc: Joseph E. Gray, Director, Department of Planning & Urban Development, City of Portland
- ✓ Sarah Hopkins, Senior Planner, Dept. of Planning & Urban Development, City of Portland
- Katherine A. Staples, PE, City Engineer, City of Portland
- Bradley A. Roland, PE, Environmental Projects Engineer, City of Portland
- Anthony W. Lombardo, PE, Project Engineer, City of Portland
- Stephen K. Harris, Assistant Engineer, City of Portland
- Desk File



CITY OF PORTLAND

June 11, 1999

Steve Bradstreet
EER
222 St. John Street
Portland ME 04102

RE: Tuckenhagen-Zajac Development

Dear Steve:

Representatives from Public Works, Planning, Fire, Traffic, Corporation Counsel and Building Inspections have reviewed the Tuckenhagen submission dated 5-20-99.

We have made the following comments:

- Granite curb radii must be placed at the driveway opening.
- Parking spaces should measure 9 x 19 ft. with an aisle width of 24 feet.
- A note should be added to the plan regarding the road construction work along Riverside.
- We will need to see a treatment plan for the stormwater leaving the site.
- Please submit the elevation/grading of the expanded detention basin.
- Please submit an erosion control plan.

These are the final comments regarding the proposed plan.

We anticipate approving the site plan when we receive the requested items.

Please call if you have any questions.

Sincerely,

Sarah Hopkins
Senior Planner

cc: Alexander Jaegerman, Chief Planner
Jim Wendel, Development Review Coordinator

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CITY OF PORTLAND

June 29, 1999

Steve Bradstreet
EER
222 St. John Street, Suite 314
Portland, ME 04102

RE: Tuchenhagen-Zajac LLC at 1000 Riverside Street

Dear Mr. Bradstreet:

On June 29, 1999, the Portland Planning Authority granted minor site plan approval for the Tuchenhagen addition at 1000 Riverside Street.

The approval is based on the submitted site plan. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

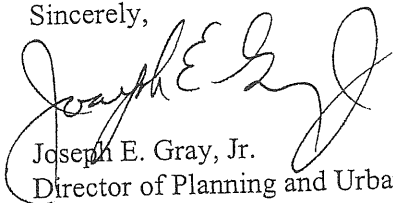
Please note the following provisions and requirements for all site plan approvals:

1. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. A one year extension may be granted by this department if requested by the applicant in writing prior to the expiration date of the site plan.
2. A performance guarantee in a form acceptable to the City of Portland and an inspection fee equal to 1.7% of the performance guarantee will have to be posted before beginning any site construction or issuance of a building permit.
3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
4. Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.
5. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

6. The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact the Planning Staff.

Sincerely,



Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Sarah Hopkins, Senior Planner
P. Samuel Hoffses, Building Inspector
Marge Schmuckal, Zoning Administrator
Tony Lombardo, Project Engineer
Development Review Coordinator
William Bray, Director of Public Works
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Lt. Gaylen McDougall, Fire Prevention
Inspection Department
Kathleen Brown, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File



CITY OF PORTLAND

July 19, 1999

Steve Bradstreet
EER
222 St. John Street, suite 314
Portland, ME 04102

RE: Tuchenhagen-Zajac at 1000 Riverside Street.

Dear Mr. Bradstreet

This letter is to confirm the revision to the approved site plan of the Tuchenhagen project located at 1000 Riverside Street. The approved revision includes the use of a non-woven geotextile with a crushed stone ballast for the construction of the wet pond. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments.

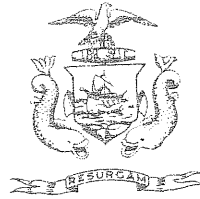
If you have any questions regarding the revision please contact the planning staff at 874-8720.

Sincerely,

Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Sarah Hopkins, Senior Planner
P. Samuel Hoffses, Building Inspector
Jeff Tarling, City Arborist
William Bray, Director of Public Works
Tony Lombardo, Project Engineer
Lt. Gaylen McDougall, Fire Prevention
Penny Littell, Associate Corporation Counsel
Inspection Department
Development Review Coordinator
Kathleen Brown, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File

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CITY OF PORTLAND

August 6, 1999

Steve Bradstreet
EER
222 St. John Street, suite 314
Portland, ME 04102

RE: Tuchenhagen-Zajac at 1000 Riverside Street.

Dear Mr. Bradstreet

This letter is to confirm the revision to the approved site plan of the Tuchenhagen project located at 1000 Riverside Street. The approved revision includes the planting of new trees along the new driveway instead of relocating existing trees. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments.

If you have any questions regarding the revision please contact the planning staff at 874-8720.

Sincerely,

Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Sarah Hopkins, Senior Planner
P. Samuel Hoffses, Building Inspector
Jeff Tarling, City Arborist
William Bray, Director of Public Works
Tony Lombardo, Project Engineer
Lt. Gaylen McDougall, Fire Prevention
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Development Review Coordinator
Kathleen Brown, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File

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*Road design
Riverside*

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990065
I. D. Number

Tuchenhagen - Zajac, LLC

Applicant

1000 Riverside St, Portland, ME 04103

Applicant's Mailing Address

Environmental Engineering & Re

Consultant/Agent

828-1272 774-6907

Applicant or Agent Daytime Telephone, Fax

5/21/99

Application Date

Project Name/Description

Address of Proposed Site

Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply):

- New Building
- Building Addition
- Change Of Use
- Residential
- Office
- Retail
- Manufacturing
- Warehouse/Distribution
- Parking Lot
- Other (specify)

Proposed Building square Feet or # of Units

Acreage of Site

Zoning

Check Review Required:

- Site Plan (major/minor)
- Subdivision # of lots
- PAD Review
- 14-403 Streets Review
- Flood Hazard
- Shoreland
- Historic Preservation
- Zoning Conditional Use (ZBA/PB)
- Zoning Variance

Fees Paid: Site Plan \$500.00 Subdivision

Planning Approval Status:

- Approved
- Approved w/Conditions See Attached

Approval Date Approval Expiration

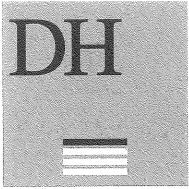
OK to Issue Building Permit signature date

Performance Guarantee Required* Not Required

* No building permit may be issued until a performance guarantee has been submitted as indicated

<input type="checkbox"/> Performance Guarantee Accepted	date	amount	expiration date
<input type="checkbox"/> Inspection Fee Paid	date	amount	
<input type="checkbox"/> Building Permit Issued	date		
<input type="checkbox"/> Performance Guarantee Reduced	date	remaining balance	signature
<input type="checkbox"/> Temporary Certificate of Occupancy	date	<input type="checkbox"/> Conditions (See Attached)	
<input type="checkbox"/> Final Inspection	date	signature	
<input type="checkbox"/> Certificate Of Occupancy	date		
<input type="checkbox"/> Performance Guarantee Released	date	signature	
<input type="checkbox"/> Defect Guarantee Submitted	submitted date	amount	expiration date

*2nd driveway?
Parament subids
landscaping - all on
charters plan*



DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207 775 1121
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

MEMORANDUM

TO: Sarah Hopkins, Senior Planner

FROM: Jim Wendel, P.E. Development Review Coordinator

DATE: June 29, 1999

RE: Site Plan Review
Tuchenhagen-Zajac LLC
1000 Riverside Street

A review of the revised site plan submission dated 6/17/99, rev. C, has been completed. We offer the following comment:

1. The wet pond calculations are appropriate. However, coordination with the applicant's engineer has indicated that he will provide another revised plan with some additional details of the wet pond.

Based on the above submitted plans and item one above, all technical design issues are addressed.

Should you have any questions please call.

June 30, 1999

Ms. Sarah Hopkins
Senior Planner
Planning Department
City of Portland
389 Congress Street
Portland, Maine 04101

Subject: Tuchenhagen-Zajac LLC

Dear Sarah:

There has been one minor addition to the Site Grading, Drainage and Erosion Control Plan. During my final review of the plans I realized that the construction of the wet pond would be down into the stiff clay layer. This will disturb the clay and cause a colloidal suspension of the clay particles. Since the purpose of the wet pond is to remove suspended solids I felt that a non-woven geotextile with a crushed stone ballast is required to prevent this suspension. A note regarding this has been added to the plans.

I have talked with Jim Wendel about this and he agrees with my recommendation. Enclosed are seven prints of this sheet for staff review.

If you have any questions or need additional information, please feel free to give me a call.

Very truly,

ENVIRONMENTAL ENGINEERING
& REMEDIATION, INC.



Stephen J. Bradstreet, P.E.

August 4, 1999

Ms. Sarah Hopkins, Senior Planner
Planning Department
City of Portland
389 Congress Street
Portland, Maine 04101

**Subject: Tuchenhagen-Zajac, LLC
Tree Replacement**

Dear Sarah:

We would like to request a change in the approved site plan regarding the disposition of the pine trees abutting the Riverside Golf Course parking lot. We had a pre-construction meeting on site Monday morning with Jim Wendel, Nancy Knauber, White Brothers and the golf course maintenance superintendent. At that time we found that Dig Safe had painted out the gas service to the building and the 8" transmission line. The trees that we had proposed to be spaded and relocated to line up with the trees lining the first fairway are extremely close to the gas lines. Seeing the close proximity to the gas lines we would like to remove the existing trees and replace them with new trees of the same type and number. The size will obviously be smaller but will be specified to be 7 to 8 feet high. Our concern is in spading trees that close to a high pressure gas line.

If this is acceptable to the City, we would appreciate an approval letter regarding the same. If you have any questions, please feel free to give me a call.

Very truly,

ENVIRONMENTAL ENGINEERING
& REMEDIATION, INC.



Stephen J. Bradstreet, P.E.

August 17, 1999

Ms. Sarah Hopkins, Senior Planner
Planning Department
City of Portland
389 Congress Street
Portland, Maine 04101

**Subject: Tuchenhagen-Zajac, LLC
Overhead Door Relocation**

Dear Sarah:

We would like to request a change in the approved site plan regarding the location of one of the overhead doors. We have just been informed by the building manufacturer's structural engineers that the left most loading door is located within a bay requiring bracing to meet design codes. They have requested that the loading door be moved one more bay to the left. This will eliminate two parking spaces. The plan provides more spaces than required for this use. These two spaces can be provided between the two loading doors if requested, but I do feel it makes sense in that location.

If this is acceptable to the City, we would appreciate an approval letter regarding the same. If you have any questions, please feel free to give me a call.

Very truly,

ENVIRONMENTAL ENGINEERING
& REMEDIATION, INC.



Stephen J. Bradstreet, P.E.



ALLFIRST BANK
25 SOUTH CHARLES STREET, SUITE 1501
15TH FLOOR INTERNATIONAL DIVISION
BALTIMORE, MD 21201
INTERNATIONAL COLLECTIONS: (410) 244-4566
LETTERS OF CREDIT: (410) 244-4475/545-2052/244-4538

April 2, 2002

CITY OF PORTLAND
PLANNING AND URBAN DEVELOPMENT
389 CONGRESS STREET,
PORTLAND, ME 04101

RE: Our Letter of Credit Number: SB-902402-0101 Amount: USD189,498.00
Current USD Balance: 189,498.00
Date of Issue: 07/27/1999
Account of: TUCHENHAGEN-ZAJAC
 ATTN: SANDY ZAJAC
 1000 RIVERSIDE STREET
 PORTLAND, ME 04103
Prior Expiration Date: 06/01/2002

Ladies and Gentlemen:

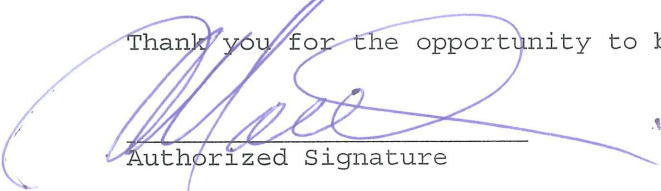
According to the original terms of this letter of credit, it has been automatically renewed for an additional period.

The new expiration date is: 06/01/2003

This letter is a notification only and is not an amendment to the credit.

Very truly yours,

Thank you for the opportunity to be of service to you.



Authorized Signature

cc: TUCHENHAGEN-ZAJAC
ATTN: SANDY ZAJAC
1000 RIVERSIDE STREET
PORTLAND, ME
04103

KEEHN WILLIAM, R.
Bank: 0101 Branch: 999
 : 101-744

Letter of Credit File SB-902402-0101

DEPARTMENT DIRECTOR
Lee D. Urban



DIVISION DIRECTORS
Mark B. Adelson
Housing & Neighborhood Services

Alexander Q. Jaegerman
Planning

John N. Lufkin
Economic Development

DEPARTMENT OF PLANNING AND DEVELOPMENT

TO: Duane Kline, Finance Department
FROM: Alexander Jaegerman, Chief Planner
DATE: May 7, 2002
SUBJECT: Request for Release of Performance Guarantee
1000 Riverside Street; Tuchenhagen-Zajac LLC
(ID#1999-0065) (CBL# 360-A-004)

Please release the Letter of Credit account # SB-902402-0101 for the Tuchenhagen-Zajac project at 1000 Riverside Street.

Original Sum \$ 189,498.00

Approved:


Alexander Jaegerman
Planning Division Director

cc: ✓ Sarah Hopkins, Development Review Services Manager
✓ Jay Reynolds, Development Review Coordinator
Todd Merkle, Public Works
Code Enforcement
File

STORMWATER MANAGEMENT REPORT

FOR

TUCHENHAGEN-ZAJAC, LLC

Submitted to:

**City of portland
City Hall
389 Congress Street
Portland, Maine 04101**

Submitted by:

**Environmental Engineering & Remediation, Inc.
222 St. John Street
Suite 314
Portland, Maine 04102**

May 18, 1999

**Stormwater Management Report
for
Tuchenhagen-Zajac, LLC
Portland, Maine**

PROJECT LOCATION

The Tuchenhagen-Zajac, LLC parcel is located at 1000 Riverside Street adjacent to the Riverside Golf Course. The site watershed feeds a ravine within the golf course property that eventually outlets to the Presumpscot River approximately 2,000 feet to the northwest. The site watershed is bounded by Riverside Street to the east, a mini-storage facility to the south, and the golf course property to the west and north. The major portion of the site being developed in barren/gravel storage yard area.

PRE-DEVELOPMENT CONDITIONS

The \pm 3.9-acre parcel consists of a 180,000 SF light industrial building with associated paved and gravel parking area, barren/gravel storage yard area, lawn area and scrub/brush/meadow area. The site currently drains in a north-northwesterly direction to an existing detention basin located in the northwest corner of the parcel. The basin outlets to a ravine located on the opposite side of fairway number 1, where it flows to the Presumpscot River.

The parcel has a slight slope of approximately 1 percent. The site collects drainage from a catch basin located on the mini storage facility property and directs it to the existing detention facility. The drainage area contributing flow to the detention basin is approximately 2.98 acres consisting of \pm 1.36 acres of impervious area and \pm 1.62 acres of grass, shrub and barren area. Riverside Street is currently under construction with a stormdrain is being placed within Riverside Street to collect any street runoff.

POST-DEVELOPMENT CONDITIONS

The proposed development will increase the pavement and building area to \pm 2.48 acres with the remaining area of \pm 1.44 acres consisting of a lawn and grass/shrub area, for a total post-development watershed area of 3.92 acres.

The overall drainage pattern for the site will not change. Additional site drainage that was sheeting off the site to the west is now being collected and directed to the detention basin. This, along with detention, reduces the impact to the abutting property.

Runoff on-site will be collected by either the stormdrain system within the parking area or the existing swale along the northside of the property. Both systems outlet to the expanded detention basin.

STORMWATER RUNOFF CALCULATIONS

Stormwater runoff calculations for this project were made using the Hydro CAD computer program, which is based on the Soil Conservation Service's TR-20 methodology. Runoff was predicted based on the standard type III storm. Three storms were modeled; the two year storm (3.0 inches in 24 hours); the ten year storm (4.7 inches in 24 hours); and the 25 year storm (5.5 inches in 24 hours). The detention basin has been routed with each storm to assure that it is large enough.

Based on the calculations in Appendix A, the stormwater results are tabulated below.

Year Storm Event	Pre-Development		Post-Development - Subareas				
	Subarea 1	Subarea 2	1	2	3	4	5
2	0.57 CFS	1.48 CFS	0.57	2.27	1.90	0.32	0.00
10	1.18 CFS	2.66 CFS	1.18	4.02	3.24	1.04	0.03
25	1.48 CFS	3.22 CFS	1.48	4.84	3.86	1.44	0.10

The detention area is being expanded to reduce post-development flows to below pre-development conditions. The detention area will also provide stormwater quality control and filter out impurities washed off the road and driveway areas.

With the detention area, the following table indicates the reduced flows at the outlet of the detention area.

Year Storm Event	Pre-Development	Post-Development	Post-Development Percent Reduction
2	1.57 CFS	1.15 CFS	27%
10	3.49 CFS	3.15 CFS	10%
25	4.07 CFS	3.93 CFS	3%

The reduction of post-development flows is achieved by modifying the existing outlet control structure utilizing a new orifice and replacing the existing 15" PVC culvert with a 6" PVC culvert to control the flow for the three storm events. The peak flood elevation for the 25-year storm does not encroach any abutting properties. Even with the increase of 0.94 acres in the post-development watershed area, the detention area reduces peak flows off site by 3 to 27 percent.

SUMMARY AND CONCLUSIONS

While the proposed buildings and paved areas generate additional runoff, the proposed expansion of the existing detention area with modifications to the outlet structure; reduces the rate of runoff below pre-development conditions. The combination of the detention area and increased collection area has reduced the runoff rate off the property and lessens the impact to abutting properties.

**PRE-DEVELOPMENT
STORMWATER CALCULATIONS**

Project Zajac
Location _____
Subject _____

By SJB
Checked _____
Revised _____

DATE 5/13/99
DATE _____ SHEET 1 Of _____
DATE _____ Job No. _____



Pre-Development

Soils - Wm B - Windsor loamy sand 0-8%
Gp - Gravel pit - SW Cole borings indicate area has been filled with 5-6 feet of fine sand typical of A soils
Wm B - Type A soils
Gp - Type A soils (filled)

Subarea 1 - Mini-Storage Lot

Impervious - Bldgs, pavement, gravel
(Assume gravel may someday be paved) - $16.8 \text{ ac} = 15,120 \text{ SF} = .35 \text{ A}$

Grass - Dense - $6.2 \text{ ac} = 5,580 \text{ SF} = .13 \text{ A}$

$H = 71 - 68 = 3'$
 $L = 270'$ $S = .011$.48 A

CNs
Impervious - 98
Grass - Good - 39

AB = 60' BC = 215'



Pre-Development

Subarea 2 - Area draining to parking lot CB

Impervious 30.2 \pm = 27,180 SF = .62 A
 Grass - Good 5.1 \pm = 4590 SF = .11 A
 .73 A

CNs Impervious - 98
 Grass - Good - 39

H = 71 - 68 = 3
 L = 445 S = .007

AB = 150' BC = 295'

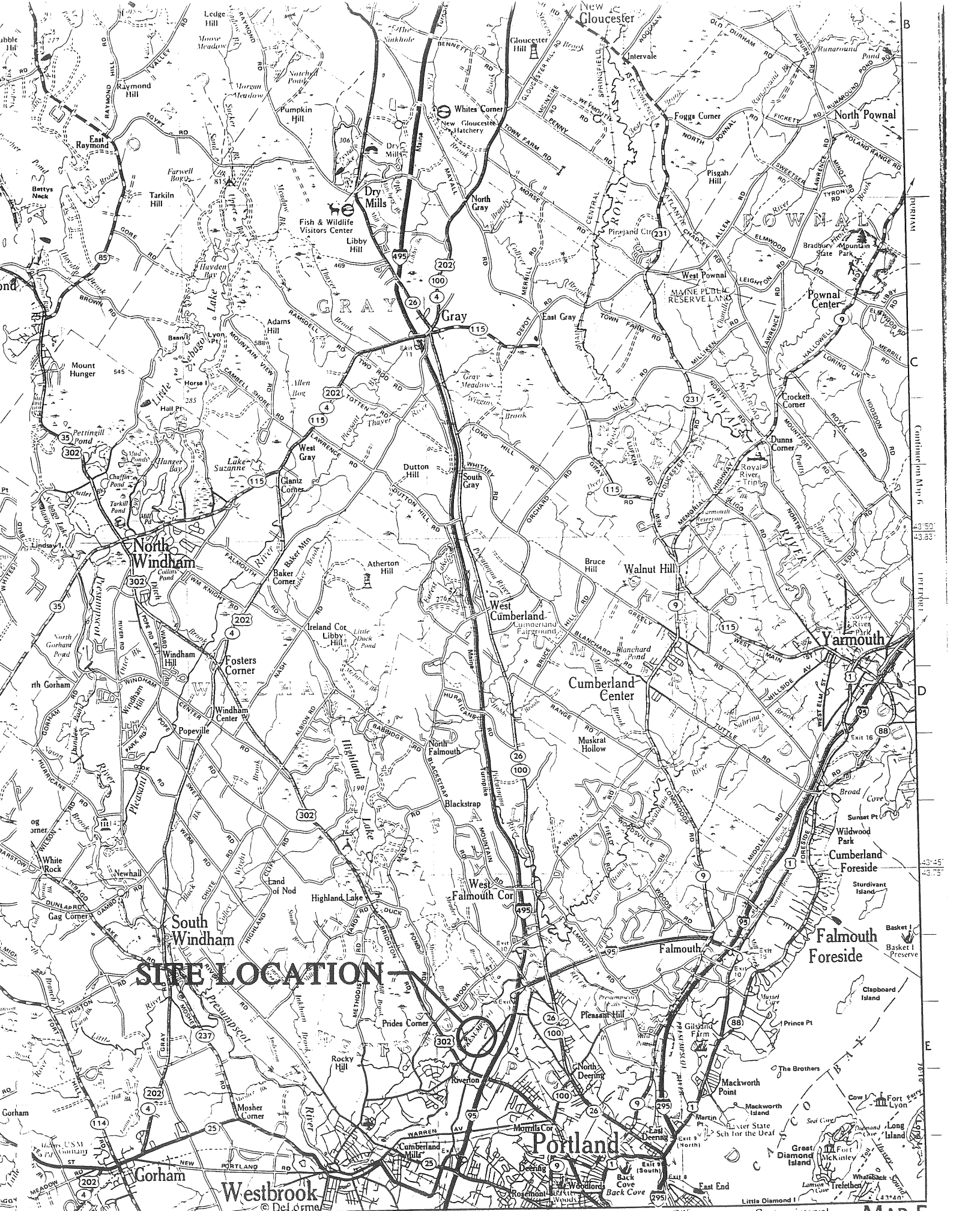
Subarea 3 - Area draining to detention basin

Impervious 18.1 \pm = 16,290 SF = .37 A
 Barren - Grass 50% 22.8 \pm = 20,520 SF = .47 A
 Grass Good 23.8 \pm = 21,420 SF = .49 A
 Brush - Fair 21.5 \pm = 19,350 SF = .44 A
 1.77 A

CNs Impervious 98
 Grass 50% 68
 Grass Good 39
 Brush Fair 35

H = 71.5 - 63 = 8.5
 L = 600' S = .014

AB = 140' BC = 460'



SITE LOCATION

Continuation Map 6

Continue on Map 3

Contour interval
80 feet (24.4 meters)

MAP 5

UNITED STATES
DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

6971 IV SE 10 MI. TO INTERCHANGE 11
(CUMBERLAND CENTER)

LEWISTON 28 MI.
WEST CUMBERLAND 4.5 MI.

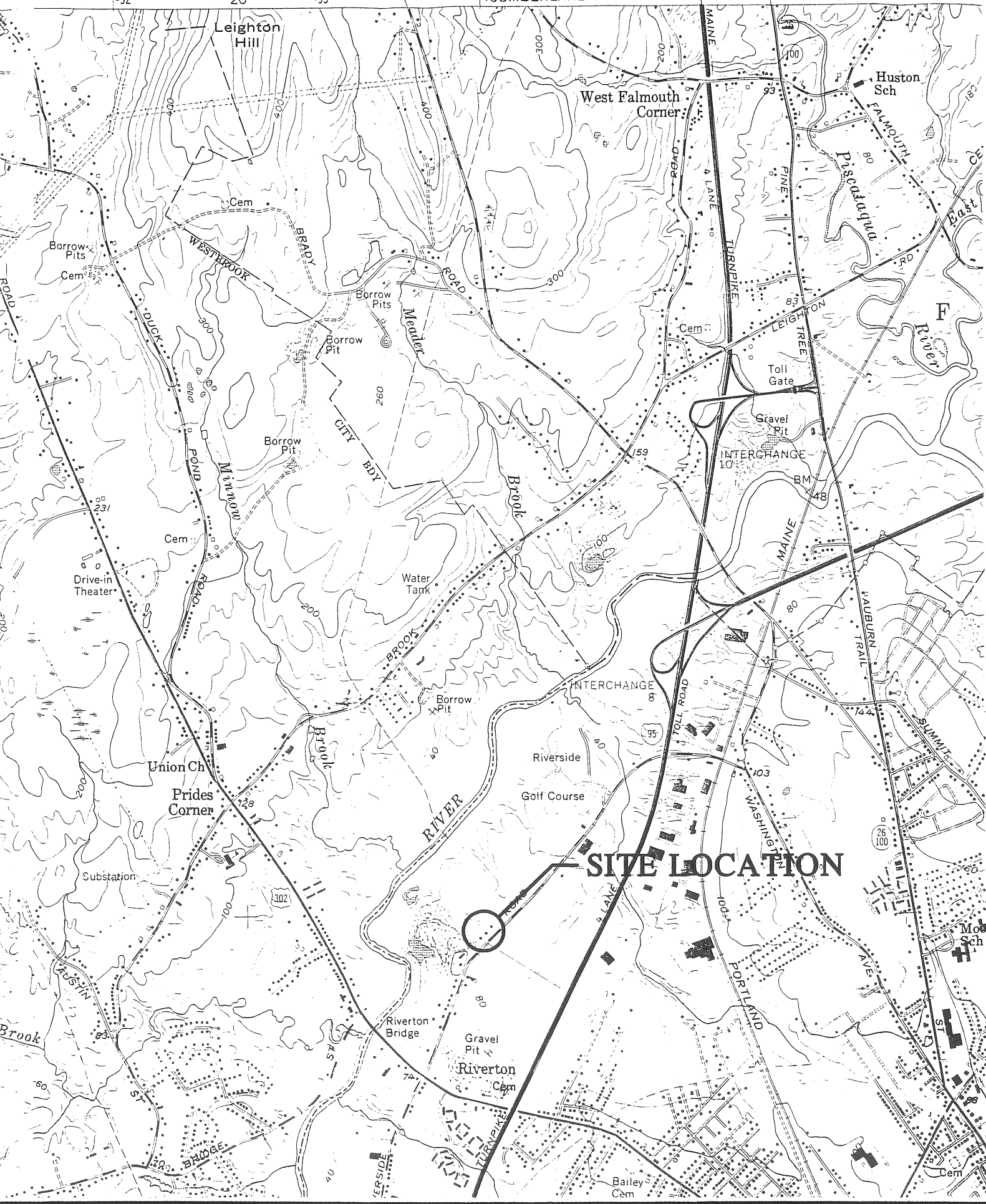
392

20'

393

4.9 MI. TO ME. 100
NORTH FALMOUTH 2.3 MI.

17'30"



WsB

(Joins sheet 66)

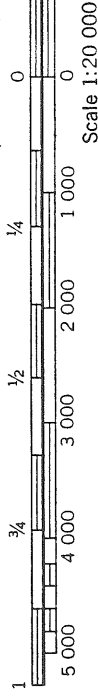
DeB



1 Mile
5 000 Feet

95

(Joins sheet 76)



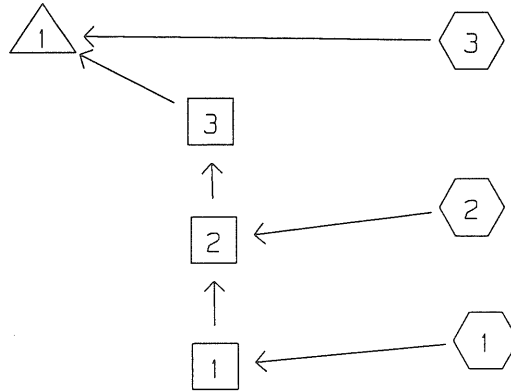
Scale 1:20 000

465 000 FEET

(Joins sheet 81)

313 000 FEET

WATERSHED ROUTING =====



SUBCATCHMENT 1	= Mini-Storage Lot	->	REACH 1
SUBCATCHMENT 2	= Area draining to parking lot CB	->	REACH 2
SUBCATCHMENT 3	= Area draining to detention basin	->	POND 1
REACH 1	= 8" PVC	->	REACH 2
REACH 2	= 15" CMP	->	REACH 3
REACH 3	= Channel	->	POND 1
POND 1	= Existing Detention Pond	->	

Data for Pre-Development Drainage

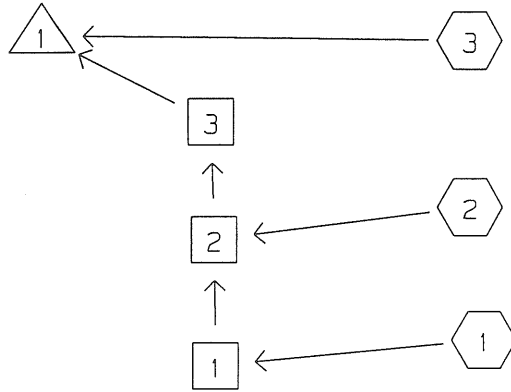
TYPE III 24-HOUR RAINFALL= 4.70 IN

Prepared by Environmental Engineering & Remediation, Inc.

14 May 99

HydroCAD 5.01. 000749 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING =====



SUBCATCHMENT 1	= Mini-Storage Lot	->	REACH 1
SUBCATCHMENT 2	= Area draining to parking lot CB	->	REACH 2
SUBCATCHMENT 3	= Area draining to detention basin	->	POND 1
REACH 1	= 8" PVC	->	REACH 2
REACH 2	= 15" CMP	->	REACH 3
REACH 3	= Channel	->	POND 1
POND 1	= Existing Detention Pond	->	

Data for Pre-Development Drainage

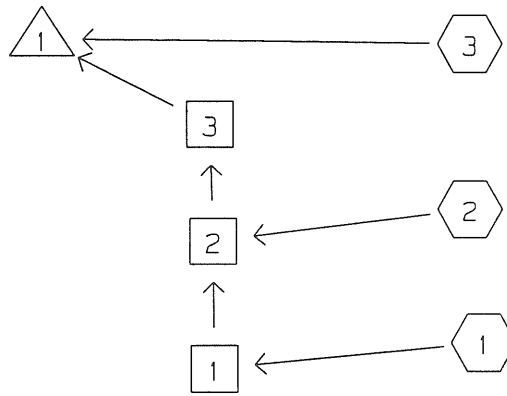
TYPE III 24-HOUR RAINFALL= 5.50 IN

Prepared by Environmental Engineering & Remediation, Inc.

14 May 99

HydroCAD 5.01' 000749 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING =====



SUBCATCHMENT 1	= Mini-Storage Lot	->	REACH 1
SUBCATCHMENT 2	= Area draining to parking lot CB	->	REACH 2
SUBCATCHMENT 3	= Area draining to detention basin	->	POND 1
REACH 1	= 8" PVC	->	REACH 2
REACH 2	= 15" CMP	->	REACH 3
REACH 3	= Channel	->	POND 1
POND 1	= Existing Detention Pond	->	

**POST-DEVELOPMENT
STORMWATER CALCULATIONS**



Post-Development

Sub-Area 1 - Same as Pre-Development
AB = 60' BC = 215'

Sub-Area 2 - Area draining to existing CB

CN
98 Impervious - 45.9 $\text{in} = 41,310 \text{ SF} = .95 \text{ A}$

39 Grass - Good 7.2 $\text{in} = 6,480 \text{ SF} = .15 \text{ A}$

$$H = 71 - 68.35 = 2.65'$$
$$L = 445' \quad S = .006$$

$$AB = 150' \quad BC = 295'$$

Sub-Area 3 - Area draining to new CB

CN
98 Impervious - 32.8 $\text{in} = 29,520 \text{ SF} = .68 \text{ A}$

39 Grass - Good - 3.6 $\text{in} = 3240 \text{ SF} = .07 \text{ A}$

$$H = 70 - 67.85 = 2.15$$
$$L = 180' \quad S = 2.15/180 = .011$$

$$AB = 180'$$

Sub-Area 4 - Area drainage toward golf course

CN
98 Impervious - 20,600 SF = .47 A

39 Grass - Good - 25.5 $\text{in} = 22,950 \text{ SF} = .53 \text{ A}$

$$H = 70.5 - 63 = 7.5$$
$$L = 600' \quad S = 7.5/600 = .013$$

$$AB = 140' \quad BC = 460'$$

PROJECT Zajac
LOCATION _____
SUBJECT _____

By SJB
Checked _____
Revised _____

DATE 5/13/99
DATE _____
DATE _____

SHEET 4 Of _____
Job No. _____



Sub-Area 5 - Area draining around parking lot

CM

98 Impervious - 1400 SF = .03 A

39 Grass - Good - 26.9 ft = 24,210 SF = .56 A

$$H = 70.5 - 63 = 7.5$$

$$L = 460' \quad S = .016$$

$$AB = 100' \quad BC = 360'$$

foundations of various
for sewer design
engineering practice.

.....14

.....15

pipes and conduits
phs commonly
or pressure-conduit
as described herein-
the flow character-
t part prepared by
n for circular pipes
0.10 This chart, as
s solution of the
art is illustrated by

closed conduits
t diameter scale
draulic radius of the
oi of S and n will
ti point, sets of
error a compatible
tic may be found

ed on log-log scales
probably more con-
graphs usually
nd in some texts or

f closed-conduit
ze and n value. For
are used for design
(9 Special slide
g uation. Usual
be found in Table

.....16

.....17

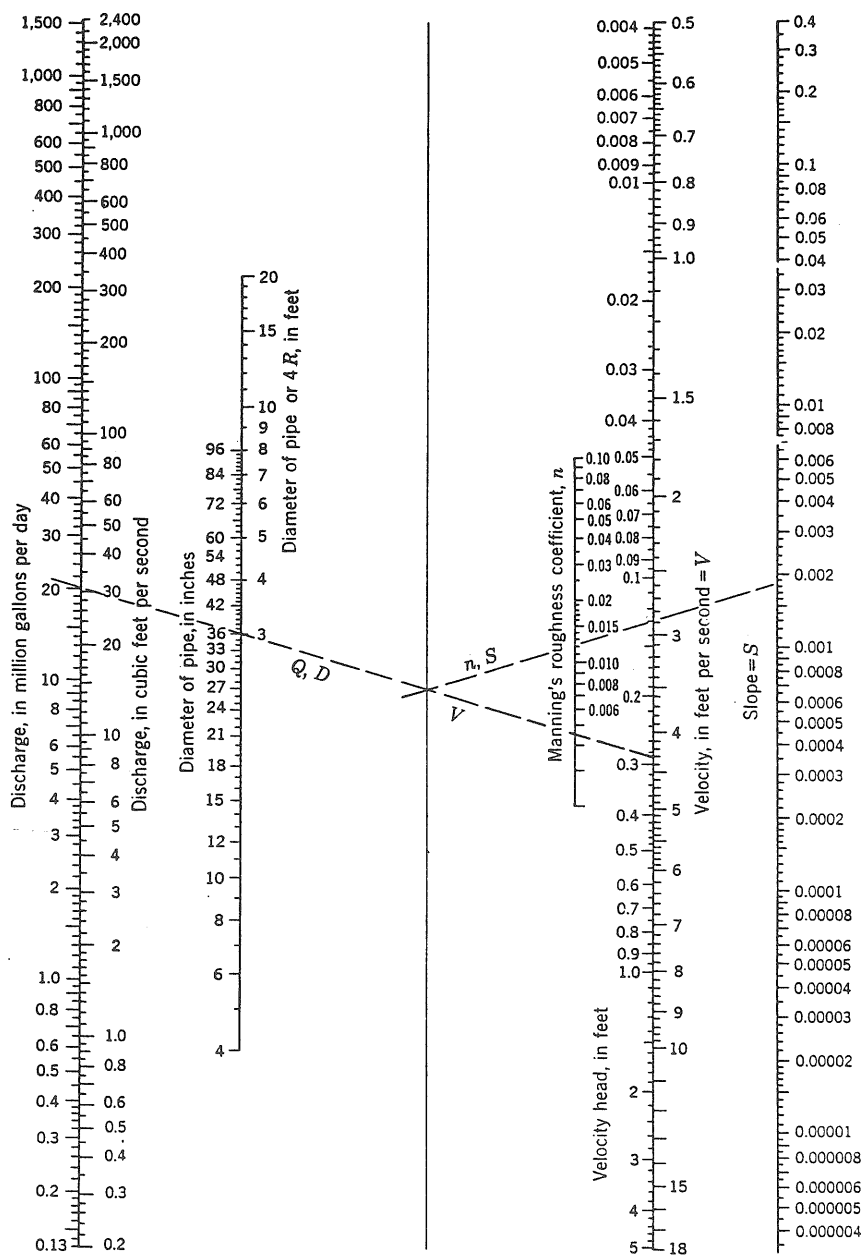
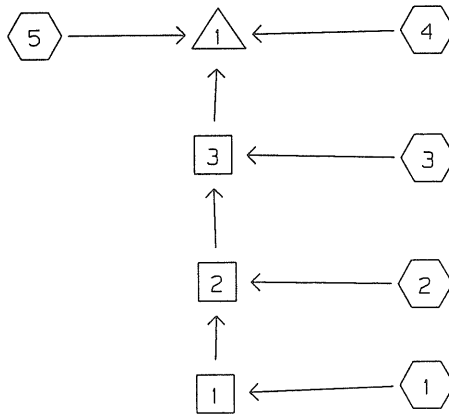


FIGURE 22.—Alignment chart for Manning formula for pipe flow.

in which the nomenclature is basically the same as that used in Equation 13 and C is a coefficient related to roughness.

The formula is used widely for pressure-conduit or pipe flow, although it is equally applicable to open-channel conditions. Published values for C have come largely from pipe-flow experiments, while many of the reported n values are from open-channel flow tests. The Hazen-Williams

WATERSHED ROUTING =====



SUBCATCHMENT 1	= Mini-Storage Lot	->	REACH 1
SUBCATCHMENT 2	= Area draining to existing CB	->	REACH 2
SUBCATCHMENT 3	= Area draining to new CB	->	REACH 3
SUBCATCHMENT 4	= Area draining along golf course	->	POND 1
SUBCATCHMENT 5	= Area draining around parking lot	->	POND 1
REACH 1	= 8" PVC	->	REACH 2
REACH 2	= 15" PVC between CBs	->	REACH 3
REACH 3	= 15" PVC outlet to detention pond	->	POND 1
POND 1	= Detention Pond	->	

Data for Post-Development Drainage

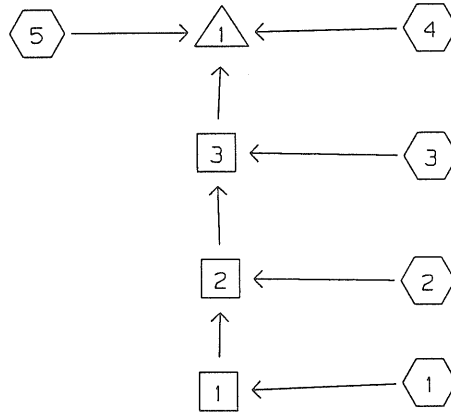
TYPE III 24-HOUR RAINFALL= 5.50 IN

Prepared by Environmental Engineering & Remediation, Inc.

14 May 99

HydroCAD 5.01 000749 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING =====



SUBCATCHMENT 1	= Mini-Storage Lot	-> REACH 1
SUBCATCHMENT 2	= Area draining to existing CB	-> REACH 2
SUBCATCHMENT 3	= Area draining to new CB	-> REACH 3
SUBCATCHMENT 4	= Area draining along golf course	-> POND 1
SUBCATCHMENT 5	= Area draining around parking lot	-> POND 1
REACH 1	= 8" PVC	-> REACH 2
REACH 2	= 15" PVC between CBs	-> REACH 3
REACH 3	= 15" PVC outlet to detention pond	-> POND 1
POND 1	= Detention Pond	->

DRAFT COPY ONLY - 07/27/1999

ISSUING BANK: ALLFIRST BANK 25 SOUTH CHARLES STREET 15TH FLOOR BALTIMORE, MD 21201 U.S.A.	IRREVOCABLE STANDBY LETTER OF CREDIT	NUMBER SB-902402-0101
---	--	--------------------------

PLACE AND DATE OF ISSUE: BALTIMORE, MD 1999 JULY 27	PLACE AND DATE OF EXPIRY: AT OUR COUNTERS 2000 JUNE 1
---	---

APPLICANT: TUCHENHAGEN ZAJAC 1000 RIVERSIDE ST. PORTLAND, ME 04103	BENEFICIARY: CITY OF PORTLAND PLANNING AND URBAN DEVELOPMENT 389 CONGRESS STREEET, PORTLAND, ME 04101
---	---

AMOUNT: USD189,498.00 UP TO AN AGGREGATE THEREOF

PARTIAL DRAWINGS: PERMITTED.	CREDIT AVAILABLE WITH: ALLFIRST BANK 25 SOUTH CHARLES STREET 15TH FLOOR BALTIMORE, MD 21201 BY: PAYMENT Against presentation of documents detailed herein and drafts at: SIGHT Drawn on: ALLFIRST BANK 25 SOUTH CHARLES STREET BALTIMORE, MD 21201
------------------------------	--

Sketchy
Chery Lopes
Susan
207 77-9500

RE: NEW BUILDING 1000 RIVERSIDE ST. PORTLAND MAINE, 04103

ALLFIRST BANK HEREBY ISSUES ITS IRREVOCABLE LETTER OF CREDIT FOR THE ACCOUNT OF TUCHENHAGEN-ZAJAC AS DEVELOPER, HEREINAFTER REFERRED TO AS THE DEVELOPER, IN THE NAME OF THE CITY OF PORTLAND IN THE AGGREGATE AMOUNT OF USD189,498.00.

THE CITY, THROUGH ITS DIRECTOR OF PLANNING AND URBAN DEVELOPMENT, MAY DRAW ON THIS LETTER OF CREDIT BY PRESENTATION OF A SIGHT DRAFT AND THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS THERETO, AT ALLFIRST BANK OFFICES LOCATED AT 25 SOUTH CHARLES STREET, SUITE 1501, BALTIMORE MD 21201, STATING THAT:

(1) THE DEVELOPER HAS FAILED TO COMPLETE BY JUNE 1, 2000 OR BY THE EXPIRATION DATE OF ANY TEMPORARY CERTIFICATE OF OCCUPANCY ISSUED, WHICHEVER DATE COMES FIRST, AT THE DEVELOPER'S EXPENSE, THE WORK ON THE ROADS AND OTHER PUBLIC IMPROVEMENTS AS SET FORTH IN A CERTAIN SCHEDULE OF COSTS OF PUBLIC

Page: 2
Letter of Credit No. SB-902402-0101
07/27/1999

IMPROVEMENTS DATED JULY 22, 1999; OR

- (2) THE DEVELOPER HAS FAILED TO POST THE TEN PERCENT (10%) DEFECT BOND OR GUARANTEE REQUIRED BY THE PORTLAND CITY CODE SECTIONS 14-501 AND 14-525, OR
- (3) THE DEVELOPER HAS FAILED TO NOTIFY THE CITY FOR INSPECTIONS.

IN THE EVENT OF ALLFIRST BANK'S DISHONOR OF THE CITY OF PORTLAND'S SIGHT DRAFT ALLFIRST BANK SHALL INFORM THE CITY OF PORTLAND IN WRITING OF THE REASON OR REASONS THEREOF WITHIN THREE (3) WORKING DAYS OF THE DISHONOR.

AFTER ALL UNDERGROUND WORK IN THE PUBLIC RIGHT OF WAY HAS BEEN COMPLETED AND INSPECTED TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS, INCLUDING BUT NOT LIMITED TO SANITARY SEWERS, STORM DRAINS, CATCH BASINS, MANHOLES, ELECTRICAL CONDUITS, AND OTHER REQUIRED IMPROVEMENTS CONSTRUCTED CHIEFLY BELOW GRADE, THE CITY OF PORTLAND DIRECTOR OF FINANCE AS PROVIDED IN SECTION 14-501 OF THE PORTLAND CITY CODE MAY AUTHORIZE ALLFIRST BANK, BY WRITTEN CERTIFICATION, TO REDUCE THE AVAILABLE AMOUNT OF THIS LETTER OF CREDIT BY A SPECIFIED AMOUNT.

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT SHALL BE DEEMED AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR ONE YEAR FROM THE PRESENT OR ANY FUTURE EXPIRATION DATE OF THIS LETTER OF CREDIT UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO SUCH EXPIRATION DATE ALLFIRST BANK NOTIFIES THE DIRECTOR OF PLANNING AND URBAN DEVELOPMENT BY REGISTERED MAIL AT THE ABOVE LISTED ADDRESS THAT ALLFIRST BANK ELECTS NOT TO CONSIDER THIS LETTER OF CREDIT RENEWED FOR SUCH ADDITIONAL PERIOD.

IN THE EVENT OF SUCH NOTICE, THE CITY MAY DRAW HEREUNDER BY PRESENTATION OF A SIGHT DRAFT DRAWN ON THE BANK, ACCOMPANIED BY THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS THERETO, AND A STATEMENT PURPORTEDLY SIGNED BY THE DIRECTOR OF PLANNING AND URBAN DEVELOPMENT READING AS FOLLOWS:

THIS DRAWING RESULTS FROM NOTIFICATION THAT ALLFIRST BANK HAS ELECTED NOT TO RENEW ITS LETTER OF CREDIT NO. SB-902402-0101; OR
THIS DRAWING RESULTS FROM THE DEVELOPER'S FAILURE TO TIMELY COMPLETE TO THE SATISFACTION OF THE CITY THE PUBLIC IMPROVEMENTS SET FORTH IN A CERTAIN SCHEDULE OF COSTS OF PUBLIC IMPROVEMENTS DATED JULY 22, 199; OR
THIS DRAWING RESULTS FROM THE DEVELOPER'S FAILURE TO POST A TEN PERCENT (10%) DEFECT GUARANTEE OR BOND AS PROVIDED IN PARAGRAPH 14-501 OF THE PORTLAND CITY CODE; OR
THIS DRAWING RESULTS FROM THE DEVELOPER'S FAILURE TO NOTIFY THE CITY FOR INSPECTIONS.

Continued on page 3.

Page: 3
Letter of Credit No. SB-902402-0101
07/27/1999

THIS LETTER OF CREDIT WILL AUTOMATICALLY EXPIRE UPON THE EARLIER OF:

ALLFIRST BANK'S RECEIPT OF A WRITTEN NOTIFICATION FROM THE CITY OF PORTLAND THAT SAID WORK AS OUTLINED IN A CERTAIN SCHEDULE OF COSTS OF PUBLIC IMPROVEMENTS DATED JULY 22, 1999 BETWEEN THE DEVELOPER AND THE CITY OF PORTLAND HAS BEEN COMPLETED IN ACCORDANCE WITH THE CITY OF PORTLAND SPECIFICATIONS AND ALLFIRST BANK LETTER OF CREDIT NO. SB-902402-0101 MAY BE CANCELLED; OR

THE EXPIRATION DATE OF JUNE 1, 2000 OR ANY AUTOMATICALLY EXTENDED DATE AS SPECIFIED HEREIN.

PARTIAL DRAWINGS ARE PERMITTED.

WE ENGAGE WITH YOU THAT DRAFTS DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT WILL BE DULY HONORED IF PRESENTED AT OUR OFFICE AT 25 SOUTH CHARLES STREET, SUITE 1501, BALTIMORE MD 21201 ON OR BEFORE JUNE 1, 2000 OR ANY AUTOMATICALLY EXTENDED DATE AS SPECIFIED HEREIN.

VERY TRULY YOURS,
ALLFIRST BANK

NAME
TITLE

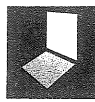
THE CITY OF PORTLAND HAS ACCEPTED THE PROVIDING OF ALTERNATIVE SECURITY FOR THE DEVELOPER'S OBLIGATIONS TO BE PERFORMED PURSUANT TO SECTION 14-501 AND/OR SECTION 14-525 OF THE PORTLAND CITY CODE.

DATED: _____ BY: _____
JOSEPH E. GRAY JR.
ITS DULY AUTHORIZED DIRECTOR OF
PLANNING AND URBAN DEVELOPMENT

SEEN AND AGREED TO:

BY: _____ DATE: _____

REVIEWED PURSUANT TO SECTION 14-501 AND/OR SECTION 14-525, PORTLAND CITY CODE.
BY: _____



allfirst

ALLFIRST BANK
25 SOUTH CHARLES STREET
15TH FLOOR
BALTIMORE, MD 21201
INTERNATIONAL COLLECTIONS: (410) 244-4566
LETTERS OF CREDIT: (410) 244-4475, 4582, 4587

April 4, 2000

CITY OF PORTLAND
PLANNING AND URBAN DEVELOPMENT
389 CONGRESS STREET,
PORTLAND, ME 04101

RE: Our Letter of Credit Number: SB-902402-0101 Amount: USD189,498.00
Current USD Balance: 189,498.00
Date of Issue: 07/27/1999
Account of: TUCHENHAGEN-ZAJAC
 ATTN: SANDY ZAJAC
 1000 RIVERSIDE STREET
 PORTLAND, ME 04103
Prior Expiration Date: 06/01/2000

Ladies and Gentlemen:

According to the original terms of this letter of credit, it has been automatically renewed for an additional period.

The new expiration date is: 06/01/2001

This letter is a notification only and is not an amendment to the credit.

Very truly yours,

Thank you for the opportunity to be of service to you.

Authorized Signature

cc: TUCHENHAGEN-ZAJAC
ATTN: SANDY ZAJAC
1000 RIVERSIDE STREET
PORTLAND, ME
04103

SUTTER, EUGENE A.
Bank: 0101 Branch: 999
: 101-745