316-B-2

#2005-0137

238 Riverside St.

Warehouse

Bradco Supply

PLANNING REPORT #62-05

WAREHOUSE BUILDING
238 RIVERSIDE STREET
SITE PLAN REVIEW
BRADCO SUPPLY CORP., APPLICANT

Submitted to:
Portland Planning Board
Portland, Maine

Submitted by:
Kandice Talbot, Planner

October 13, 2005

I. INTRODUCTION

Bradco Supply Corp. is requesting major site plan review of a proposal to develop a 30,790 sq. ft. warehouse on the Wickes Lumber site located at 238 Riverside Street. The proposed warehouse is to be built to store product.

The property is zoned B-4 Commercial Business and is approximately 5.95 acres in size.

The applicant is proposing a one (1) story, 30,790 sq. ft. warehouse at the rear of the property. Currently there is parking and an existing 30,452 sq. ft. building on the site. The proposal is to be reviewed for compliance with the site plan standards of the land use code.

13 notices were sent to neighborhood property owners. A neighborhood meeting was held, however no citizens attended the meeting. Neighborhood meeting information is included as Attachment 11 for your review.

II. STAFF REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of the site plan ordinance. Staff comments are highlighted in this report.

Zoning

The B-4 zoning allows for a maximum impervious surface ratio of 80%. The site currently has 86% impervious surface and the proposed impervious surface is 85%. Although the impervious surface is more than the allowed impervious surface, because the developer is lessening the impervious surface, not increasing it, this is acceptable. The Zoning Administer has reviewed and approved the plans and a memo is included as Attachment 10.

III. SITE PLAN REVIEW

1/2. Traffic

Vehicular circulation patterns between customers and delivery trucks will be separated. All traffic will enter at the signalized intersection across from Home Depot. The southern curb cut will be closed and the northern curb cut reconfigured to align with Home Depot. The intersection signalization will also be modified.

Customers will have access to the front parking lot and make supply pickups to the south of the Wickes building. Delivery vehicles will travel to the north of the Wickes building and travel to the rear storage yard. Trucks will circulate in the yard, drop off supplies at both buildings and yard area, and exit via the northern truck route.

The site currently has 55 parking spaces. The applicant is proposing 32 new parking spaces for a total of 87 parking spaces. The Zoning Administrator has reviewed the parking and finds it adequate.

A traffic study has been submitted and is included as Attachment 4. Tom Errico, Traffic Engineer, has reviewed the traffic study and recommended the following (Attachment 9):

a. The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provide a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue should be documented.

b. The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lane. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. The Traffic Engineer asks that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.

c. The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.

d. The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit Union and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.

The developer has addressed the Traffic Engineer's comments, along with an agreement of the monetary contribution. However, new plans have not been submitted showing traffic improvements. The developer has stated that they are proposing to install signalization as close to the right-of-way as possible, so that in the future, when Riverside Street is widened, the signalization will be within the right-of-way. Until such time, however, an easement will be required to allow the City to maintain any signalization equipment on the Bradco Corp. property. Potential conditions of approval are:

- that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit.

- that the developer provide an easement for any new signalization equipment which is not located within the City right-of-way, to allow the City to maintain the equipment. An executed easement shall be submitted prior to issuance of a building permit.

3. Bulk, Location, Height of Proposed Buildings

The proposed structure will be a typical metal-framed building. Elevations of the building are included as Attachment 7.

4. Sewers, Stormdrains, Water

The proposed building will be entirely warehouse use with no office or restroom facilities. This building will be serviced with underground electric, gas, and an 8" fire service. These services will originate from on-site services located at the Wickes building.

A capacity letter from the Portland Water District for the extension of the 8" water main for sprinkler service to the new building is included as Attachment 11.

5. Landscaping and Existing Vegetation

The applicant is proposing additional landscaping along Riverside Street to shield cars in the parking lot and to establish street trees. Some excess pavement areas in the front yard are designated for removal so plantings and lawn areas can be established. A new landscape island is proposed in the parking lot near the entrance drive to direct traffic and improve the visual appearances of the site from the public way. The City Arborist is currently reviewing the landscape plan. A potential condition of approval is:

- that the City Arborist review and approve the landscape plan prior to issuance of a building permit.

6. Soils and Drainage

A stormwater management plan has been prepared and is included as Attachment 6. This plan indicates no increase in runoff from the site.

The drainage ditches on the north and south sides of the property will be revegetated and check dams will be constructed to reduce the velocity of the stormwater. This is proposed to provide water quality treatment equivalent to that of a grassed swale.

The Development Review Coordinator has reviewed the plans and has provided comments, which are included as Attachment 8. The DRC had concerns regarding tight development area that will require particular care and attention during construction to insure positive drainage paths and minimal ponding areas. It was recommended that additional spot grades be identified on the drawing to verify drainage path directions.

As, stated previously, the drainage is intended to sheet flow towards the sides of the property where existing drainage ditches will convey flow towards the rear of the site and the front of the site. It appears that the swale on the north side of the site is actually located on the abutting property and will require a drainage easement be put in place to insure continued availability of this conveyance system.

The DRC had also recommended that evidence be provided verifying the capacity of the ditches to each side of the property and evidence of stormwater runoff treatment.

The applicant has submitted revised plans, which the DRC has reviewed and approved. The DRC's memo is included as Attachment 12.

7. Exterior Lighting

The site will be upgraded with site lighting. A photometric plan and lighting catalogue cuts have been submitted. The applicant is proposing both pole and building mounted lights, which will be shielded fixtures. The applicant has also added house side shields to light fixtures located near the property line to minimize light spill over onto abutting properties.

8. Fire

Sprinkler service will be provided by the development. There is also a hydrant proposed in the vicinity of the proposed building.

IV. STAFF RECOMMENDATION

This project, as proposed meets the Site Plan ordinance. Staff is recommending that the Planning Board approve this proposal with conditions.

V. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report 62-05 relevant to standards for site plan regulations, and other findings as follows:

A. That the plan [is/is not] in conformance with the site plan standards of the land use code.

i. that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit.

ii. that the developer provide an easement for any new signalization equipment which is not located within the City right-of-way, to allow the City to maintain the equipment. An executed easement shall be submitted prior to issuance of a building permit.

iii. that the City Arborist review and approve the landscape plan prior to issuance of a building permit.

Attachments:

1. Applicant's Submittal Letter dated June 23, 2005
2. Deeds
3. Letter of Financial Capability
4. Traffic Report Narrative
5. Lighting Catalogue Cuts
6. Stormwater Management Narrative
7. Building Elevations
8. DRC's Memo dated September 6, 2005
9. Traffic Engineer's Memo dated September 8, 2005
10. Zoning Administrator's Memo dated September 13, 2005
11. Applicant's Submittal dated October 4, 2005
12. DRC's Memo dated October 13, 2005
13. Plans

Sebago Technics
Engineering Expertise You Can Build On

sebagotechnics.com
One Chabot Street
P.O. Box 1339
Westbrook, Maine
04098-1339
Ph. 207-856-0277
Fax 856-2206

Att. 1

June 23, 2005
04435

Ms. Sarah Hopkins
Planning Department
City of Portland
389 Congress Street
Portland, ME 04101

Major Development Site Plan Application – Bradco Supply Corp., 238 Riverside Street

Dear Sarah:

On behalf of Bradco Supply Corp., I am pleased to submit the attached site plan application and supporting documents for a proposed 30,790 square foot warehouse building on the Wickes Lumber site at 238 Riverside Street, Tax Map 316-B-2. Wickes Lumber is a division of Bradco Supply.

Bradco Supply is proposing to consolidate their existing operations on Bishop Street to this location. They currently lease the Bishop Street facility. The Wickes and Bradco operations will occupy the current Wickes building, and the new warehouse would be built to store product.

A summary of the site improvements follows:

1. Vehicular circulation patterns between customers and delivery trucks will be separated. All traffic will enter at the signalized intersection across from Home Depot. The southern curb cut will be closed and the northern one reconfigured to align with Home Depot. The intersection signalization will be modified by John Murphy, PE. Customers will have access to the front parking lot and make supply pickup to the south of the Wickes building. This is how customer pickup currently functions. Delivery vehicles will now travel to the north of the Wickes building and travel to the rear storage yard via the truck route designated on the site plan. Trucks can circulate in the yard, drop off supply at both buildings and yard area, and exit via the northern truck route.

2. The existing gravel storage yard in the rear and north of the Wickes Lumber building will be regraded and paved with bituminous pavement. This lot is currently very flat and poorly drained, limiting its access in wet weather.

3. The site will be upgraded with site lighting. Currently, there are only inefficient building mounted lights which make it unsafe for customers and employees. The front parking lot will be upgraded to conform to City standards, thereby providing safe lighting levels for customers. This will be accomplished with both pole and building mounted lights. The storage yard will be lighted to a lesser degree appropriate for the intended use. This will

1a

also consist of pole and building mounted lights. All lights will be shielded fixtures. We have provided a site photometrics plan and catalog cut sheet on the fixtures.

4. The rear building will be entirely warehouse use with no office or restroom facilities. This building will be serviced with underground electric, gas, and an 8" fire service. These services will originate from on-site services located at the Wickes building.

5. The two existing pole storage sheds located behind the Wickes Lumber building will be removed and replaced with two new three-sided storage sheds along the northern property line. This is to improve site circulation and provide a more efficient use of the storage yard.

6. Landscaping has been added along Riverside Street to shield cars in the parking lot and to establish street trees. Some excess pavement areas in the front yard are designated for removal so plantings and lawn areas can be installed. A new landscape island is proposed in the parking lot near the entrance drive to direct traffic and improve the visual appearance of the site from the public way.

7. A staging area for assembly of deliveries to job sites is relocated to the rear of the site near the truck route to avoid conflicts with customers in the yard area.

8. A 20 foot wide paved fire lane is established along the south side of the new building. This will be maintained year round.

9. A stormwater management plan has been prepared for the project which indicates no increased runoff will be generated from the site. To improve water quality, we will be paving the gravel lot to decrease silt runoff into the side swales. The existing ditch along the southern property line will be reshaped, sodded and stone check dams installed to help filter out sediment.

In accordance with the submission requirements for a major site plan, I offer the following plans and supporting documents for your review and consideration:

A. Completed application form, checklist, and application fee of $500.00.

B. An ALTA/ACSM land title boundary survey of the property performed by ASC National, LLC.

C. Site plan of the property at a scale of 1"=40' showing existing and proposed buildings, parking areas, travel lanes, storage areas for lumber, staging areas, fencing, and other pertinent site improvements.

D. Grading & Utility Plan at a scale of 1"=40' showing existing and proposed grades, building finish floor elevation, utilities, site lighting, erosion and sedimentation control measures, construction notes, and existing fire hydrant on Riverside Street.

E. A landscape plan at a scale of 1" = 40' showing proposed plantings, quantities and installation details and notes.

F. Construction Details for Site Improvements.

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G. We have had Tom Gorrill of Gorrill-Palmer Engineers prepare a traffic impact study. This is attached in Section 5.

H. Building elevations have been prepared by Grant Hays Associates. These are included in Section 8.

I. Lighting Photometrics Plan showing fixture location, type and intensity. Also included are cut sheets of proposed fixtures. All fixtures are full cut-off design. See Section 7.

J. Written Statement

1. The existing use on the site is retail sale of building products/lumber yard. Bradco Supply Corp., who is co-locating to the site, is the same use.

2. As shown on Sheet 3 of 7, the total land area is 5.95 acres. The existing Wickes Lumber building is 30,452 square feet. The new Bradco Supply building is 30,791 square feet. There are two existing pole barn-style lumber sheds (2,400 square feet and 3,200 square feet) that will be removed and replaced with two new three-sided metal sheds (2,500 square feet and 3,000 square feet). There is also an existing metal three-sided shed of 3,300 square feet and a yard office of 220 square feet that will remain.

3. There are two major easements located to the rear of the site. These overlap each other and consist of a 100 foot wide Central Maine Power Company easement and a 75 foot Portland Pipe Line easement. No work is proposed within these easements. Other lesser utility easements are noted on the ALTA/ACSM Land Title Survey. No new easements or burdens are proposed other than those required by CMP to service the new building.

4. Solid waste consists of waste packaging from products sold on site. This consists of cardboard, scrap wood, plastic wrap, metal banding, vinyl shingles, broken drywall, and minor office waste. This waste is stored in a 30 yard roll-off container located in the rear storage yard. This container is emptied bi-weekly. Bradco Supply Corp. may utilize a smaller six yard container within the new building for convenience. This container is emptied less frequently.

5. There is no need for additional sewer and domestic water service for this building. The 8" fire service, gas and power will be extended on site to the new warehouse. Existing utilities are adequate to serve this facility.

6. A Stormwater Management Plan is attached which describes surface drainage on site and how it is being controlled.

7. A construction schedule is included in the Erosion & Sedimentation Control Plan noted on Sheet 6.

8. No State or Federal permits are required.

9. Attached is a copy of the current deed. See Section 3.

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10. The project will be self-funded by Bradco Supply Corp. A letter from Bradco Supply is included in Section 4. As for technical capacity, Sebago Technics, Inc. is providing the engineering of the site. Grant Hays & Associates is providing architectural services, and PM Construction is the construction manager for the project. Bradco Supply Corp. owns and manages numerous other facilities in the United States.

11. The site is located in an urban area and is 85% impervious. There are no known unusual natural areas, wildlife habitats, or archaeological sites located on it.

12. Final plans will be submitted in an electronic format upon approval.

13. Currently, there is no recycling of waste materials on site. Cardboard has been recycled in the past, but was stopped due to difficulty in separating waste. The applicant is considering restarting this program. As noted in item 4 above, a 30 yard solid waste container is located in the rear storage yard. This yard area is shielded by the existing building from the public way. The abutting property is an unscreened stone storage yard. The dumpster for Bradco is stored within the building.

I trust the application is complete for the City's review and consideration. I would be happy to meet with you or the Planner assigned to this project to discuss the details of this application. In the interim, please feel free to call me. I look forward to working with you again on a Portland project.

Sincerely,

SEBAGO TECHNICS, INC.

Stephen G. Doe

Stephen G. Doe, R.L.A.
Landscape Architect

SGD:jc/dlf
Enc.

cc: Skip Roberts, Bradco Supply Corp.
Phil Morin, PM Construction
Les Friedman, Wickes Lumber
Dave Fagnant, Bradco Supply Corp.

Att. 2

Doc#: 61138 Bk:21621 Ps: 278

QUITCLAIM DEED

WICKES INC., a Delaware corporation, formerly known as Wickes Lumber Company, for consideration of $10, paid

grants to BRADCO REALTY CORP., a New Jersey corporation*, with Quitclaim Covenants, the land in Portland, Cumberland County, Maine.

*with a mailing address of
13 Production Way, Avenel, NJ 07001

SEE EXHIBIT A ATTACHED

For our title see deed from Wickes Companies, Inc., a Delaware corporation, to Wickes Lumber Company, a Delaware corporation, dated April 26, 1988, recorded May 12, 1988.

MAINE REAL ESTATE TAX PAID

WICKES INC., a Delaware corporation, formerly known as Wickes Lumber Company

Dated: July 26, 2004

By: James O'Grady
Its: President

THE STATE OF ILLINOIS

July 26, 2004

Then personally appeared the above named grantor James O'Grady, President of WICKES INC., a Delaware corporation, and acknowledged the foregoing instrument to their free act and deed, before me.

"OFFICIAL SEAL"
JOANN MCLAUGHLIN
NOTARY PUBLIC STATE OF ILLINOIS
COMMISSION EXPIRES 02/05/05

Notary Public
My commission expires:
2/5/05

256140.1 050495-32982

Site 267

2a

Doc#: 61138 Bk:21621 Pg: 279

EXHIBIT "A"

LEGAL DESCRIPTION

LEGAL DESCRIPTION

FEE PARCEL:

A certain lot or parcel of land, with the buildings thereon, situated in Portland, in the County of Cumberland and State of Maine, and bounded and described as follows:

Beginning at a point on the new right of way of Riverside Street, Portland, Maine, as established by the City of Portland, which is between the property of Arthur Thibodeau and Joseph Olas;

Thence in a southerly direction along the arc of a curve to the left having a radius of 619.77 feet, a distance of one hundred fifty-two (152.00) feet, more or less, to a point;

Thence along the arc of a curve to the right having a radius of 669 feet, a distance of seventy (70.00) feet, more or less, to a point;

Thence South 81°02' West, eleven and thirty-seven hundredths (11.37) feet to an iron;

Thence South 81°02' West, four hundred thirty-nine and three-tenths (439.30) feet to an iron;

Thence North 75°33' West six hundred seventy-two (672.00) feet to an iron;

Thence North 20°50'10" West one hundred fifty-six and forty-five hundredths (156.45) feet to an iron;

Thence South 88°39' East one thousand one hundred eight and fourteen hundredths (1,108.14) feet to an iron;

Thence in the same direction nine (9.00) feet, more or less, to the point of beginning.

APPURTENANT RIGHT OF WAY:

Along with the right to use and maintain a certain sewer manhole as granted to Wickes Inc., dba Wickes Lumber Company/Wickes Lumber by an Easement Deed and Agreement from Sterling Motors, Inc. to, dated July 23, 2002 and recorded in the Cumberland County Registry of Deeds in Book 17833, Page 300.

Site 267

AH. 3

Bradco Supply Corp.

13 PRODUCTION WAY, P.O. BOX 67, AVENEL, NEW JERSEY 07001-0067
(732) 382-3400 FAX (732) 382-6577
mweinberger@bradcosupply.com

MICHAEL L. WEINBERGER
GENERAL COUNSEL

June 13, 2005

Sarah Hopkins, Development Review Manager
Planning & Urban Development
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Wickes/Bradco Supply – 238 Riverside Street, Portland, ME 04103

Dear Ms. Hopkins:

The construction of the 30,000 sq.ft. warehouse building and associated improvements at the referenced site will be entirely funded through the working capital of the Company without any external financing.

Very truly yours,

Michael L. Weinberger,
Secretary

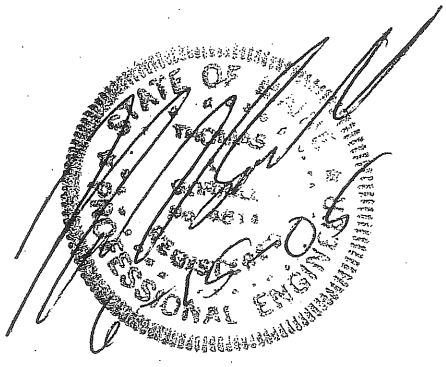
MLW/bp

AH.4

Traffic Impact Study
Wickes Lumber
Portland, Maine

Prepared for:

Sebago Technics, Inc.
One Chabot Street, PO Box 1339
Kittery, Maine 04098



June 2005

Prepared by:

Gorrill-Palmer Consulting Engineers, Inc.

Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Road
Gray, ME 04039

(207) 657-6910
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Traffic Impact Study
Wickes Lumber Expansion
Portland, Maine
2005

Index

Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill-Palmer Consulting Engineers, Inc. was retained by Sebago Technics, Inc. to examine the traffic impacts associated with a proposed expansion of Wickes Lumber on Riverside Street in Portland, Maine. The project will add approximately 30,700 square feet of warehouse. Access to the site is currently via two driveways on Riverside Street. As indicated the City of Portland will require the southerly driveway to be closed and the signalized driveway to be modified.

1. The proposed expansion is forecast to generate 17 and 19 trip ends for the weekday AM and PM peak hour of generator. This level of trip generation does not require a traffic permit from the Maine Department of Transportation (MaineDOT).

2. The level of service analyses show that the site driveway is forecast to operate at a level of service 'B' or better. The addition of site-generated traffic is not anticipated to affect the level of service at nearby intersections.

3. Gorrill-Palmer Consulting Engineers, Inc. obtained crash data from the MaineDOT to determine if any locations within the study area are considered High Crash Locations (HCL's). Based on this information, there are no High Crash Locations in the study area.

4. The sight distances for the proposed modified site drive at Riverside Street exceed MaineDOT requirements. Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the existing street system can accommodate the traffic generated by the site.

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I. *Existing and Proposed Site*

The existing Wickes Lumber site is located across from Home Depot on Riverside Street in Portland.

Proposed for the site is a 30,700 square foot expansion of the warehouse. Access to the site will be from a modification of the northern entrance, which will be under signalized control with Home Depot. It is our understanding that the southerly driveway will be closed. The project location is shown on Figure 1 of Appendix A.

II. *Background Traffic Conditions*

Gorrill-Palmer Consulting Engineers, Inc. based the study on the following information:

- Crash information for 2002-2004 provided by the Maine Department of Transportation.
- Turning movement counts from 3:30 PM to 6:00 PM collected by Gorrill-Palmer Consulting Engineers, Inc. at the following locations:
  - Wickes Lumber at Riverside Street
  - Warren Avenue at Riverside Street
- Posted speed of 35 mph on Riverside Street.

Predevelopment Traffic Volumes

Seasonal Adjustment

The MaineDOT utilizes highway classifications of I, II, or III for state and local roadways. Type I roadways are defined as urban roadways, or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Type II roadways, or arterial roadways are those that see a combination of commuter and recreational traffic and therefore experience moderate fluctuations during the year. Type III roadways, or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuation.

The study area roadways are all classified as Type I roadways by MaineDOT. Raw count volumes were adjusted to estimate volumes indicative of the 30th highest hour of the year.

Annual Growth

The proposed development is anticipated to be completed by 2006. The 2005 roadway volumes were increased by two percent per year in the study area to reflect traffic increases in the area. This rate was based on historical data published by the MaineDOT. A copy of the data is located in Appendix C of this report.

Other Development

Gorrill-Palmer Consulting Engineers, Inc. contacted the City of Portland regarding other development in the area already in the approvals process that may contribute traffic to the study area roadways. Based on this conversation, a Dunkin Donuts will be located on Warren Avenue. The forecast traffic generated by Dunkin Donuts was included on the 2006 predevelopment volumes. Other development volumes can be found on Figure 4 of Appendix A.

The raw volumes on Figure 2 were seasonally and annually adjusted to result in the 2006 predevelopment volumes shown on Figure 3 of Appendix A.

III. *Trip Generation*

For the purposes of trip generation, Gorrill-Palmer Consulting Engineers, Inc. utilized the Institute of Transportation Engineers (ITE) publication *Trip Generation,* 7th Edition. The ITE publication references Land Use Code 150, Warehousing, as an appropriate land use code for this type of development. Trip generation calculations are included in Appendix C of this report. The results are summarized in the following table:

Trip Generation for Wickes Lumber, Portland

Land Use Code	Weekday	AM Peak Hour	PM Peak Hour
LUC 150: Warehousing	152	17	19

A trip end is defined as either a trip to or from the site. Thus, a round trip would be the equivalent of two trip ends.

IV. *Trip Distribution*

Gorrill-Palmer Consulting Engineers, Inc. has obtained the ratio of entering and exiting traffic from ITE data. The trip distribution for the proposed facility is as follows:

AM Peak Hour: 60% enter, 40% exit
PM Peak Hour: 10% enter, 90% exit

V. *Trip Composition*

Gorrill-Palmer Consulting Engineers, Inc. anticipates that all trips to and from the proposed development will be primary trips, which is typical of a warehouse.

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VI. *Trip Assignment*

The trip assignment has been based on turning movement counts completed by our office as well as our understanding of the study area. The trip percentages and trip assignment are shown on Figure 6 of Appendix A.

VII. *2006 Postdevelopment Traffic*

The anticipated year 2006 predevelopment traffic shown on Figure 5 of Appendix A has been combined with the traffic forecast for the development shown on Figure 6 of Appendix A to yield the 2006 postdevelopment traffic shown on Figure 7 of Appendix A.

VIII. *Study Area*

The study area for the project includes the following:

- Riverside Street at Warren Avenue
- Site drive at Riverside Street

IX. Capacity Analyses

Gorrill-Palmer Consulting Engineers, Inc. completed capacity analyses for the intersections listed in Section VIII.

The study area intersections were evaluated with Synchro traffic software for the signalized locations. Levels of service rankings are similar to the academic ranking system where an 'A' is represents little control delay and an 'F' represents significant delay. A level of service 'D' or above is desired at a signalized intersection.

The following tables summarize the relationship between control delay and level of service:

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Gorrill-Palmer Consulting Engineers, Inc. based our analyses on the existing roadway configurations at Riverside Street and Warren Avenue and post development configurations at Riverside Street and the proposed modified site drive. The analyses were based on Figure 5 for the predevelopment scenarios and Figure 7 for the post development scenarios. The results of the capacity analyses are summarized as follows. The detailed analyses are included in Appendix B.

Level of Service for Riverside Street at Warren Avenue

Approach	2006 PM Peak Hour			
	Predevelopment		Post development	
	Delay	LOS	Delay	LOS
Warren EBL	28	C	28	C
Warren EBTR	86	F	86	F
Warren WBL	91	F	91	F
Warren WBT	62	E	62	E
Warren WBR	13	B	13	B
Riverside NBL	20	C	20	C
Riverside NBTR	32	C	33	C
Riverside SBLT	74	E	74	E
Riverside SBR	13	B	13	B
Overall Intersection	**56**	**E**	**56**	**E**

Level of Service for Riverside Street at Wickes Lumber and Home Depot Site Drives

Approach	2006 PM Peak Hour			
	Predevelopment		Post development	
	Delay	LOS	Delay	LOS
Site Drive EBL	13	B	14	B
Site Drive EBR	8	A	7	A
Home Depot WBLT	19	B	18	B
Home Depot WBR	7	A	7	A
Riverside NBLTR	6	A	7	A
Riverside SBTR	5	A	5	A
Overall Intersection	**7**	**A**	**7**	**A**

Based on the above tables, the site driveway is anticipated to operate at an acceptable level of service. The intersection of Riverside Street and Warren Ave. does not meet the desired level of service 'D' or above for a signalized intersection. However, additional traffic from the development is not anticipated to affect the level of service at this location. The low volume of forecast traffic generated by the expansion will produce a negligible affect on any pre-existing conditions in the study area.

X. *Crash Data*

In order to evaluate whether a location has a crash problem, MDOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:
2. A minimum of 8 crashes over a three-year period.

Our office reviewed the MaineDOT crash records for the last three years in the study area (2002-2004). The study area was on Riverside Street from Node 06307 (Riverside Court) to Node 06310 (Warren Avenue). Based on information provided by the MaineDOT, there were a total of 16 crashes with a critical rate factor of 0.00. There are no locations that are considered High Crash Locations.

XI. *Sight Line Analysis*

The Maine Department of Transportation (MaineDOT) has guidelines for sight distances at roadways. The sight lines standards for roadways within an urban compact are as follows:

Standards for Sight Distance

Speed (mph)	MaineDOT
25	200
30	250
35	305
40	360
45	425
50	495

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight distances at the proposed modified site driveway on Riverside Street in accordance with MaineDOT standards.

The MaineDOT standards are as follows:

Roadway observation point:	10 feet off major street travelway
Height of eye at roadway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

The posted speed limit on Riverside Street is 35 mph, which results in a required sight distance of 305 feet for MaineDOT. Our office examined the sight lines at the proposed driveway and found that the sight distance in the northbound direction reached the intersection of Riverside Street and Warren Ave at approximately 360 feet. The sight distance in the southbound direction was in excess of 500 feet. We conclude that the sight distances at the proposed modified site drive meet MaineDOT requirements.

In addition, Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

XII. Conclusions

Gorrill-Palmer Consulting Engineers, Inc. has examined the impact of the traffic associated with the proposed expansion of Wickes Lumber and reached the following conclusions:

1. The proposed expansion is forecast to generate 17 and 19 trip ends for the weekday AM and PM peak hour of generator. This level of trip generation does not require a traffic permit from the Maine Department of Transportation (MaineDOT).

2. The level of service analyses show that the site driveway is forecast to operate at a level of service 'B' or better. The addition of site-generated traffic is not anticipated to affect the level of service at nearby intersections.

3. Gorrill-Palmer Consulting Engineers, Inc. obtained crash data from the MaineDOT to determine if any locations within the study area are considered High Crash Locations (HCL's). Based on this information, there are no High Crash Locations in the study area.

4. The sight distances for the proposed modified site drive at Riverside Street exceed MaineDOT requirements. Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the existing street system can accommodate the traffic generated by the site.

TYPE:

CATALOG #:

~~AH.5~~

LUMARK®

DESCRIPTION

Dominated by flat surfaces and strong lines that emphasize the princples of architecture, the *IMPACT* Trapezoid cutoff wall luminaire make it ideal complement to site design. These luminaires are U.L. Listed and CSA Certified for wet location when mounted down and damp location up mounted.

APPLICATION

The *IMPACT's* rugged die-cast construction, full cutoff classified optics is perfect for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities providing facade and security lighting needs.

SPECIFICATION FEATURES

A···Housing

The housing is a two-piece design of die-cast aluminum for precise control of tolerances and repeatability.

B···Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" J-Box or wall with "Hook-N-Lock" mechanism for quick installation. Secured with two (2) captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom.

C···Optical Modules

All optical modules utilizes high performance 95% reflective sheet. Strong Type II optical module is standard.

D···Ballast

HID luminaires supplied with high power factor ballast with Class H insulation. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-20°F) for MH. Compact Fluorescent luminaires feature program start, high efficient multi-voltage 50/60Hz ballast with -18°C (0°F) minimum starting.

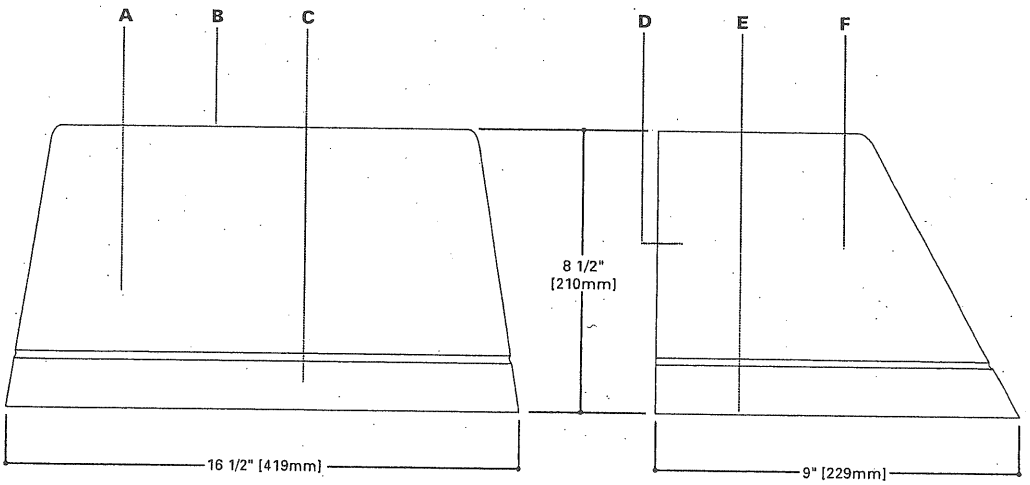
E···Door

Die-cast door mounted with, 1/8" heat- and impact-resistant clear tempered glass lens, with internal plated steel clips and sealed with EPDM gasketing. Hinged door secured in place via two (2) captive fasteners.

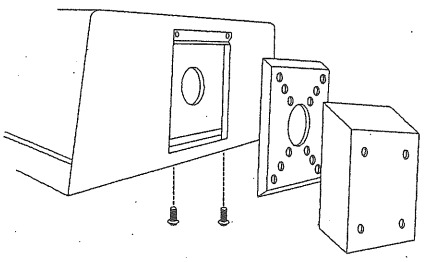
F···Finish

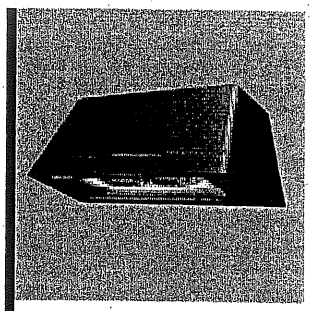
Durable polyester powder coat finish. Standard color is bronze. Optional white, black and silver colors available. Other finish colors available. Consult your Cooper Lighting Representative concerning special color requirements.

Dark Sky Friendly



HOOK-N-LOCK MOUNTING (Mounting attachment included. J-Box not included.)





IP IMPACT TRAPEZOID

50-175W
High Pressure Sodium
Metal Halide

26-52W
Compact Fluorescent

WALL MOUNTED LUMINAIRE

iMPACT™
Cutoff Wall Luminaires

TECHNICAL DATA

25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

IES FILES

Metal Halide
175W (MHI_17)
High Pressure Sodium
150W (HPI_15)

Compact Fluorescent
26W (PLIP26)
32W (PLIP32)
42W (PLIP42)
52W (PLIP52)

ENERGY DATA

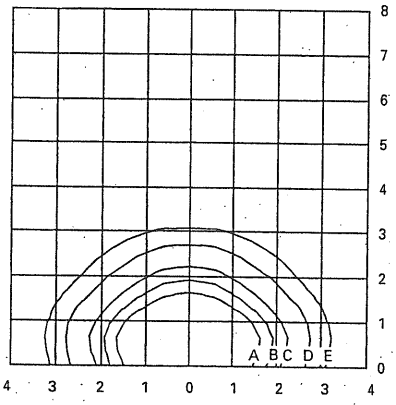
High Reactance Ballast Input Watts
50W HPS HPF (66 Watts)
50W MH HPF (72 Watts)
70W HPS HPF (91 Watts)
70W MH HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MH HPF (129 Watts)
150W HPS HPF (190 Watts)
150W MH HPF (185 Watts)

CWA Ballast Input Watts
175W MH HPF (210 Watts)

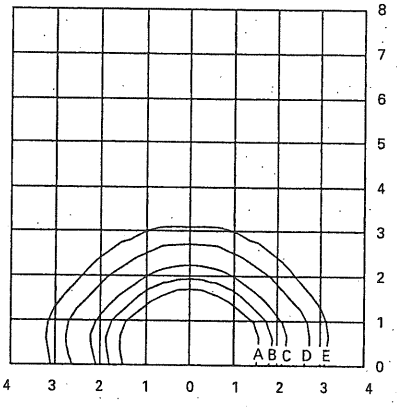
Electronic Ballast Input Watts
26W PL HPF (29 Watts)
32W PL HPF (36 Watts)
42W PL HPF (46 Watts)
52W PL HPF (55 Watts)

59

PHOTOMETRICS



MHIP-T-175-MT-LL
175-Watt MH
14,000-Lumen Clear Lamp



HPIP-T-150-MT-LL
150-Watt HPS
16,000-Lumen Clear Lamp

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
10'	4.50	2.25	1.13	0.45	0.23
15'	2.00	1.00	0.50	0.20	0.10
20'	1.12	0.56	0.28	0.11	0.06

ORDERING INFORMATION

SAMPLE NUMBER: MHIP-T-150-MT-LL

	IP	T			
Lamp Type MH=Metal Halide HP=High Pressure Sodium PL=Compact Fluorescent	Fixture Type IP=IMPACT	Fixture Shape T=Trapezoid	Lamp Wattage HID[1] 50=50W[2] 70=70W[3] 100=100W 150=150W 175=175W[4] Compact Fluorescent 26/32/42=26, 32, or 42W[5] 52=52W[5]	Voltage[6] 120V 208V 240V 277V 347V 480V DT=Dual-Tap[7] MT=Multi-Tap[8] TT=Triple-Tap[9] E=Electronic Ballast[10]	Options (add as suffix) F1=Single Fuse—120, 277 or 347V (Must Specify Voltage) F2=Double Fused—208 or 240V (Must Specify Voltage) PE=Button Photocontrol (Must Specify Voltage) Q=Quartz Restrike[11] EM/SC=Emergency Separate Circuit[11] TR=Tamper Resistant Screw (Door and Mounting Plate) ___=Standard Color Bronze WH=White BK=Black SY=Silver LL=Lamp Included (Must Specify Wattage on PL)

STOCK SAMPLE NUMBER: MHIT17

	IT	
Lamp Type HP=High Pressure Sodium MH=Metal Halide	Fixture Type[12] IT=IMPACT Trapezoid	Lamp Wattage 10=100W 15=150W 17=175W

NOTES: Options not available with stock products. Order Accessories as separate items for field installation. Refer to standard ordering information to add options and accessories.

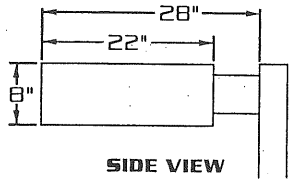
Catalog Number	Lamp Wattage	Lamp Type/Base	Voltage	Ballast Type/ Power Factor	Net Wt. (lbs.)	Shipping Volume (cu. ft.)
Wedge						
MHIP-T-50-MT-LL	50	MH/Medium	Dual-Tap	Hi. X/HPF	16	1.64
MHIP-T-70-MT-LL	70	MH/Medium	Multi-Tap	CWA/HPF	16	1.64
HPIP-T-50-DT-LL	50	HPS/Medium	Dual-Tap	Hi. X/HPF	16	1.64
HPIP-T-70-MT-LL	70	HPS/Medium	Multi-Tap	Hi. X/HPF	16	1.64
PLIP-T-26/32/42-E	26/32/42	PL/GX24Q-3&4	120-277V	Electronic	16	1.64
PLIP-T-52-E	52	PL/GX24Q-3	120-277V	Electronic	16	1.64
Stock Catalog Number						
HPIT10	100	HPS/Medium	Multi-Tap	Hi. X/HPF	12	1.45
MHIT10	100	MH/Medium	Multi-Tap	Hi. X/HPF	12	1.45
HPIT15	150	HPS/Medium	Multi-Tap	Hi. X/HPF	18	1.45
MHIT17	175	MH/Medium	Multi-Tap	CWA/HPF	17	1.45

NOTES: [1] All lamps are medium-base. [2] Available only in 120, 277V and Dual-Tap. [3] Not available in 480V. [4] Metal Halide construction only. [5] (2) 26W quad tube lamps only. [6] HID products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Lighting Representative for availability and ordering information. [7] Dual-Tap ballast are 120/277V wired 277V. [8] Multi-Tap ballast are 120/208/240/277V wired 277V. [9] Triple-Tap ballast are 120/277/347V wired 347V. [10] Supplied with 120V through 277V 50/60Hz for Compact Fluorescent. [11] The power might need to cycle and allow HID lamp to cool in warm climates. Use a 100W maximum HID lamp. [12] Painted bronze. Supplied with lamp and Multi-Tap HPF ballast wired 277V.

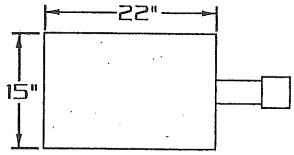
5b

VERSALUX

[400 WATT MAX.]

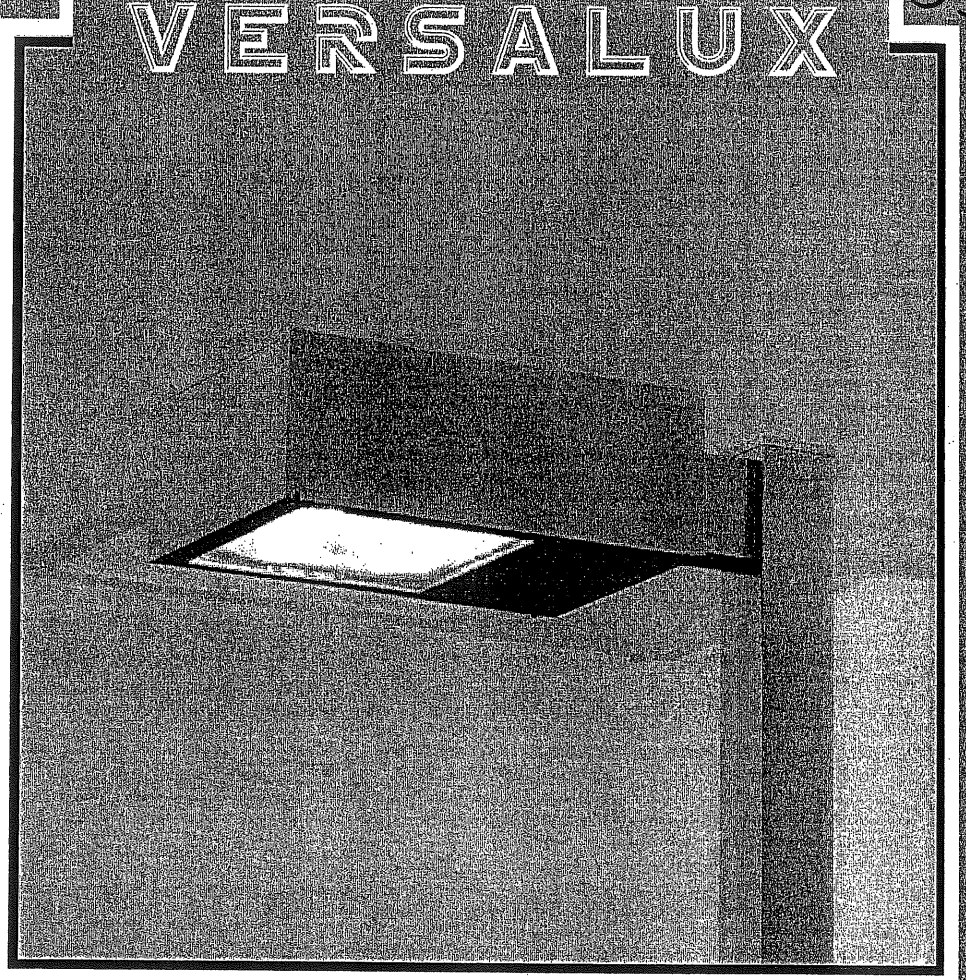


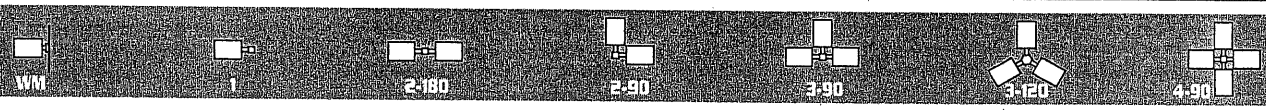
SIDE VIEW



TOP VIEW

E.P.A.= 1.72





SPECIFICATIONS

HOUSING: ONE PIECE HEAVY GAUGE DIE FORMED ALUMINUM CONSTRUCTION WITH SEPARATE BALLAST COMPARTMENT.

LENS ASS'Y: ONE PIECE HINGED HEAVY GAUGE DIE FORMED ALUMINUM DOOR FRAME SURROUNDS 3/16" CLEAR TEMPERED GLASS LENS. GLASS IS SEALED TO DOOR WITH HIGH TEMPERATURE SILICONE SEAL. TWO CAPTIVE THUMB SCREWS DISENGAGE LENS ASSEMBLY FROM HOUSING WITHOUT THE USE OF TOOLS.

OPTICS: COMPUTER DESIGNED ONE PIECE SEMI SPECULAR HYDROFORMED REFLECTOR COMBINES WITH LENS TO PRODUCE A HIGHLY EFFICIENT, SHARP CUTOFF. OPTICS ARE FIELD ROTATABLE.

GASKETING: CLOSED CELL EPDM GASKETING COMPRESSED BETWEEN DOOR AND HOUSING SEALS OPTICAL CHAMBER.

LAMP HOLDER: MOGUL BASE PORCELAIN.

LAMP: (BY OTHERS)

BALLAST: H.P.F./C.W.A. AUTOTRANSFORMER, -20° STARTING TEMPERATURE. ELECTRICAL COMPONENTS ARE MOUNTED TO HINGED REMOVABLE TRAY FOR EASY ACCESS.

ARM: 3"X5"X6" LONG HEAVY WALL EXTRUDED ALUMINUM. ARM IS SECURED TO HOUSING AND TO POLE WITH STAINLESS STEEL RODS.

FINISH: POLYESTER POWDER COAT-STATE OF THE ART 20 PSI PRESSURE POWER WASH AT 140° TEMPERATURE INCORPORATES FOUR STEP IRON PHOSPHATE PROCESS TO CLEANSE AND PRETREAT THE METAL SURFACE FOR MAXIMUM PAINT ADHESION. ELECTROSTATICALLY APPLIED TEXTURED POLYESTER POWDER TOP COAT IS BAKED AT 400° TEMPERATURE FOR MAXIMUM HARDNESS AND EXTERIOR DURABILITY.

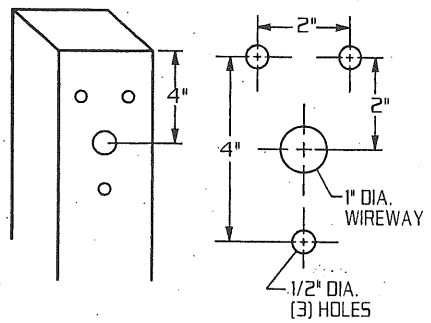
U.L. Listed for wet location

USA ARCHITECTURAL LIGHTING

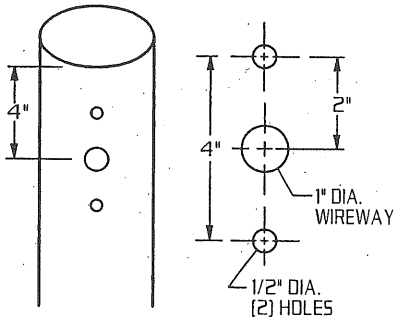
7900 CLYBOURN AVENUE, SUN VALLEY, CA. 91352
(818) 767-3031 (323) 875-1136
FAX NO. (818) 767-4681
www.usaltg.com

5C

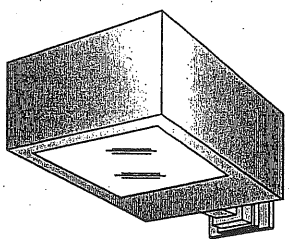
TYPICAL SQUARE POLE TEMPLATE

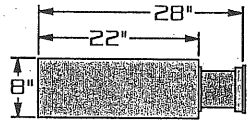


TYPICAL ROUND POLE TEMPLATE



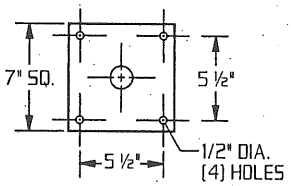
WALL MOUNT



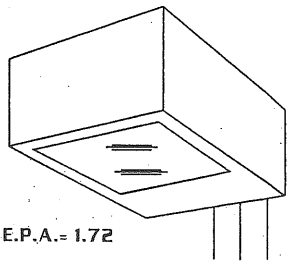


EXTRUDED ALUMINUM ARM AND CAST ALUMINUM WALL BRACKET ASSEMBLY PROVIDED WITH BUILT IN GASKETED WIRE ACCESS FOR FIXTURE/SUPPLY WIRE CONNECTION.

WALL PLATE



LAMP SIZE: 100 - 400 WATT



E.P.A.= 1.72

RECTILINEAR HEAVY GAUGE ALUMINUM HOUSING.

FIELD ROTATABLE OPTICS.

FIELD ADJUSTABLE OPTICS. TYPE II AND III LIGHT DISTRIBUTION.

HINGED BALLAST TRAY, WITH QUICK DISCONNECT PLUG FOR EASY ACCESS TO ELECTRICAL COMPONENTS.

TOOLESS LUMINAIRE ACCESS.

ORDERING INFORMATION

MODEL NO. : VRS	OPTICS	WATTAGE TYPE VOLTAGE	MOUNTING	FINISH	OPTIONS

MODEL NO. :	OPTICS	LAMP	MOUNTING	FINISH	OPTIONS
V R S	☐ TYPE I I..... (hydroform) ☐ TYPE II II..... (hydroform) ☐ TYPE III III..... (hydroform) ☐ TYPE IV (FORWARD THROW) IV..... (segmented) ☐ TYPE V V-SQ.. (segmented)	WATTAGE TYPE VOLTAGE ☐400 ☐HPS ☐120 ☐250 ☐MH ☐208 ☐200 ☐MV ☐240 ☐175 ☐277 ☐150 ☐480 ☐100 ☐MT **METAL HALIDE UNITS ONLY** USE ED28 LAMP FOR 400 W. USE MEDIUM BASE LAMP FOR 100 W.	ARM MOUNT ☐1 ..... STREET LIGHTING ARM MOUNT ☐ST23 ..... (TO FIT OVER 2 3/8" O.D. ARM) ADJUSTABLE KNUCKLE ☐NKLE23 ..... (TO FIT OVER 2 3/8" O.D.) ☐NKLE27 ..... (TO FIT OVER 2 7/8" O.D.) WALL MOUNT ☐WM ..... SEE ACCESSORIES SECTION FOR ST23 AND NKLE DETAILS	☐DARK BRONZE **DBM** ☐MEDIUM BRONZE **MBM** ☐BLACK **BKM** ☐WHITE **WTM** ☐SILVER **SLM** **OPTION:** ☐ANODIZED **AZ** ANODIZED HOUSING MUST HAVE PAINT FINISH COAT EXAMPLE: **AZDBM** SEE PAGE 3 FOR ADDITIONAL COLORS	☐ CLEAR POLYCARBONATE DIFFUSER .....**LEX** ☐ HOUSE SIDE SHIELD .....**HS** ☐ PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) .....**PC+V** ☐ TWIST LOCK PHOTO CELL+VOLTAGE (EXAMPLE TPC120V) .....**TPC+V** ☐ TWIST LOCK RECEPTACLE ONLY .....**TPR** ☐ SINGLE FUSE (120V., 277V) .....**SF** ☐ DOUBLE FUSE (208V., 240V) .....**DF** ☐ TAMPER PROOF .....**TP**

USA ARCHITECTURAL LIGHTING
7300 CLYBOURN AVE. NE. SUN VALLEY, CA. 91352
(818) 767-3031 (323) 875-1106
FAX NO. (818) 767-4631
www.usaltg.com

Quick Summary

5d

Site

Calculation Summary:	Attained	Target
Zonal Cavity Illum*:	N/A fc	N/A fc
Unit Power Density:	0.00 W/sq. ft.	N/A W/sq. ft.

*Zonal cavity illuminance does not take into account objects within the space, or daylighting.

Front Parking statistics

AVE: 1.97 MAX 6.69 Min 0.52

AVE/min 3.77:1 MAX/min 12.77:1

Room Summary:

Overall Size: 2613.42 ft x 1327.83 ft x N/A ft

Reflectances: Ceiling: N/A
Walls: N/A
Floor: N/A

Total Cost: $0.00

Luminaire Type Summary

Type	Catalog Number	Quantity
A1	VRS-III-250-MH-MT-1/20' MTG HGT	2
A2	2-VRS-III-250-MH-MT-1/20' MTG HGT	4
AW	VRS-III-250-MH-MT-WM/ WALL MTD 18' AFG	2
C1	VRS-III-175-MH-MT-1/20' MTG HGT	7
C2	2-VRS-III-175-MH-MT-1/20' MTG HGT	2
WM	MHIPT-100/ WALL MTD AT 12' AFG	5
WM2	MHIPT-100 WALL MTD AT 15' AFG	5

Luminaire Location Summary

Type	X	Y	Z	Rotate	Tilt	Spin	AimX	AimY	AimZ	LLF
A1	1829.93	500.99	0.00	-20.00	0.00	0.00	n/a	n/a	n/a	0.80
A1	1727.47	548.19	0.00	-20.00	0.00	0.00	n/a	n/a	n/a	0.80
A2	1783.16	706.29	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
A2	1908.23	684.09	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
A2	1770.06	618.42	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
A2	1891.63	594.04	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
AW	1637.24	751.14	0.00	-100.00	0.00	0.00	n/a	n/a	n/a	0.80
AW	1620.79	656.13	0.00	-100.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2223.16	643.48	0.00	-90.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2219.50	557.21	0.00	-90.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2154.58	537.83	0.00	-180.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2204.87	464.86	0.00	0.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2345.83	527.79	0.00	-275.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2354.87	615.71	0.00	-275.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2299.45	685.38	0.00	-190.00	0.00	0.00	n/a	n/a	n/a	0.80
C2	2288.43	598.23	0.00	-275.00	n/a	n/a	n/a	n/a	n/a	n/a
C2	2282.44	514.98	0.00	-92.00	n/a	n/a	n/a	n/a	n/a	n/a
WM	1931.79	496.59	0.00	-2.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	1988.19	496.30	0.00	-2.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	2045.17	495.73	0.00	-2.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	1939.83	734.61	0.00	-100.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	1701.53	778.36	0.00	-280.00	0.00	0.00	n/a	n/a	n/a	0.80

Site Plan View
Scale: Scale is Fit
C1
C2
C3
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C5
C6
C7
C8
C9
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C11
C12
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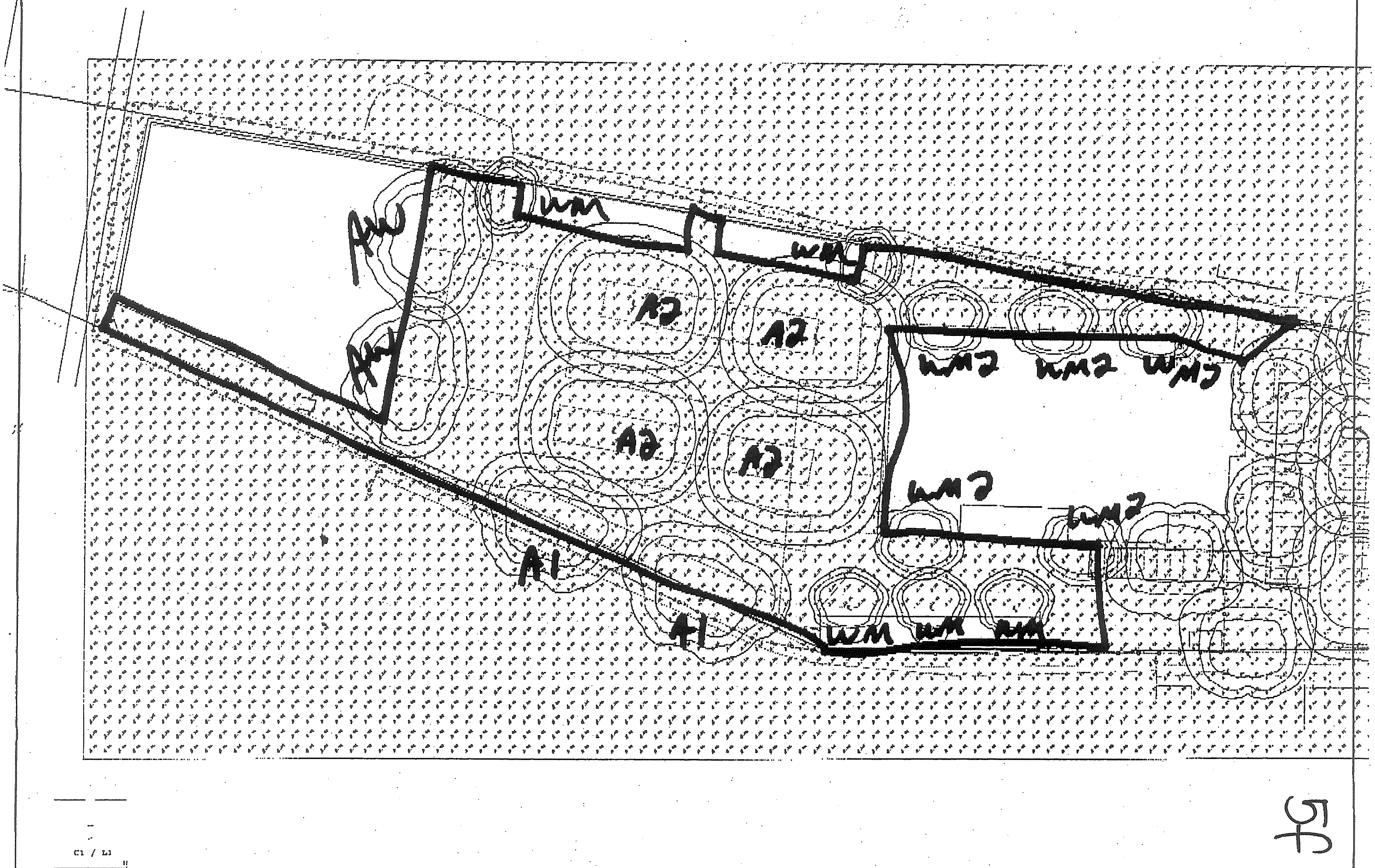
Site Plan View

Scale: Scale to Fit



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Att. 6

04435

Stormwater Management Report
Wicke's Lumber Expansion
238 Riverside Street, Portland, Maine
June 2, 2005

Introduction

This Stormwater Management Report has been prepared on behalf of Bradco Supply Corp. in order to evaluate the pre- and post-development conditions of the proposed Wicke's Lumber Expansion project on Riverside Street in Portland, Maine. This project is proposed for an existing retail site, and includes the construction of one new building and the paving of a yard area currently consisting of compacted gravel.

The development area is approximately 6.0 acres in size and is currently developed and operated as Wicke's Lumber. The existing facility includes a single retail building with associated parking, and a storage shed to the south. The back (westerly) part of the site consists of a graveled building supply storage area behind the structure. Included in this area are two (2) canopied lumber storage areas and a small shed. There is also a small area at the most westerly end of the project which is set aside as a Central Maine Power (CMP) easement. The proposed improvements affect the back of the site and include removing the two canopies and shed, constructing a new building on the back (west) end of the site, and grading and paving the existing gravel storage area. The CMP easement will not be modified. Stormwater will be allowed to continue to runoff the north and south sides of the property to existing ditches. No detention is proposed on the site.

Methodology

In order to evaluate drainage characteristics as a result of the proposed development activities, a quantitative analysis was performed to determine peak rates of runoff for the 2, 10, and 25-year storm events in the pre-development and post-development conditions. The evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software was utilized to perform the calculations.

Peak runoff rates were analyzed for the 2, 10, and 25-year frequency, 24-hour duration storm events. A Type III rainfall distribution was applied to these storms. The rainfall amounts for southeast Cumberland County are as follows:

Storm Frequency	Precipitation (in./24 hr)
2-year	3.0
10-yr	4.7
25-year	5.5
100-year	6.7

The HydroCAD Data output sheets from this analysis are appended to this report, along with pre-development and post-development watershed maps.

Soils

Soil information was obtained from the USDA/SCS Medium Intensity Soil Survey. The survey indicates the predominant site soil as Swanton. The easterly portion of the site, under the existing parking area, is classified as Au Gres. The Hydrologic Soil Group (HSG) of each soil is classified by Technical Release #55 of the Soil Conservation Service as follows:

Au Gres.....B
Swanton.....C/D

Existing Conditions

The site is relatively flat, and existing stormwater currently flows as surface runoff to the perimeter of the site. For modeling, the site was divided into three subcatchments (labeled 1S, 2S, and 3S), each of which flows to a different analysis point (AP1, AP2, and AP3). Subcatchment 1S is comprised of the existing parking area on the easterly end of the site, fronting Riverside Street. Runoff flows to Riverside Street. Analysis Point 1 is located at the property line along the street. Subcatchment 2S includes the southerly portion of the site. Runoff flows to the south where it enters a ditch along the property line, and is conveyed easterly to a culvert under Riverside Street. Analysis Point 2 is located at the southeasterly corner of the property, at the culvert entrance. Subcatchment 3S includes the northerly portion of the site. Runoff flows to the north where it enters a ditch along the property line, and is conveyed westerly to an existing open channel. Analysis Point 3 is located near the northwesterly corner of the site, where the ditch enters the open channel.

Proposed Site Improvements

In the stormwater model, subcatchment delineations in the pre- and post-developed conditions remain essentially the same. Subcatchment 1S is unchanged. Improvements to the existing parking area (i.e. construction of grassed traffic islands) reduce the total impervious area of the subcatchment and lower the peak runoff rate. The boundary between Subcatchments 2S and 3S changed somewhat based on grading and the pitched roof of the new building, though the total area of each remains the same. In Subcatchment 2S, the proposed improvements resulted in a shorter time of concentration, and thus an increased peak runoff rate. This was addressed in the model by increasing the roughness coefficient of the ditch to represent proposed check dams. These will increase the time of concentration and reduce the peak runoff rate below existing conditions. In Subcatchment 3S, proposed improvements resulted in slightly less impervious area. The pavement will provide a "cleaner" line, so small parts of the existing gravel along the northerly ditch can be grassed. This had the effect of lowering the peak runoff rate slightly below pre-development levels.

Water Quality

The drainage ditches on the north and south sides of the property will be revegetated and check dams will be constructed to reduce the velocity of the stormwater. This will provide water quality treatment equivalent to that of a grassed swale.

Results

Sub-catchment Data - Summary Table						
Sub-catchment	Pre-Development			Post-Development		
	Area (ac)	CN	Tc (min)	Area (ac)	CN	Tc (min)
1S	0.73	98	3.3	0.73	93	3.7
2S	2.49	95	7.5	2.49	95	8.4
3S	2.73	96	4.3	2.73	95	4.2
Total:	5.95			5.95		

Stormwater Runoff - Summary Table						
Analysis Point	Peak Runoff Rate (cfs)					
	Pre-Development			Post-Development		
	2-yr	10-yr	25-yr	2-yr	10-yr	25-yr
AP-1	2.35	3.71	4.35	2.05	3.44	4.09
AP-2	6.44	10.52	12.42	6.25	10.22	12.07
AP-3	8.12	13.09	15.42	7.95	12.98	15.32

Conclusion

As summarized in the above table, the proposed improvement of the commercial site will slightly reduce the peak rate of runoff leaving the site. As described above, this is due to a decrease in impervious area in Subcatchments 1S and 3S, and improvements to the drainage ditch in Subcatchment 2S.

Prepared By:

Patrick M. Martin

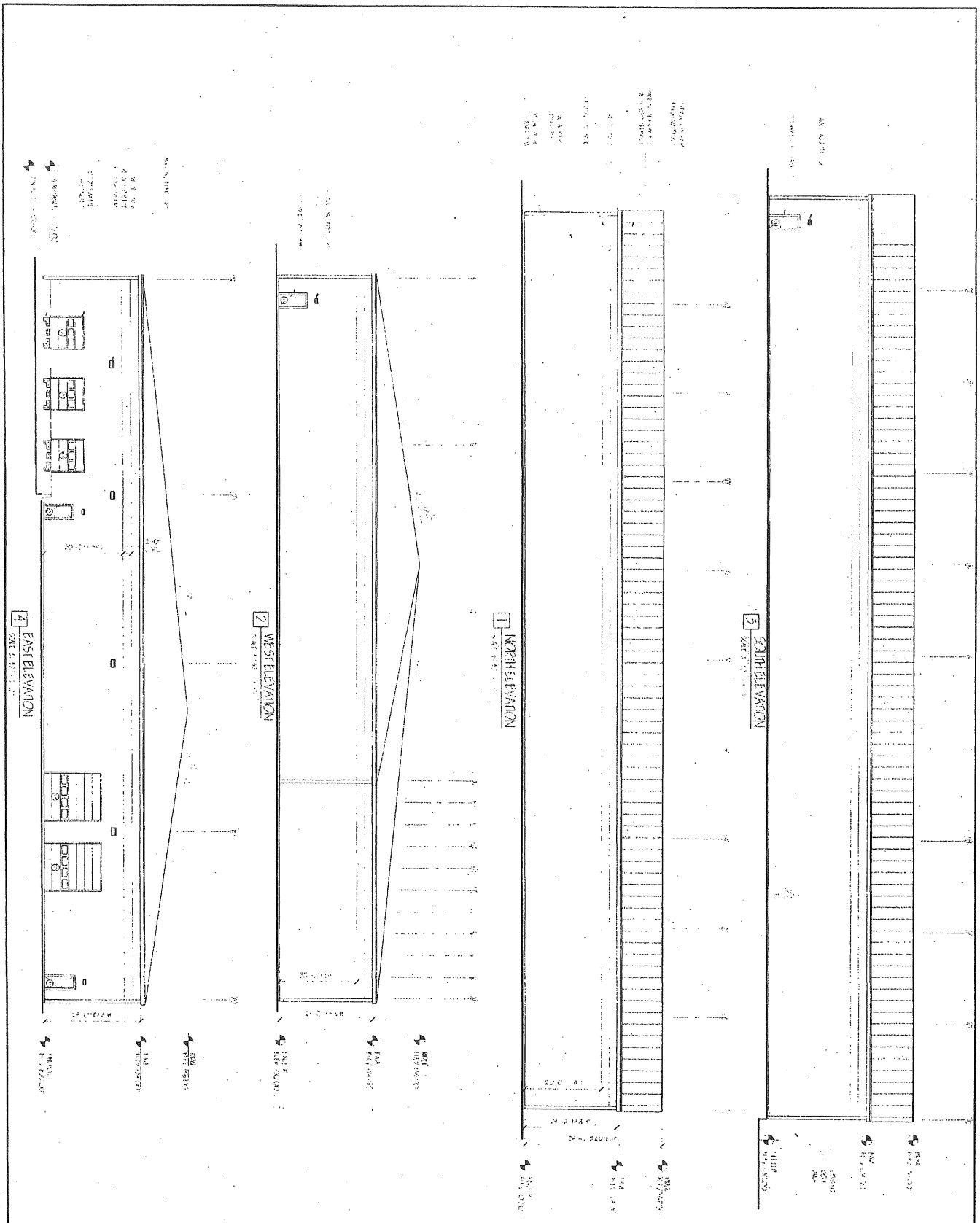
Patrick M. Martin
Design Engineer

Reviewed By:

STATE OF MAINE JON H. WHITTEN, JR. NO. 10414 REGISTERED PROFESSIONAL ENGINEER

Jon H. Whitten, Jr., P.E.
Sr. Project Engineer

PMM/JHW:pmm/dlf
June 2, 2005



A4.7

GRANT HAYS ASSOCIATES

A3

EXTERIOR ELEVATIONS

DRAWING TITLE

ARCHITECTURE
INTERIOR DESIGN
P.O. BOX 6170 FALMOUTH, MAINE 04105

(207) 871-5900 (207) 871-9508

NEW STORAGE BUILDING FOR
BRADCO / WICKES SUPPLY

235 RIVERSIDE ST PORTLAND, MAINE

JOB TITLE

REVISIONS

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

Att. 8

MEMORANDUM

DATE: **September 6, 2005**

TO: **Kandi Talbot, Portland Planning**

C: **Steve Doe, Sebago Technics**

FROM: Stephen R. Bushey, P.E.

SUBJECT: **Wickes Lumber/Bradco Supply Site Plan Review**

Kandi,

DeLuca-Hoffman Associates, Inc. has reviewed the submission materials prepared by Sebago Technics on behalf of Bradco Supply Co. dated June 23, 2005. The submission package included the Site Plan application and supporting documents including the stormwater management study and a plan set consisting of seven drawings. The proposed project consists of a new building and site modifications for parking, paving and general storage. The site is characterized by a narrow width that extends back from Riverside Street to a power line easement some 1,000 feet from the street. Existing development abuts the property to each side.

We offer the following comments regarding the proposal:

~~Site Plan~~

1. The Space and Bulk table on the Site Plan suggests that the Maximum impervious surface area on the site will exceed the 80% allowable under the Code. The Zoning officer should review and determine the need for a waiver or other zoning action for these conditions.

2. The limits of sidewalk and granite curb placement on Riverside Street should be clarified. Do these limits extend to each side of the property?

3. The parking count is proposed to be 87 spaces. Is at least a third handicap space required to meet ADA compliance?

4. The site plan should denote the snow storage locations and the applicant should provide evidence of their general snow storage and removal procedures.

~~Grading and utility Plan~~

1. The grading plan outlines a very tight development area that will require particular care and attention during construction to insure positive drainage paths and minimal ponding areas. We suggest additional spot grades be identified on the drawing to verify drainage paths directions.

2. In general, runoff is intended to sheet flow towards the sides of the property where existing drainage ditches will convey flow towards the rear of the site (north side) and the front of the site (south side). It appears that the swale on the north side of the site is actually located on the abutting property; therefore we recommend that a drainage easement be put in place to insure continued availability of this conveyance system.

3. The Portland Water District should sign off on the extension of the 8" water main for sprinkler service to the new building. The Fire Department should review for the need of a new fire hydrant on the property given the building's distance from Riverside Street.

Stormwater Management Study

1. The stormwater management study and computations document that post development runoff peak flow conditions will not exceed predevelopment conditions at three points of analysis. Our submission materials did not contain the pre and post development watershed maps therefore we did not specifically review these aspects. It appears that the peak runoff rates are slightly decreased in the post development condition simply due to an overall decrease in impervious area. Based on the site plans it is difficult to identify the exact areas where this occurs other than at the front of the site where some landscaping is to be installed. Towards the rear of the site it appears that a greater amount of paved area will be installed, replacing existing gravel. We recommend that evidence be provided verifying the capacity of the ditches to each side of the property since these are the primary conveyance systems. Each ditch appears to be relatively shallow in depth and slope; therefore their true capacity may be limited.

2. The stormwater report has not provided evidence of any measures for providing stormwater runoff treatment as is required by the City's Technical Standards. The site's drainage system relies on sheet flow of runoff off hard surfaces and conveyance by the ditches to each side. The report suggests that these grassed swales will also provide water quality treatment. Generally, the swales will provide little treatment to the runoff and may be prone to clogging with excessive vegetation over time if not properly maintained. The swales will also convey little to none of the runoff from the front parking area therefore providing no treatment of runoff. We suggest the engineer explore the potential to install Low Impact Development (LID) measures such as a Bio-Retention cell along the parking lot pavement edges. The DEP is currently recommending greater consideration be given this approach to water quality treatment. Since landscaping is already proposed at the front of the site, it may be possible to install the bio-retention cell(s) to treat smaller, routine storm events.

Erosion and Sediment Control

1. The plans appear to provide adequate information pertaining to erosion control during construction with details and narrative.

2. Riprap sizing should be provided for the area between the proposed concrete pads on the north side of the site.

Details

1. The plans contain sufficient details including lighting photometrics.

We trust these comments are useful. At this time the plans and application materials are satisfactory for consideration by the Planning Board and we recommend Conditional Approval for the project pending the applicant's addressing the comments above.

Att. 9

Kandi Talbot - Bradco Supply Corp. -- Riverside Street

From: "Tom Errico" <terrico@wilbursmith.com>
To: "Kandi Talbot" <kcote@portlandmaine.gov>
Date: 09/08/2005 10:11 AM
Subject: Bradco Supply Corp. -- Riverside Street
CC: "Katherine Earley" <KAS@portlandmaine.gov>

Kandi—

I have reviewed the Site Plan prepared by Sebago Technics and the Traffic Study prepared by Gorrill-Palmer Consulting Engineers, Inc. and offer the following comments.

1. The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provided a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue intersection should be documented.
2. The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lanes. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. I would also ask that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.
3. The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.
4. The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.

Please contact me if you have any questions.

Best Regards,

Thomas A. Errico, P.E.
Senior Transportation Engineer
Wilbur Smith Associates
59 Middle Street
Portland, Maine 04101
(207) 871-1785 Phone
(207) 871-5825 Fax

Att. 10

From: Marge Schmuckal
To: Kandi Talbot
Date: 09/13/2005 10:47:26 AM
Subject: 238 Riverside Street -Wickes/Bradco

Kandi,
I have reviewed this project for compliance with the B-4 zoning regulations. They are meeting all the B-4 requirements, including setbacks, F.A.R. and parking. The impervious surface ratio is currently legally nonconforming at 86% and it will be reduced to 85%, lessening the nonconformity which is encouraged.

I have spoken to Stephen Doe concerning a readable elevation plan to determine compliance. He has e-mailed me a readable copy of the building elevation which shows that the building height is well the maximum allowed.

Marge Schmuckal
Zoning Administrator

Sebago Technics
Engineering Expertise You Can Build On

sebagotechnics.com
One Chabot Street
P.O. Box 1339
Westbrook, Maine
04098-1339
Ph. 207-856-0277
Fax 856-2206

AH. 11

October 4, 2005
04435

Ms. Kandice S. Talbot
Planning & Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

Supplemental Submittal
Wickes Lumber/BRADCO Supply Site Plan Review

Dear Kandi:

This supplemental submission has been prepared to address the staff review comments as noted in the memorandum from Stephen Bushey dated September 6, 2005 and e-mailed from Tom Errico dated September 8, 2005. Our responses are as follows:

Response to Memorandum from Steve Bushey

Site Plan

1. *The Space and Bulk table on the Site Plan suggests that the Maximum impervious surface area on the site will exceed the 80% allowable under the Code. The Zoning officer should review and determine the need for a waiver or other zoning action for these conditions.*

   We understand that Marge Schmuckel has reviewed the plans and concluded they are in compliance with the space and bulk requirements.

2. *The limits of sidewalk and granite curb placement on Riverside Street should be clarified. Do these limits extend to each side of the property?*

   Riverside Street currently has granite curb and bituminous sidewalks. We have identified areas where new granite curbing and sidewalks are needed. These are at the new entrance and where the existing curb cut to the south is to be closed.

3. *The parking count is proposed to be 87 spaces. Is at least a third handicap space required to meet ADA compliance?*

   We have revised the handicap space requirements to have the appropriate number per ADA compliance.

11a

4. *The site plan should denote the snow storage locations and the applicant should provide evidence of their general snow storage and removal procedures.*

Snow storage areas have been identified on the site plan. Snow is typically stockpiled on site in locations that are not used for lumber storage or vehicle parking. As this accumulates and overflows into needed space, it is hauled off site by a private hauler.

Grading Plan

1. *The grading plan outlines a very tight development area that will require particular care and attention during construction to insure positive drainage paths and minimal ponding areas. We suggest additional spot grades be identified on the drawing to verify drainage paths directions.*

We have added spot grades and drainage flow arrows to better define the drainage patterns on site.

2. *In general, runoff is intended to sheet flow towards the sides of the property where existing drainage ditches will convey flow towards the rear of the site (north side) and the front of the site (south side). It appears that the swale on the north side of the site is actually located on the abutting property; therefore we recommend that a drainage easement be put in place to insure continued availability of this conveyance system.*

The applicant is currently pursuing the possibility of obtaining a drainage easement with Mack Louis Company, Inc. If and when an easement is obtained, this document will be forwarded to the City. We would like to question the requirement for this easement. Drainage from this site has historically flowed this way and been conveyed through the abutter's property by the existing swales. Should the abutter choose to develop their site, they would need to address drainage flows from off-site conditions and redirect it accordingly. This would hold true for any development. We have not experienced the requirement for obtaining downstream easements for existing flows.

3. *The Portland Water District should sign off on the extension of the 8" water main for sprinkler service to the new building. The Fire Department should review for the need of a new fire hydrant on the property given the building's distance from Riverside Street.*

We have included a capacity letter from the Portland Water District.

Stormwater Management Study

1. *The stormwater management study and computations document that post development runoff peak flow conditions will not exceed predevelopment conditions at three points of analysis. Our submission materials did not contain the pre and post development watershed maps therefore we did not specifically review these aspects. It appears that the peak runoff rates are slightly decreased in the post development condition simply due to an overall decrease in impervious area. Based on the site plans it is difficult to identify the exact areas where this occurs other than at the front of the site where some*

116

landscaping is to be installed. Towards the rear of the site it appears that a greater amount of paved area will be installed, replacing existing gravel. We recommend that evidence be provided verifying the capacity of the ditches to each side of the property since these are the primary conveyance systems. Each ditch appears to be relatively shallow in depth and slope; therefore their true capacity may be limited.

Watershed maps were included in our original submission to the City. Additional copies are enclosed for Deluca-Hoffman's use. The capacities of the ditches were analyzed using HydroCAD computer software. Hydrologic characteristics were input as a reach and calculations were performed for a 10-year storm event. The results of the HydroCAD calculations show that the peak rate of runoff will be less than the ditch capacity at full flow for a 10-year storm event. See attached calculations.

2. *The stormwater report has not provided evidence of any measures for providing stormwater runoff treatment as is required by the City's Technical Standards. The site's drainage system relies on sheet flow of runoff off hard surfaces and conveyance by the ditches to each side. The report suggests that these grassed swales will also provide water quality treatment. Generally, the swales will provide little treatment to the runoff and may be prone to clogging with excessive vegetation over time if not properly maintained. The swales will also convey little to none of the runoff from the front parking area therefore providing no treatment of runoff. We suggest the engineer explore the potential to install Low Impact Development (LID) measures such as a Bio-Retention cell along the parking lot pavement edges. The DEP is currently recommending greater consideration be given this approach to water quality treatment. Since landscaping is already proposed at the front of the site, it may be possible to install the bio-retention cell(s) to treat smaller, routine storm events.*

We have designed bio-retention basins along the front of the parking lot to provide treatment for this watershed. We have also revised our landscaping plan to incorporate species tolerant of wet conditions.

The drainage ditches on the southerly property limit will be revegetated and check dams will be constructed to reduce runoff velocity, providing water quality treatment equivalent to that of a grassed swale.

The bio-retention areas in front of the property are designed to provide water quality treatment to the first flush of runoff from the front parking area. Stormwater runoff is directed from the parking lot in sheet flow to a grassed buffer that will reduce velocity and filter sediments from the runoff. Runoff then enters the planting bed, which is graded to a depth of six inches to allow time for the ponded water to infiltrate through the organic topsoil. The organic topsoil layer provides a medium that degrades petroleum based solvents and other hydrocarbons. The treated runoff further infiltrates through a layer of crushed stone and is discharged via an underdrain that outlets to the culvert across Riverside Street. In larger storm events, water that has ponded over the underdrain will rise up through the overflow basin and be redirected to the planting bed.

11c

Erosion and Sediment Control

1. *The plans appear to provide adequate information pertaining to erosion control during construction with details and narrative.*

   No comment required.

2. *Riprap sizing should be provided for the area between the proposed concrete pads on the north side of the site.*

   Riprap has been sized.

Details

1. *The plans contain sufficient details including lighting photometrics.*

   Per the request of the Planning Board and staff, we have added house side shields to light fixtures located near the property line to minimize light spill over onto abutting properties. A revised photometric plan is attached.

Response to E-mail from Tom Errico

1. *The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provided a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue intersection should be documented.*

   We are currently working with Jack Murphy, the City, and the utility companies to better define what these improvements will be. We will supply a more detailed intersection modification plan to you under separate cover.

2. *The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lanes. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. I would also ask that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.*

   We have added Sheet 9 to our plan set which shows truck movements through the site and entrance onto Riverside Street. This plan indicates the need for such a wide entrance. The closing of the southern curb cut severely limits how trucks can enter the site and maneuver to the rear of the property. This wide curb cut will allow these maneuvers to occur without impeding off-site traffic. Truck deliveries are received from 7:00 AM to 4:00 PM, Monday through Friday. On average, they have ten deliveries a day. This will vary due to the seasonality of their business. The types of trucks entering and existing range from tractor trailers to standard vans.

11d

3. *The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.*

We understand through discussions with Tom Errico that no formal plan has been prepared by the City that indicates the limits of the widening. Currently, the Riverside right-of-way is limited in width in this location and we anticipated that additional right-of-way acquisition would be required for a future widening. Existing power poles and signalization equipment are already at or near the right-of-way line, and we would propose to place any new equipment as close to the right-of-way line as possible. We will explore the installation of junction boxes for signals to allow for ease of relocation of fixtures in the future.

4. *The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.*

The applicant agrees to make a monetary contribution of $6,500.00 towards the upgrade of the Riverside Street/Warren Avenue intersection. We request this payment be made prior to issuance of a building permit.

Neighborhood Meeting

Sebago Technics sent notices of a neighborhood meeting to abutters within 500 feet of the property and all individuals on the Citizen List as provided by the Planning Department. Notices were sent out via regular mail 7 days prior to the meeting at 5:00 PM on Tuesday, September 27, 2005.

The meeting was held at Sebago Technics' office at 1 Chabot Street in Westbrook with the following representatives present:

Stephen G. Doe	Sebago Technics, Inc.
Howard "Skip" Roberts	BRADCO Supply (Applicant)
David Fagnaunt	BRADCO Supply (Portland Mgr.)
Phillip Morin	PM Construction (General Contractor)

No members of the public attended or contacted Sebago Technics, and we closed the meeting at 6:00 PM. Attached is a copy of the notice.

I trust this supplemental information sufficiently addresses staff concerns and we can proceed with the scheduled October public hearing and final site plan approval with the Planning Board.

11e

If you have questions on this material, please call me.

Sincerely,

SEBAGO TECHNICS, INC.

Stephen G. Doe, R.L.A.
Landscape Architect

SGD:sgd/kn/jc
Enc.

cc:	Howard "Skip" Roberts	BRADCO Supply
	David Fagnaunt	BRADCO Supply
	Les Friedman	Wickes Lumber
	Phillip Morin	PM Construction
	Tom Errico	Wilber Smith Associates
	Steve Bushey	DeLuca-Hoffman

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

CUSTOMER SERVICE
OFFICE HOURS
8:30 A.M. - 4:30 P.M.

11f

September 28, 2005

Steve Doe, R.L.L.
Sebago Technics
PO Box 1339
Westbrook, Me. 04098

Re: 238 Riverside St.-Portland

Steve:

This letter is to confirm there should be an adequate supply of clean and healthful water to serve the needs of the proposed warehouse building at 238 Riverside St. in Portland. Checking District records, I find there is a 12"CI water main on the west side of Riverside St. as well as a water hydrant located in front of the property.

Service records for 238 Riverside indicate there is an 8" fire service and a 1" domestic water service tapped off the 8" fire service. See enclosed service record.

The current data from the nearest hydrant indicates there should be adequate capacity of water to serve the needs of your proposed project.

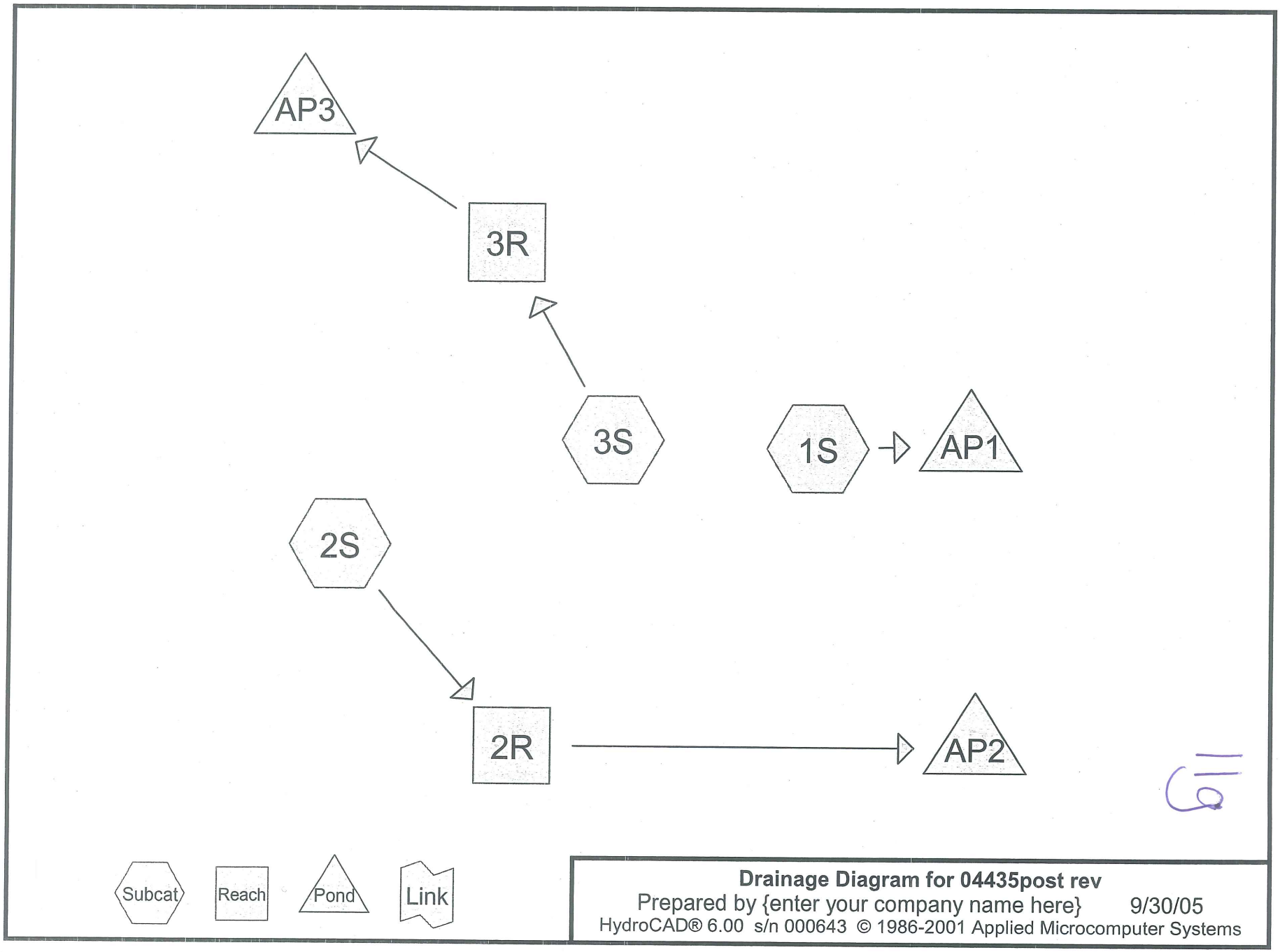
Hydrant Location: Riverside St. 300' north of Campbell St.
Hydrant # 1264
Static pressure = 82 PSI
Residual pressure = 74 PSI
Flow = 1393 GPM
Last Tested = 9/9/2004

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

Sincerely,
Portland Water District

Jim Pandiscio
Means Coordinator

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.761.8310 FAX: 207.879.5837 E-MAIL: CUSTOMERHELP@PWD.ORG WEB: WWW.PWD.ORG



Drainage Diagram for 04435post rev
Prepared by {enter your company name here} 9/30/05
HydroCAD® 6.00 s/n 000643 © 1986-2001 Applied Microcomputer Systems

Reach 2R: Drainage Ditch (South)

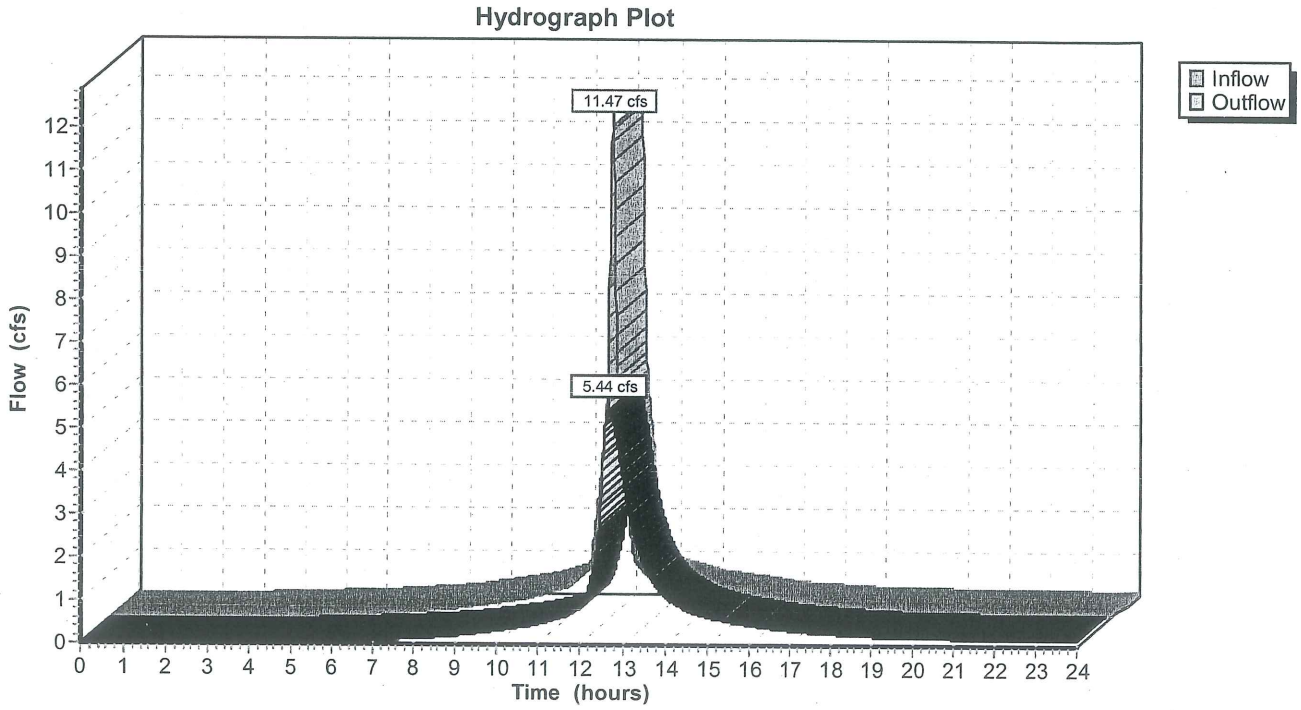
11h

Inflow = 11.47 cfs @ 12.07 hrs, Volume= 0.853 af
Outflow = 5.44 cfs @ 12.65 hrs, Volume= 0.837 af, Atten= 53%, Lag= 34.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.6 fps, Min. Travel Time= 26.4 min
Avg. Velocity = 0.3 fps, Avg. Travel Time= 62.0 min

Peak Depth= 1.42'
Capacity at bank full= 11.89 cfs
2.00' x 2.00' deep channel, n= 0.150 Length= 965.0' Slope= 0.0050 '/'
Side Slope Z-value= 3.0 '/'

Reach 2R: Drainage Ditch (South)



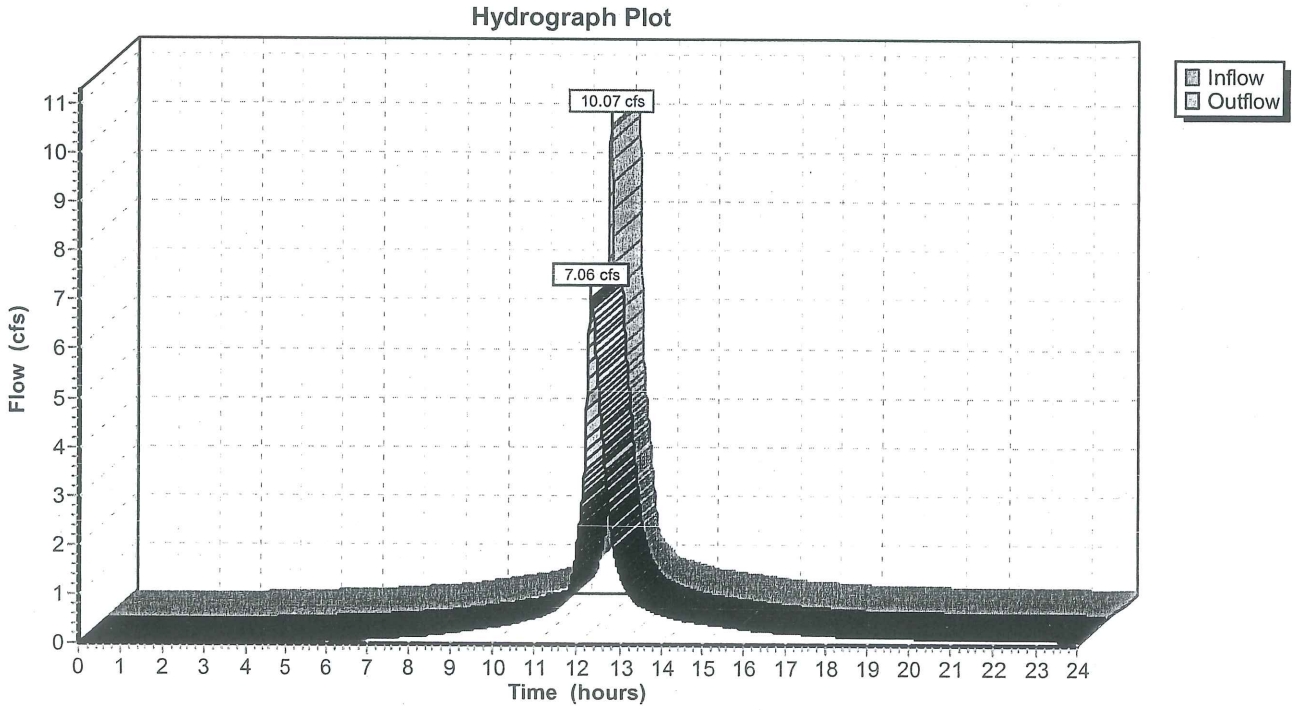
Reach 3R: Drainage Ditch North

Inflow	=	10.07 cfs @	12.07 hrs, Volume=	0.749 af
Outflow	=	7.06 cfs @	12.31 hrs, Volume=	0.743 af, Atten= 30%, Lag= 14.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.7 fps, Min. Travel Time= 10.2 min
Avg. Velocity = 0.3 fps, Avg. Travel Time= 26.5 min

Peak Depth= 1.60'
Capacity at bank full= 11.89 cfs
2.00' x 2.00' deep channel, n= 0.150 Length= 400.0' Slope= 0.0050 '/'
Side Slope Z-value= 3.0 '/'

Reach 3R: Drainage Ditch North



11j

Public Notice
Neighborhood Meeting

You are invited to a presentation and discussion of the following Site Plan Proposal:

Bradco Supply/ Wickes Lumber Co.	238 Riverside Street Approx. 30,791 SF warehouse building in the rear of the site, paving of lot, grading, landscaping, and general site improvements.
Date:	Tuesday, September 27, 2005
Time:	5:00 PM to 6:00 PM
Location:	Sebago Technics, Inc. Conference Room One Chabot Street Westbrook, Maine ☎ 856-0277, Attn: Steve Doe

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

AH. 12

DATE: **October 13, 2005**

TO: **Kandi Talbot, Portland Planning**

C: **Steve Doe, Sebago Technics**

FROM: Stephen R. Bushey, P.E.

SUBJECT: **Wickes Lumber/Bradco Supply Site Plan Review**

Kandi,

DeLuca-Hoffman Associates, Inc. has reviewed the submission materials prepared by Sebago Technics on behalf of Bradco Supply Co. accompanying the October 4, 2005 response letter. The response letter generally addresses our earlier comments on the project. The applicant has made plan revisions that bring the project into compliance with the City's Site Plan review standards. Included in these revisions are the following:

1. Bio-retention landscape cells at the front parking area. These planting beds will capture runoff from the parking area and provide treatment by passing the stormwater runoff through a filtering soil medium. Some runoff may be infiltrated back into the ground and some will be recaptured by an underdrain that conveys the flow back to the existing street system.

2. Additional spot grades have been placed on the grading plan for ease of construction.

Based on our review of the plans and supporting materials it is our opinion that the project submission is satisfactorily complete and that these materials are in accordance with the City's Technical Standards. Therefore the project appears acceptable for Final Site Plan approval by the Planning Board pending no additional comments or concerns by other City staff. We trust the typical Conditions of Approval will apply to this project.

If you have any questions please call.

Regards,

Steve Bushey, PE
Senior Engineer
DeLuca-Hoffman Associates, Inc.

Details

1. The plans contain sufficient details including lighting photometrics.

We trust these comments are useful. At this time the plans and application materials are satisfactory for consideration by the Planning Board and we recommend Conditional Approval for the project pending the applicant's addressing the comments above.

PORTLAND MAINE

Planning Division
Sarah Hopkins, Development Review Services Manager

6/24/05

Councilor Cohen,

We've received an application for a 30,000 ± warehouse on the Wickes lumber site. (Directly across from Home Depot)

Please call if you have any questions.

Sarah

389 Congress Street, 4th floor • Portland, ME • (207) 874-8720 • Fx 756-8258
Email: sh@portlandmaine.gov

SCHEDULE A

A certain lot or parcel of land situated on the westerly side of Riverside Street, so called, in the City of Portland, County of Cumberland,and State of Maine, being more particularly bounded and described as follows:

Beginning at a found 5/8 inch rebar in the westerly sideline of said Riverside Street at the southeasterly corner of the parcel being described herein, said rebar also being at the northeasterly corner of land now or formerly of the Wicks Corporation by a deed recorded in the Cumberland County Registry of Deeds in Book 3142, Page 783;

Thence N 88°-17'-53"W, by and along the northerly sideline of said Wicks Corporation, a distance of 102.51 feet to a point at the southwesterly corner of land now or formerly of Ervine Richardson by a deed recorded in said Registry in Book 5029, page 155; said point also being S 07°-09'-45" E, a distance of 60.0 feet from a found 5/8 inch rebar with cap - PLS #1155 at the northwesterly corner of said Richardson land;

Thence continuing on the same course of N 88°-17'-53"W, by and along the northerly line of said Wicks, a distance of 100.01 feet to a set iron rod near a 1 inch iron pipe found in the easterly line of land now or formerly of Blouin Realty by a deed recorded in Book 6345, Page 205;

Thence N 11°-29'-11" E, by and along the easterly line of said Blouin Realty, a distance of 77.12 feet to a set iron rod in the westerly line of land now or formerly of Tidy-Up Car Wash, Inc., by a deed recorded in said Registry in Book 12770, Page 344;

Thence S 88°-17'-53" E, by and along land of said Tidy-Up Car Wash, Inc., a distance of 122.0 feet to a set iron rod;

Thence S 01°-42-07" W, by and along said Tidy-Up Car Wash, Inc., a distance of 6.0 feet to a set iron rod;

Thence S 88°-17'-53" E, continuing by and along said Tidy-Up Car Wash, Inc., a distance of 72.41 feet to a set iron rod in the westerly sideline of Riverside Street, said iron rod being S 11°-07'-56" W, a distance of 183.01 feet from a found 6 inch by 6 inch granite monument in the westerly sideline of Riverside Street;

Thence southwesterly by and along the westerly sideline of Riverside Street along a curve to the left, an arc distance of 10.60 feet to a found 5/8 inch rebar in the westerly sideline of Riverside Street and the northeasterly corner of land now or formerly of Richardson, said curve having a radius of 544.06 feet, a delta angel of 01°-06'-59" and a chord bearing and distance of S 08°-56-16" W, 10.60 feet;

Thence southwesterly, continuing by and along the westerly sideline of Riverside Street, along a curve to the left, an arc distance of 56.16 feet to a point; said curve having a radius of 544.06 feet, a delta angle of 05°-54'-50" and a chord bearing a distance of S 05°-24'-21" W, 56.13 feet;

Thence southwesterly, continuing by and along the westerly sideline of Riverside Street, along a curve to the left, an arc distance of 3.47 feet to a found 5/8 inch rebar at the point of beginning; said curve having a radius of 629.77 feet, a delta angle of 00°-18'-56", and a chord bearing and distance of S 02°-17'-28" W, 3.47 feet.

Meaning and intending to describe a parcel of land containing 14,611 square feet, or 0.34 acres, more or less, being the same premises conveyed to the Grantors herein by Ervine L. Richardson as described in a deed recorded in the Cumberland County Registry of Deeds in Book _____, Page _____; and also a portion of the same premises conveyed to the Grantors herein by Marjorie Luce as described in a deed dated October 15, 1996 and recorded in said Registry in Book 12770, Page 344. The parcel described herein is shown on a plan entitled, "Survey Plan of Proposed Jiffy-Lube Lot, Warren Avenue, Portland Maine" for Pro-Lube, Inc., West Springfield, Massachusetts; dated March 3, 1997; by Sebago Technics, Inc., Westbrook, Maine; a non-recorded plan on file at the offices of Sebago Technics, Inc., in job file number 97087.

Excepting and reserving to the Grantor, its successors and assigns, an easement for the use, maintenance, repair and replacement of a septic system leach bed, in common with the Grantee, its successors and assigns, in the general location as shown on the Plan, subject, however, to the Grantee's right to expand and relocate such disposal bed on the property conveyed to the Grantee as described herein. This easement for the septic system leach bed shall terminate and extinguish at such time as the adjoining property of the Grantor is served by public sewer.

The above-described premises are conveyed together with an easement over the retained property of the Grantor (see Book 12770, Page 344) for travel to and from Warren Avenue and Riverside Street over the Grantor's retained parcel to the premises conveyed above.

The premises conveyed herein are further conveyed together with an easement for the temporary loading and unloading by truck for the purpose of delivering motor lubricants from the buildings located upon the property conveyed to the Grantee herein. This easement for temporary loading and unloading is located along the southerly sideline of Grantor's retained parcel (see Book 12770, Page 344) in the vicinity of the building to be constructed by Grantee. Reference is made to the Plan and to a certain site/utility plan of proposed Jiffy Lube for Pro Lube, Inc., by Sebago Technics dated April 3, 1997.

The parcel is subject to any and all rights-of-way, easements and restrictions of record, and all as shown on said survey plan.

Bearings herein are magnetic north of 1995.

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
26 Main St.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:gpcei@maine.rr.com

December 20, 2000

Mr. Joseph E. Gray Jr.
Director of Planning and Urban Development
City of Portland
389 Congress St.
Portland, Maine 04101

Subject: Wickes Lumber Site Plan Application
Response to comment

Dear Joseph:

Enclosed please find the response to condition number one of the comments that were previously received from your letter dated November 2, 2000 in regards to the Wickes Lumber Company at 238 Riverside Street in Portland. A revised set of drawings has been included, showing the necessary changes.

The following comments were indicated as being responded to under separate cover. Gorrill-Palmer Consulting Engineers, Inc. is responding to at this time.

Site Plan:

Condition 1 – Hydrants must be within 250 ft. of the stacks of lumber.

Response – We received approval from the Portland Water District to install an 8-inch water lateral from the existing 8-inch water service, used for the internal fire system, at the northeast corner of the existing building. The new water line will extend north to the existing fence line and then turn directly west along that same fence line. Two fire hydrants will be installed; one will be located at the north end of the northern canopy overhang, and the other hydrant will be installed approximately half way between the canopy and the fence line along the west side of the storage area. Please refer to the enclosed site plans for further details.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Alton M. Palmer, P.E.
Vice President

cc: Phil Lamoureux, Wickes Lumber
William Bray, Director of Public Works
Lt. Gaylen McDougall, Fire Prevention
Jim Pandiscio, Portland Water District

ALP/rmg/JN209/BMezquita-comment&response09-14-00

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services

PO Box 1237
26 Main St.
Gray, ME 04039

207-657-6910
FAX: 207-657-6912
E-Mail:gpcei@maine.rr.com

October 13, 2000

Ms. Marge Schmuckal, Code Enforcement Officer
City of Portland
389 Congress Street
Portland, ME 04101-3503

Subject: Wickes Lumber Company
Lumber Storage Expansion
Minor Site Plan Review

Dear Marge:

Gorrill-Palmer Consulting Engineers, Inc. has been retained by Phil Lamoureux of Wickes Lumber Company to prepare plans for the reconstruction of their lumber storage facilities on the rear part of their property, near the corner of Warren Avenue and Riverside Street. A location map depicting the site is enclosed. The proposed construction includes the following:

- A 7,920 s.f., three sided, storage shed on a reinforced concrete pad
- The upgrading of a 52,400 s.f. gravel storage area to a well graded hot bituminous or reclaimed pavement surface.
- The re-grading of the rear gravel area.
- The addition of a storm drainage system within the proposed paved area.

In accordance with Article V, Site Plan, Section 14-525 (a), of the Land Use Ordinance for the City of Portland, this letter and accompanying plans are intended to satisfy the Minor Site Plan submittal for review by the City of Portland Planning Authority. Our office and Wickes Lumber have met with Sarah Hopkins of the planning office to review the project on a preliminary basis. We look forward to your review.

Site Description

The project site is located just south of Warren Avenue, on the west side of Riverside Street. The total land area of the site is 5.95 acres. There is an existing showroom/warehouse roughly 130 feet from Riverside St., with a three-sided storage shed and 2 large umbrella structures for wood storage, located at the rear of the main building. The existing pavement ends just prior to the umbrella storage structures. The rear of the site, easterly of a Central Maine Power Company easement, is approximately 2.5 acres of a large open gravel area used for storage of lumber and building supplies. The reconstruction of this project will take place from

the existing edge of pavement, behind the warehouse to the edge of the existing gravel area. The gravel area is extremely flat and susceptible to rutting. There are two drainage ditches, one on each side of the property, to carry water towards Riverside Street. At the end of the ditch on the south side of the property there is a 15" culvert underneath Riverside St.

Proposed Expansion

Wickes Lumber is proposing the construction of the following items:

- First - completion of the pavement surface, approximately 8,700 s.f, at the north west corner of the existing pavement, just behind the warehouse building.
- Second - the grading and reconstruction of a new surface, either hot bituminous pavement or a reclaimed pavement surface to be directed by the owner. The total area is approximately 1.2 acres, over half of the existing gravel area.
- Third - construction of a 7,920 s.f. Storage shed, along the southern property line.
- Fourth - the regrading of the remaining gravel area, approximately 34,270 s.f., towards the rear of the site.

As part of the reconstruction for the lumber storage facility the addition of a storm system including, catchbasins and stormdrain pipe to keep water from the lumber stockpiles, will be implemented. It is proposed that the reconstructed area will not extend any further than the limits of the existing area covered by gravel.

Zoning

The property is presently zoned as B-4, Commercial Zone. Lumber and building material dealers are permitted within this zone. The ordinance requires a side setback of ten feet for the storage shed, the only structure proposed. The maximum impervious area ratio for the site, 80 percent, would not change. The existing gravel area is considered impervious. This keeps the surface type, for drainage computations, equal between the existing and proposed models for the site.

Stormwater Runoff

The area to be reconstructed for lumber and building supply storage is presently all gravel. The gravel area will be regarded to allow for positive drainage from the storage surface.

For the purpose of this study "HydroCad" was used to model the 2, 10 and 25 year events, predicting peak rates of runoff for the existing versus proposed site. For this site a proposed re-graded, hot bituminous pavement or a reclaimed pavement, area curve number of 98 was used, compared to the existing gravel area curve number of 94. Overall sub-basin area and flow patterns were not changed between the existing and proposed models. Runoff generated in sub-catchment 1, existing and proposed

conditions, will flow along the new surface by sheet flow and shallow concentrated flow to an existing ditch along the north property line, where the runoff will travel through its present course. (Refer to the enclosed pre and post-development drainage plans.) The following is a table of peak runoff rates for the existing and proposed models for sub-catchment 1:

Peak Flows (cfs) – Subcatchment 1		
2 Year	10 Year	25 Year
Pre-dev. - 1.3	2.2	2.5
Post-dev. - 1.3	2.1	2.5

The flow calculations for this sub-catchment do not change between models, leaving runoff characteristics the same.

The runoff from sub-catchments 22 through 23, the area to be used for either the hot bituminous or reclaimed pavement surface, will be collected in new catchbasins and carried towards the existing ditch along the south property line. All of the runoff from this point will travel in a new 24" storm pipe located in the existing ditch. The size of this pipe was determined based upon the relatively flat slopes available onsite, and to provide additional storage in the pipe. The pipe will be completely covered by a minimum of 3 feet of earth. The outlet for the stormline will be approximately 30 feet from the existing 15-inch culvert under Riverside Street. The following is a table of peak runoff rates for sub-catchments 21 through 23:

Peak Flows (cfs) – Subcatchment 2		
2 Year	10 Year	25 Year
Pre-dev. - 2.5	4.1	4.9
Post-dev. - 4.1	5.5	5.8

The applicant is requesting a waiver for the small increases in flow from this sub-catchment. The use of pipe and the ditch along the south property line, behind the proposed shed, will be used as storage for runoff. This will keep water from ponding on any of the re-graded surface. The small increase in peak flows are relatively minor in nature and would not result in a significant impact to the existing 15-inch culvert under Riverside St. The existing culvert is sloped at 5.70 percent for a total capacity of 8.4 cfs. The remaining acre of gravel area will be graded to drain in the existing drainage patterns of that area. The surface will also remain gravel; therefore flow computations on the rear area are not needed.

Water quality will be treated by a Stormceptor, located at the southwest corner of the existing shed, at the rear of the property. All runoff generated from sub-basins 21 through 23 will be channeled to the Stormceptor. The runoff will exit the 24-inch stormpipe near the existing culvert in Riverside St. TSS removal for the one

Stormceptor unit indicated on this project shows a 90 percent removal rate for suspended solids.

The reconstructed storage area is to be graded to allow for positive drainage. Stormwater runoff will be conveyed to a stable discharge point adjacent to the drainage ditch along the southern property line of this site. Detailed calculations for pipe/culvert sizing and water quality treatment have been included with the Site Plan submission.

Lighting

The owner is not proposing any lighting schedules for the rear of this site. The area will be used for lumber and building supply storage only.

Utilities

There is one 3-sided shed proposed, however, this shed is for storage only. There will not be any need for a sewer or water service to this structure. Electrical service may be required to the storage shed per the owners request. The only specified underground construction will be a stormdrain system, as described earlier.

Landscaping

This project consists of resurfacing an existing gravel storage area; therefore any landscaping will be per the owner's request.

Conclusion

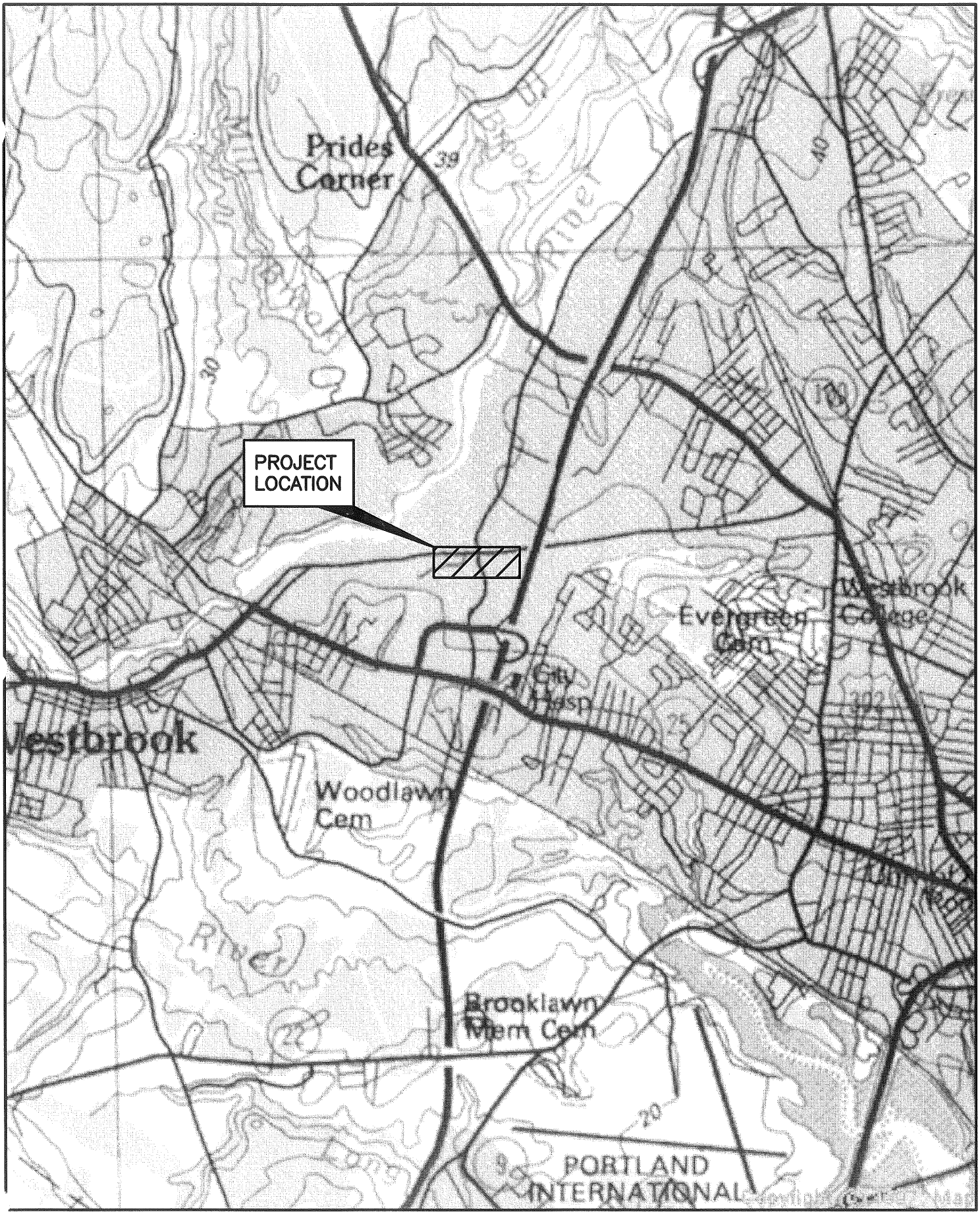
As proposed, from the City of Portland Ordinance, this site will fall under a Minor Review Process. The reconstruction of the existing gravel storage area behind Wickes Lumber will include the construction of one 7,920 s.f. building and the re-surfacing of 1.2 acres of gravel area. The project team looks forward to the Planning Board's review of this project.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Alton M. Palmer, P.E.
Vice President

CC: Phil Lamoureux, Wickes Lumber Copany



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Draft: DER	Job No.: 212
Checked: AMP	Scale: NTS
File Name: 212-map.dwg	

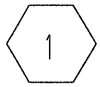
Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237, 26 Main Street
Gray, ME 04039
207-657-6910

Drawing Name:
LOCATION MAP

Project:
WICKES LUMBER COMPANY

Figure No.
A

WATERSHED ROUTING ==========



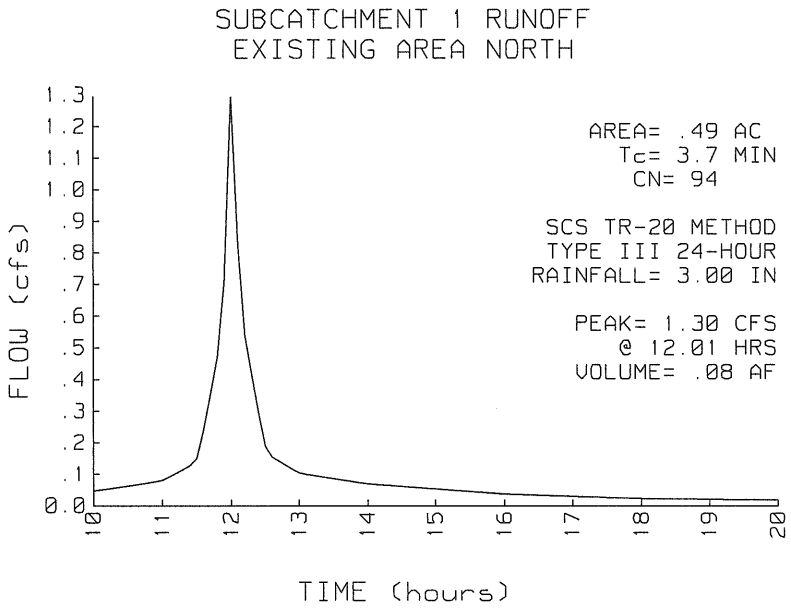
SUBCATCHMENT 1 **EXISTING AREA NORTH**

PEAK= 1.30 CFS @ 12.01 HRS, VOLUME= .08 AF

ACRES	CN	
.49	94	GRAVEL LOT

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**Segment ID: A - B**	2.7
Smooth surfaces n=.011 L=150'	P2=3 in s=.0067 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: B - C**	1.0
Unpaved Kv=16.1345 L=70'	s=.005 '/' V=1.14 fps	
	Total Length= 220 ft Total Tc=	3.7



SUBCATCHMENT 2 **EXISTING AREA SOUTH**

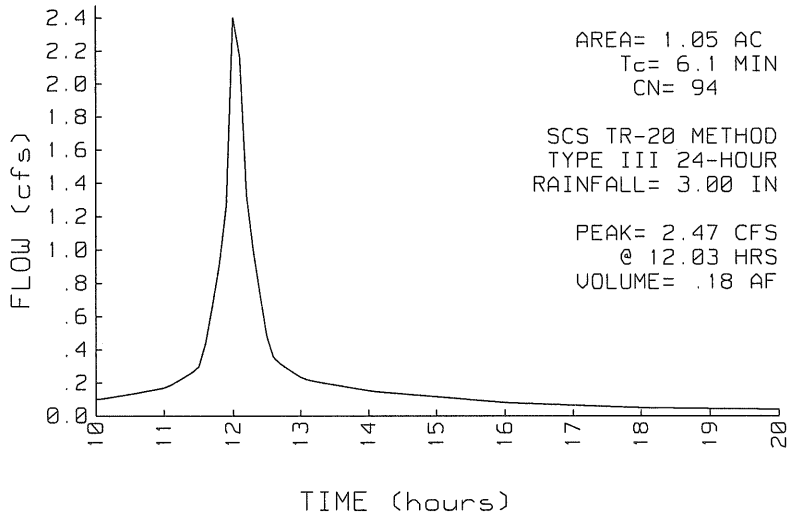
PEAK= 2.47 CFS @ 12.03 HRS, VOLUME= .18 AF

ACRES	CN	
1.05	94	GRAVEL LOT

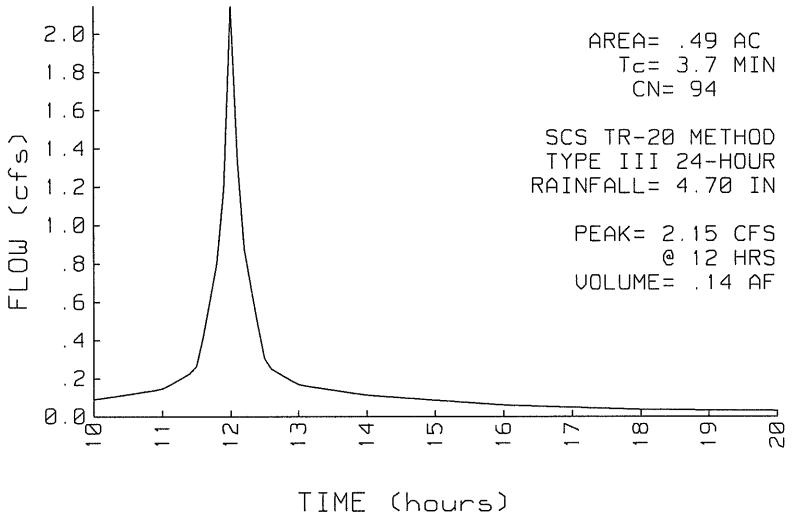
SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**Segment ID: A - B**	2.5
Smooth surfaces n=.011 L=120'	P2=3 in s=.005 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: B - C**	1.6
Unpaved Kv=16.1345 L=110'	s=.005 '/' V=1.14 fps	
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: C - D**	2.0
Unpaved Kv=16.1345 L=135'	s=.005 '/' V=1.14 fps	
	Total Length= 365 ft Total Tc=	6.1

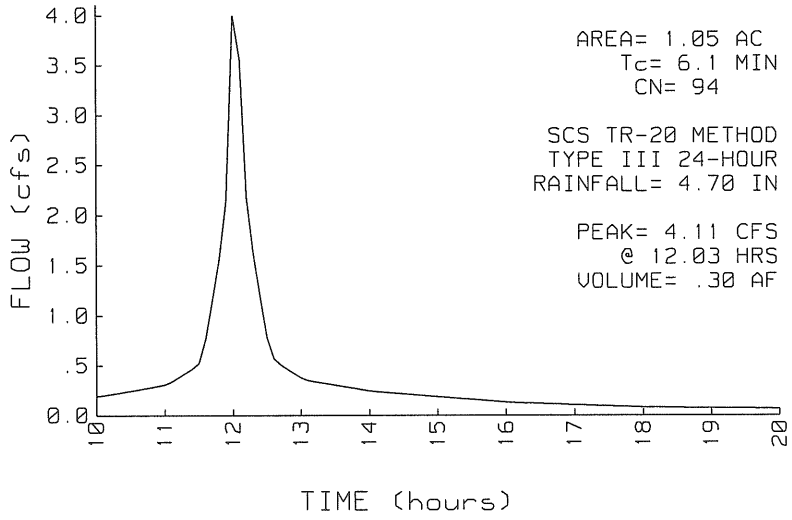
SUBCATCHMENT 2 RUNOFF
EXISTING AREA SOUTH



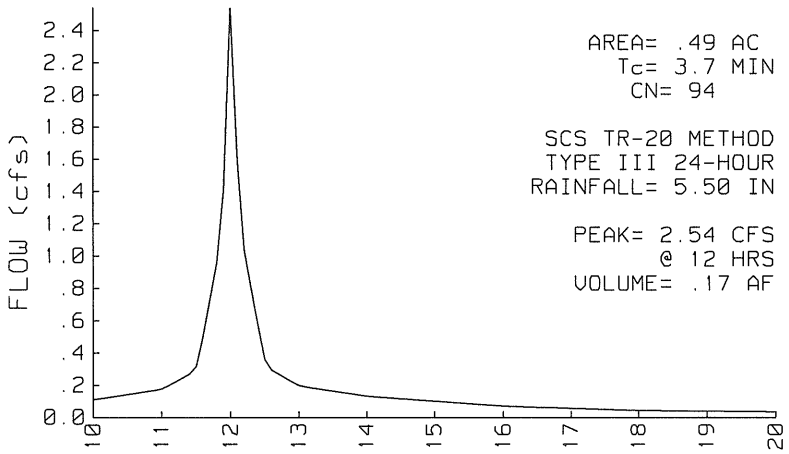
SUBCATCHMENT 1 RUNOFF
EXISTING AREA NORTH



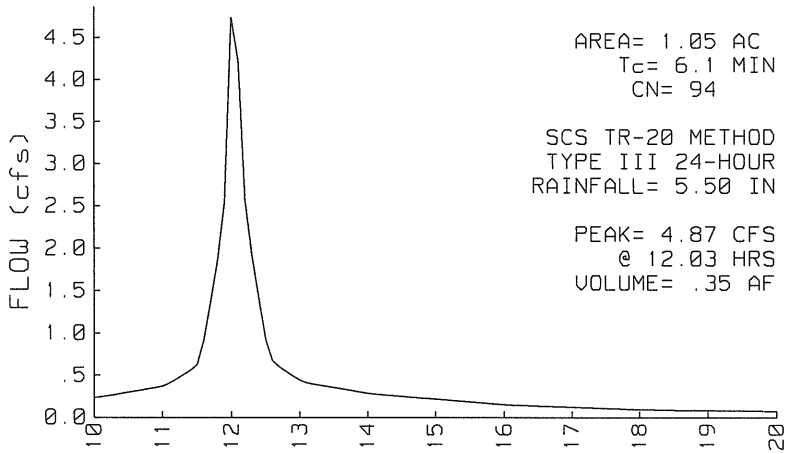
SUBCATCHMENT 2 RUNOFF
EXISTING AREA SOUTH



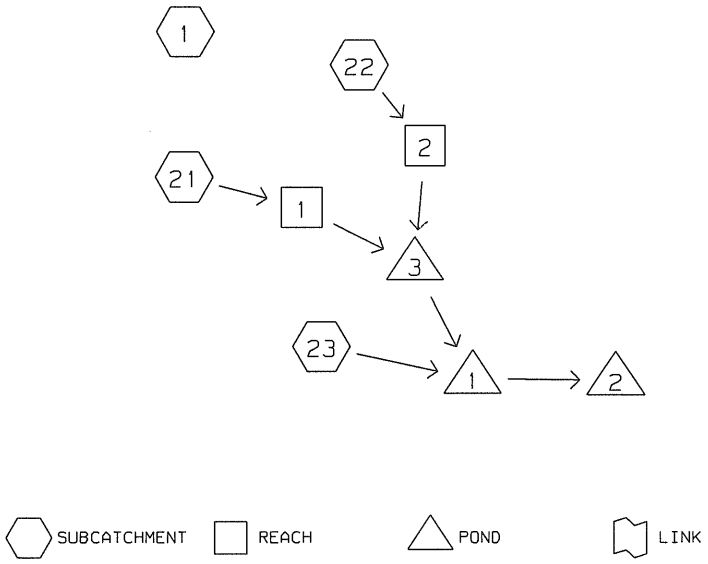
SUBCATCHMENT 1 RUNOFF
EXISTING AREA NORTH



SUBCATCHMENT 2 RUNOFF
EXISTING AREA SOUTH



WATERSHED ROUTING ==========



SUBCATCHMENT 1 **AREA NORTH**

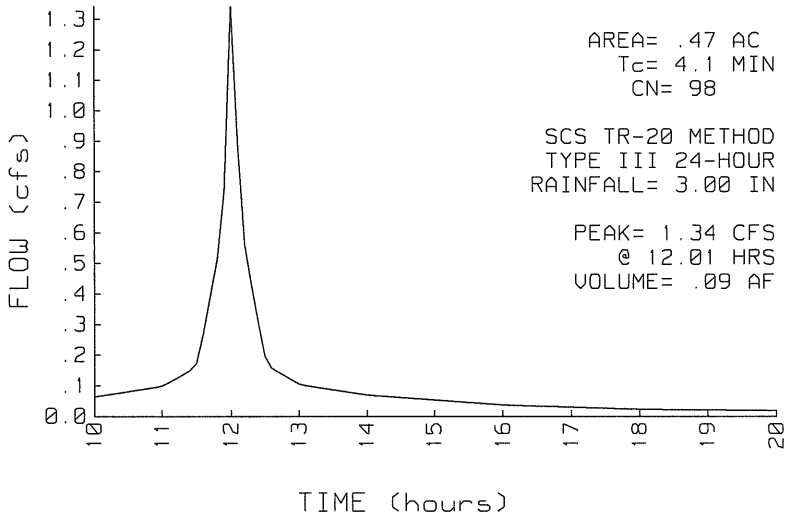
PEAK= 1.34 CFS @ 12.01 HRS, VOLUME= .09 AF

ACRES	CN	
.47	98	PAVEMENT

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**Segment ID: A - B**	1.8
Smooth surfaces n=.011 L=77' P2=3 in s=.005 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: B - C**	2.3
Paved Kv=20.3282 L=200' s=.005 '/' V=1.44 fps		
	Total Length= 277 ft Total Tc=	4.1

SUBCATCHMENT 1 RUNOFF
AREA NORTH



SUBCATCHMENT 21 **Catch Basin 1**

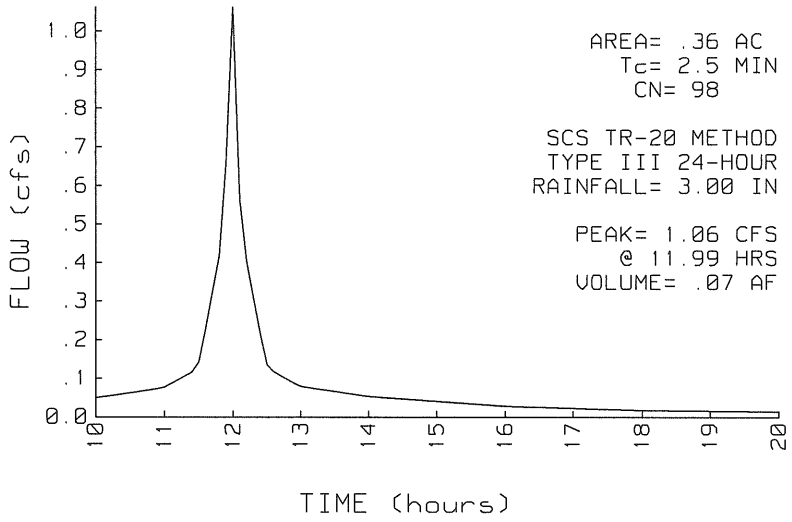
PEAK= 1.06 CFS @ 11.99 HRS, VOLUME= .07 AF

ACRES	CN	
.36	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**Segment ID: A - B**	1.2
Smooth surfaces n=.011 L=47' P2=3 in s=.005 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: B - C**	1.3
Paved Kv=20.3282 L=115' s=.005 '/' V=1.44 fps		
	Total Length= 162 ft Total Tc=	2.5

SUBCATCHMENT 21 RUNOFF
Catch Basin 1



SUBCATCHMENT 22 **Catch Basin 2**

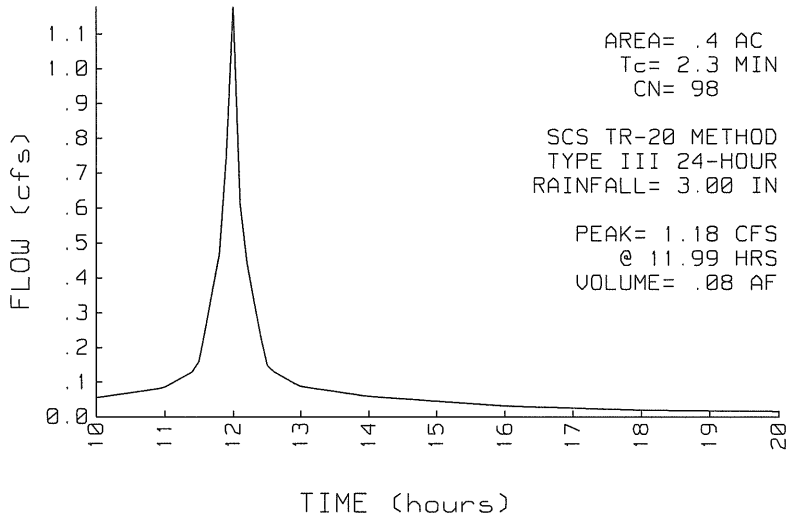
PEAK= 1.18 CFS @ 11.99 HRS, VOLUME= .08 AF

ACRES	CN	
.40	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**Segment ID: A - B**	1.4
Smooth surfaces n=.011 L=58' P2=3 in s=.005 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: B - C**	.9
Paved Kv=20.3282 L=77' s=.005 '/' V=1.44 fps		
	Total Length= 135 ft Total Tc=	2.3

SUBCATCHMENT 22 RUNOFF
Catch Basin 2



SUBCATCHMENT 23 **Catch Basin 4**

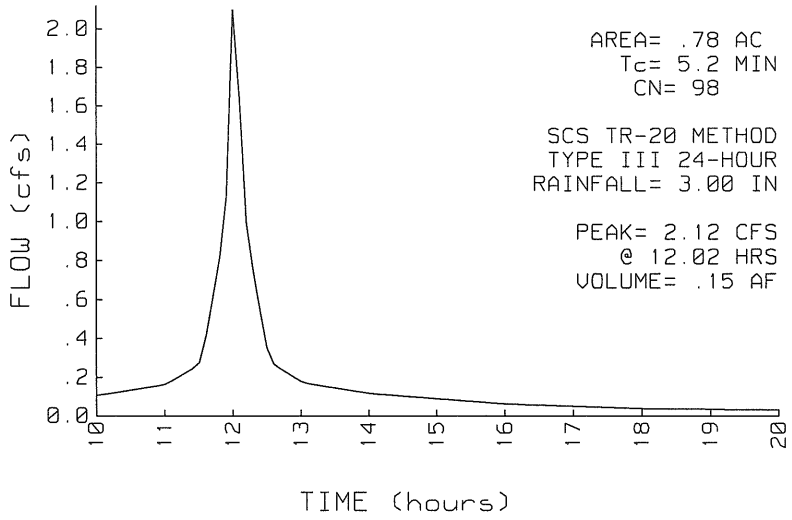
PEAK= 2.12 CFS @ 12.02 HRS, VOLUME= .15 AF

ACRES	CN	
.78	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**Segment ID: A - B**	1.0
Smooth surfaces n=.011 L=40'	P2=3 in s=.005 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	**Segment ID: B - C**	4.2
Grassed Waterway Kv=15 L=265'	s=.005 '/' V=1.06 fps	
	Total Length= 305 ft Total Tc=	5.2

SUBCATCHMENT 23 RUNOFF
Catch Basin 4



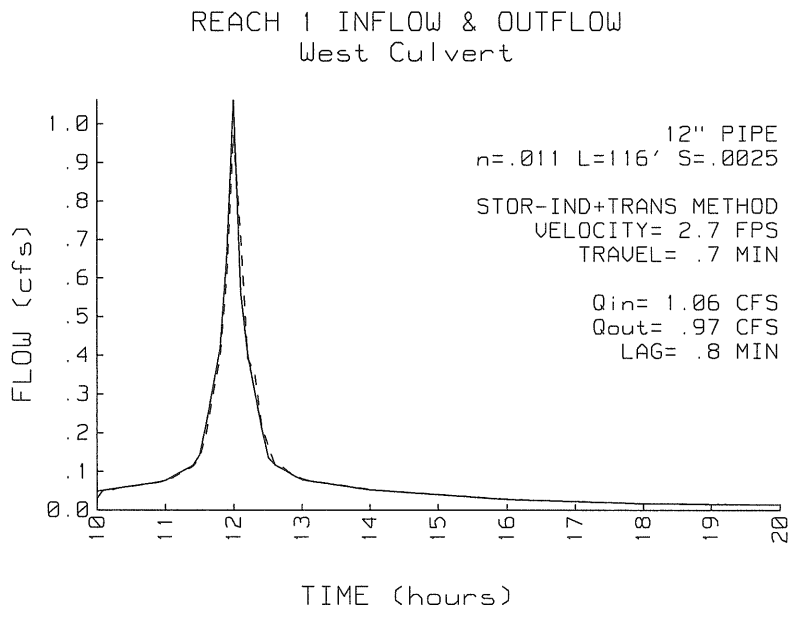
REACH 1 **West Culvert**

Qin = 1.06 CFS @ 11.99 HRS, VOLUME= .07 AF
Qout= .97 CFS @ 12.01 HRS, VOLUME= .07 AF, ATTEN= 8%, LAG= .8 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.1	0.0	.04
.2	.1	.18
.3	.2	.41
.7	.6	1.76
.8	.7	2.06
.9	.7	2.24
.9	.8	2.26
1.0	.8	2.24
1.0	.8	2.11

12" PIPE
n= .011
LENGTH= 116 FT
SLOPE= .0025 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .48 FT
PEAK VELOCITY= 2.7 FPS
TRAVEL TIME = .7 MIN
SPAN= 10-20 HRS, dt=.1 HRS



REACH 2 **North Drain**

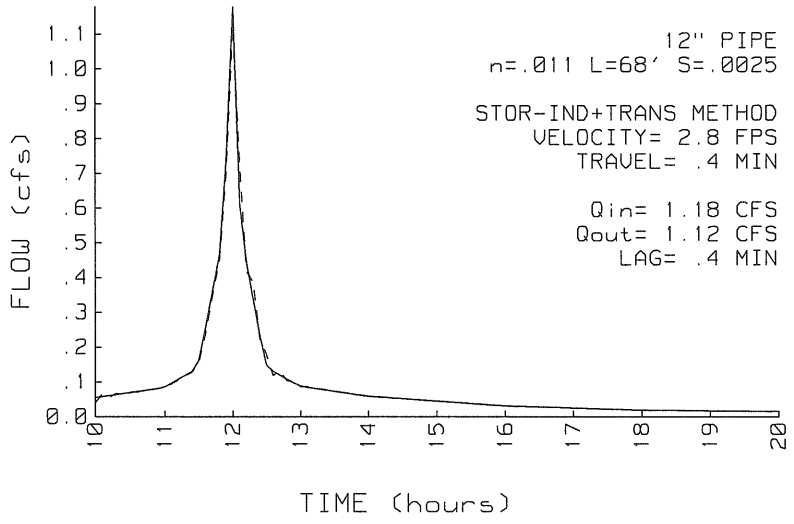
Qin = 1.18 CFS @ 11.99 HRS, VOLUME= .08 AF
Qout= 1.12 CFS @ 12.00 HRS, VOLUME= .08 AF, ATTEN= 5%, LAG= .4 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.1	0.0	.04
.2	.1	.18
.3	.2	.41
.7	.6	1.76
.8	.7	2.06
.9	.7	2.24
.9	.8	2.26
1.0	.8	2.24
1.0	.8	2.11

12" PIPE
n= .011
LENGTH= 68 FT
SLOPE= .0025 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .52 FT
PEAK VELOCITY= 2.8 FPS
TRAVEL TIME = .4 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 2 INFLOW & OUTFLOW
North Drain



POND 1 **CB 3**

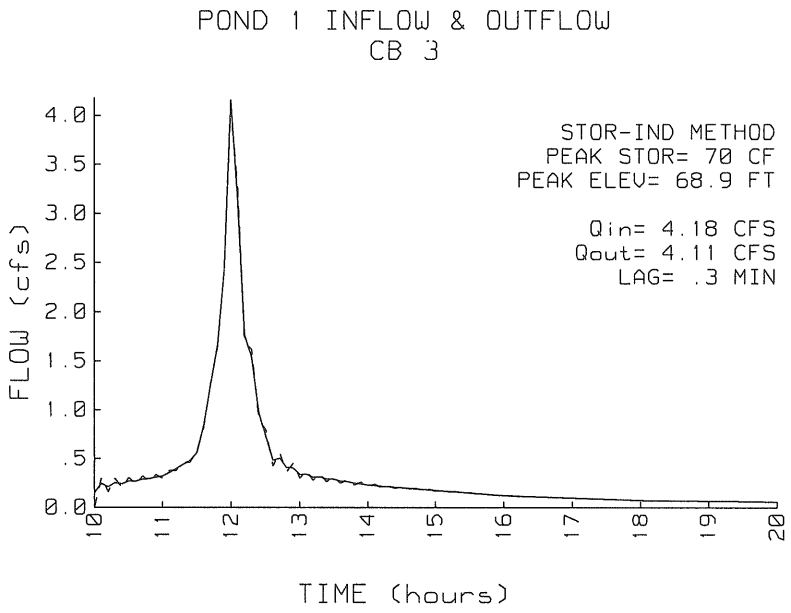
Qin = 4.18 CFS @ 12.01 HRS, VOLUME= .29 AF
Qout= 4.11 CFS @ 12.02 HRS, VOLUME= .29 AF, ATTEN= 2%, LAG= .3 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
63.5	0	0	0
63.6	13	1	1
68.8	13	66	66
69.0	63	8	74
70.0	844	453	527
70.7	2000	995	1522

STOR-IND METHOD
PEAK STORAGE = 70 CF
PEAK ELEVATION= 68.9 FT
FLOOD ELEVATION= 70.7 FT
START ELEVATION= 63.5 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 2.1 MIN (.29 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	66.8'	**12" CULVERT**

n=.011 L=90' S=.0025'/' Ke=.2 Cc=.9 Cd=.75



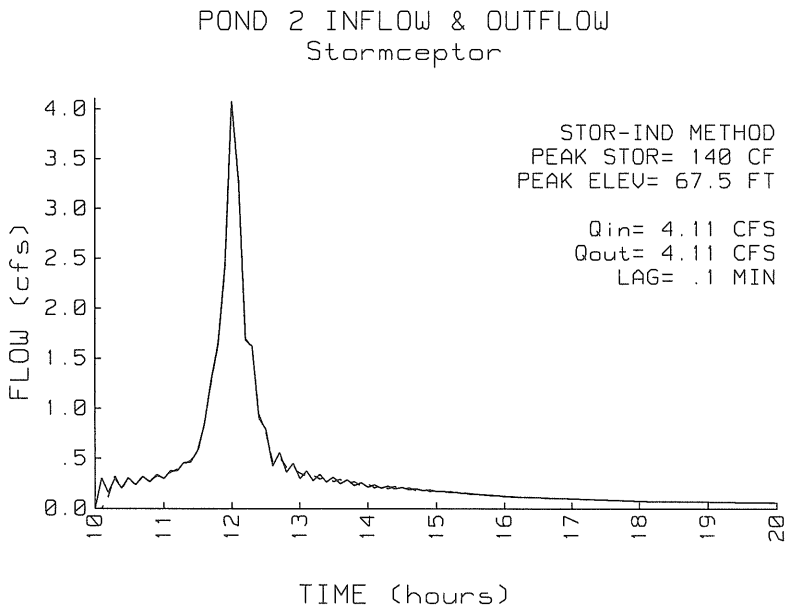
POND 2 **Stormceptor**

Qin = 4.11 CFS @ 12.02 HRS, VOLUME= .29 AF
Qout= 4.11 CFS @ 12.02 HRS, VOLUME= .29 AF, ATTEN= 0%, LAG= .1 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
62.5	0	0	0
62.6	28	1	1
70.5	28	224	225

STOR-IND METHOD
PEAK STORAGE = 140 CF
PEAK ELEVATION= 67.5 FT
FLOOD ELEVATION= 70.5 FT
START ELEVATION= 62.5 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 5.2 MIN (.28 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	66.5'	**24" CULVERT**
			n=.011 L=460' S=.0025'/' Ke=.2 Cc=.9 Cd=.75



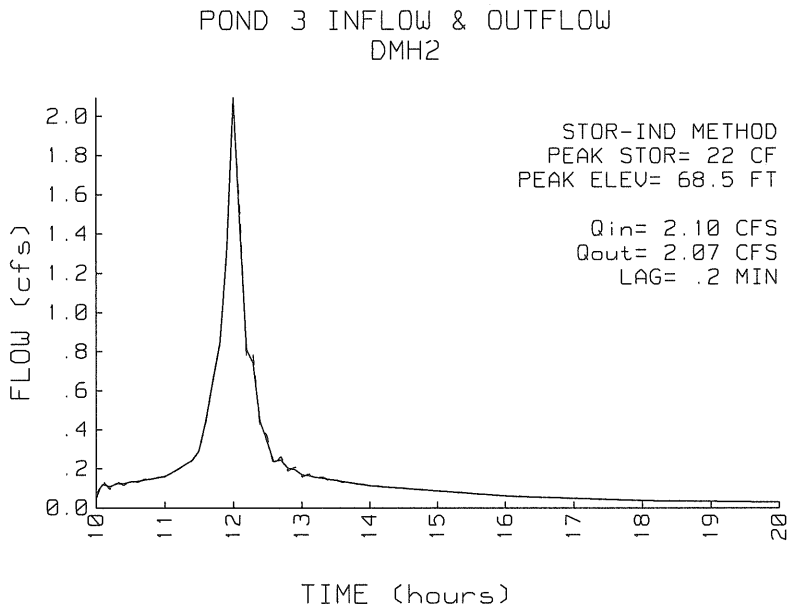
POND 3 **DMH2**

Qin = 2.10 CFS @ 12.00 HRS, VOLUME= .14 AF
Qout= 2.07 CFS @ 12.01 HRS, VOLUME= .14 AF, ATTEN= 1%, LAG= .2 MIN

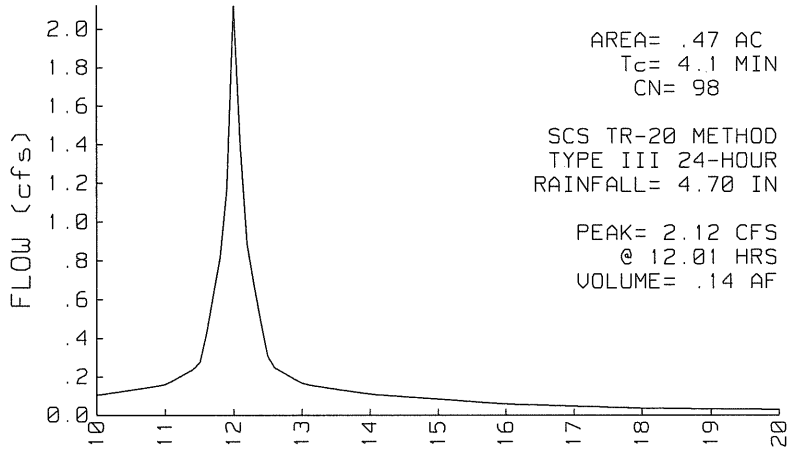
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
66.7	0	0	0
66.8	13	1	1
69.5	13	35	35
71.3	4	15	50

STOR-IND METHOD
PEAK STORAGE = 22 CF
PEAK ELEVATION= 68.5 FT
FLOOD ELEVATION= 71.3 FT
START ELEVATION= 66.7 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= .5 MIN (.14 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	66.9'	**12" CULVERT**
			n=.024 L=54' S=.0025'/' Ke=.2 Cc=.9 Cd=.75

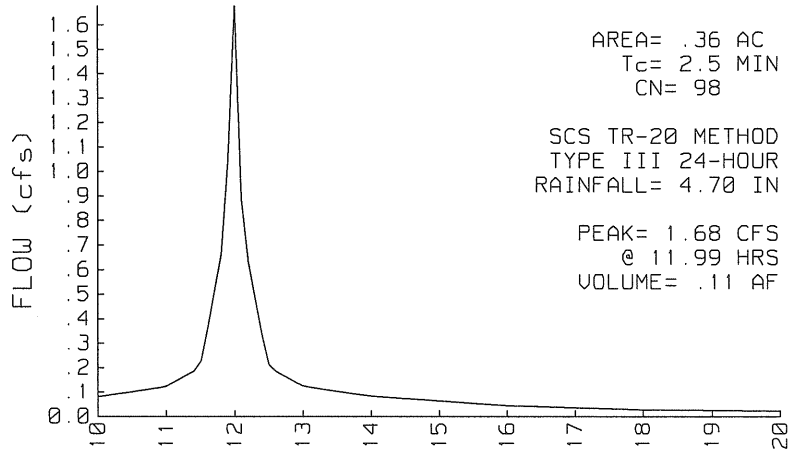


SUBCATCHMENT 1 RUNOFF
AREA NORTH



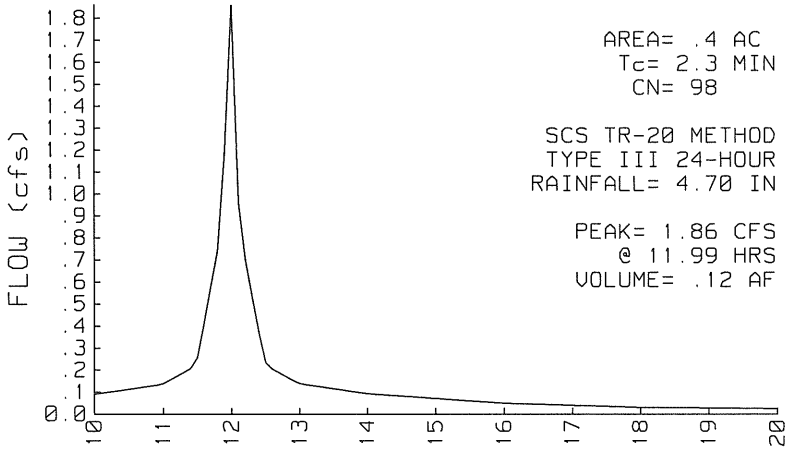
TIME (hours)

SUBCATCHMENT 21 RUNOFF
Catch Basin 1

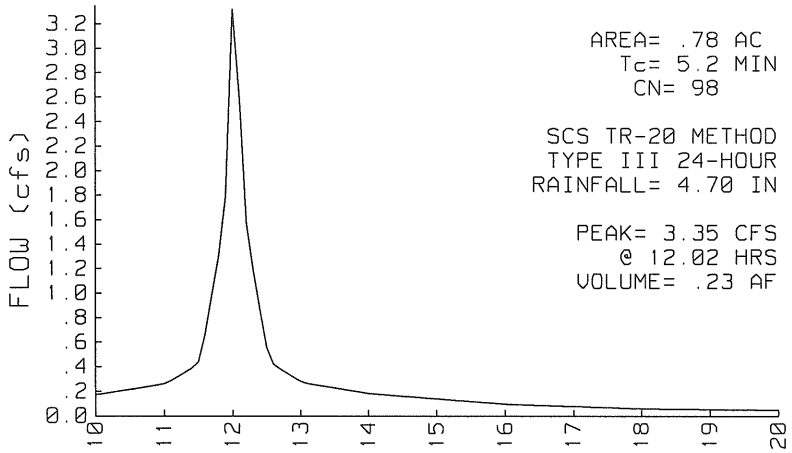


TIME (hours)

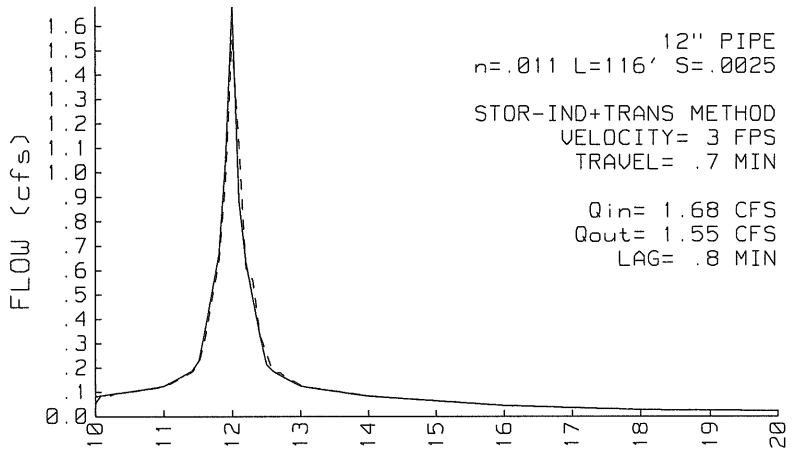
SUBCATCHMENT 22 RUNOFF
Catch Basin 2



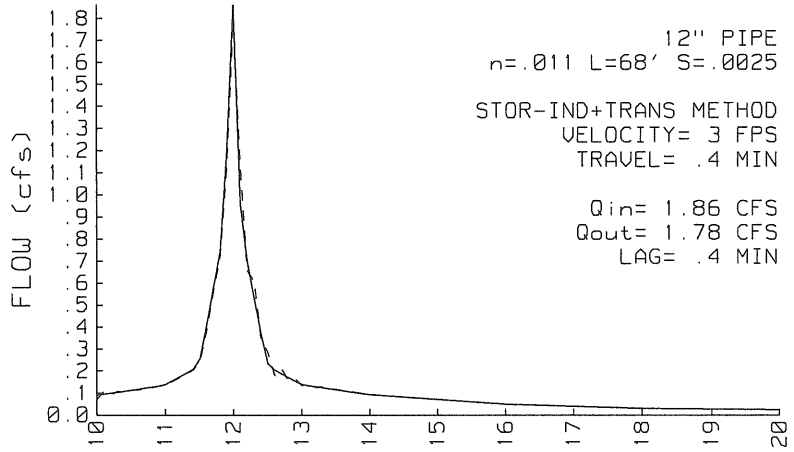
SUBCATCHMENT 23 RUNOFF
Catch Basin 4



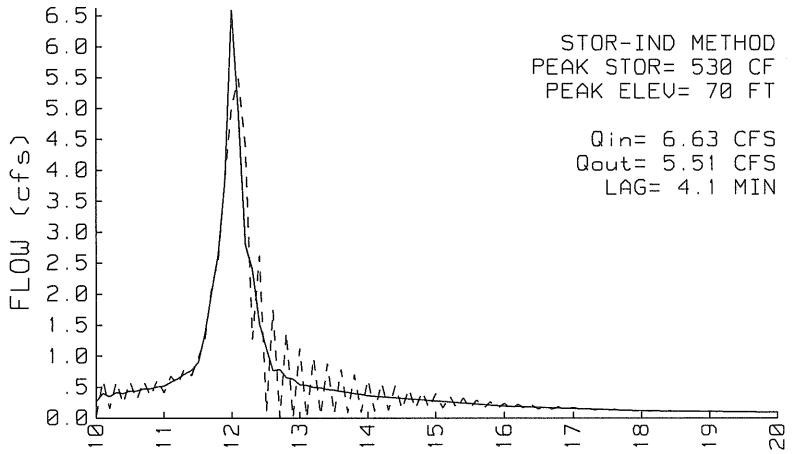
REACH 1 INFLOW & OUTFLOW
West Culvert



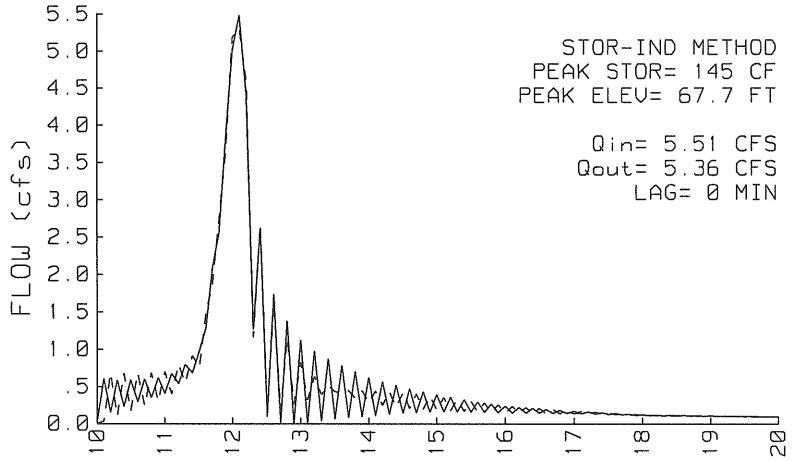
REACH 2 INFLOW & OUTFLOW
North Drain



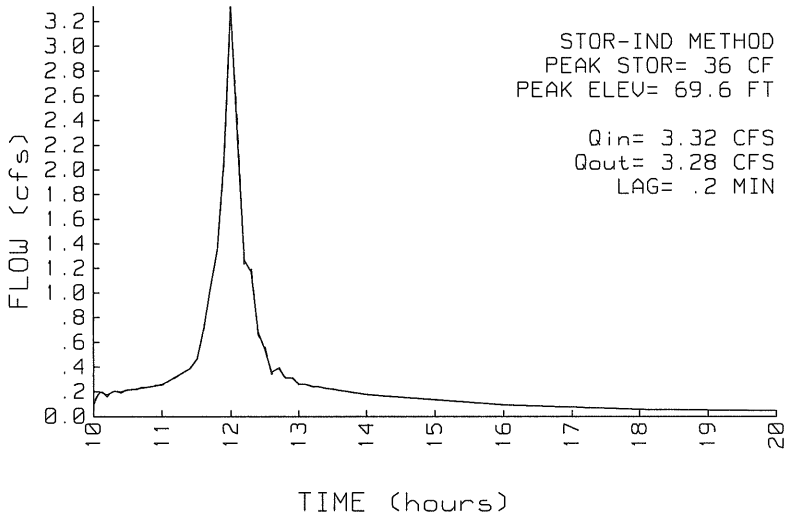
POND 1 INFLOW & OUTFLOW
CB 3



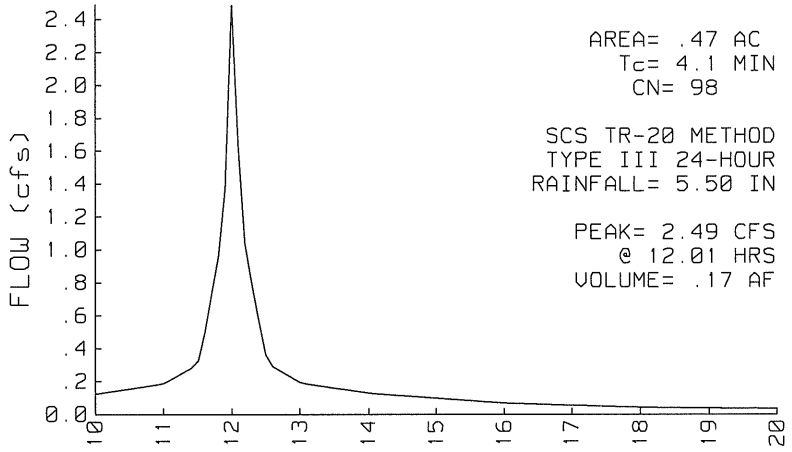
POND 2 INFLOW & OUTFLOW
Stormceptor



POND 3 INFLOW & OUTFLOW
DMH2

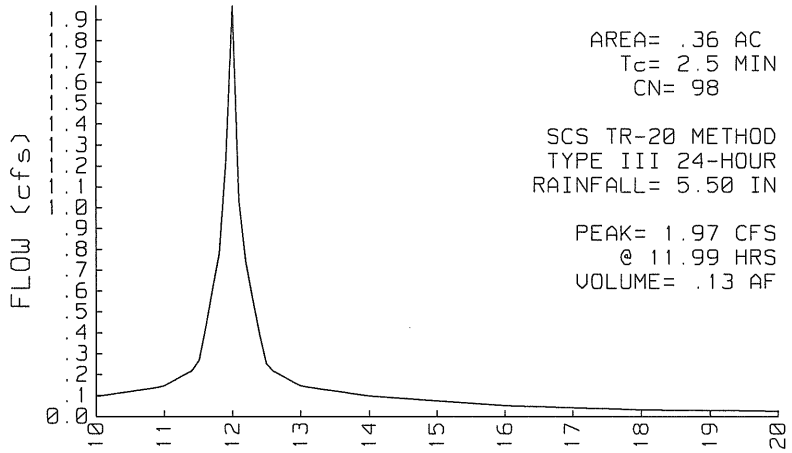


SUBCATCHMENT 1 RUNOFF
AREA NORTH



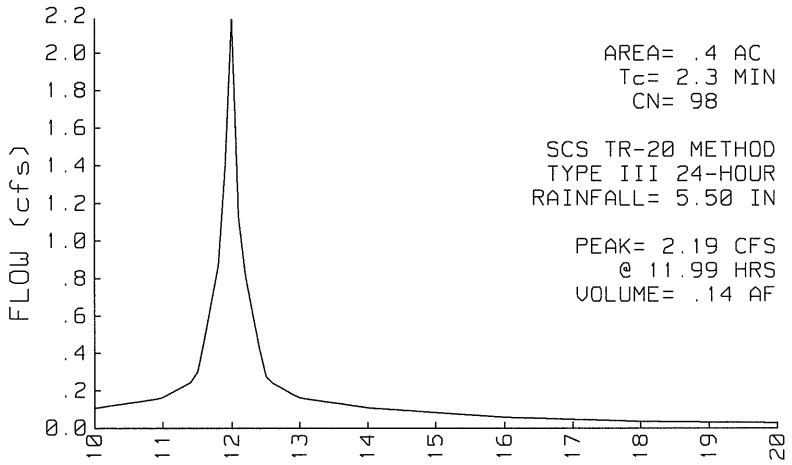
TIME (hours)

SUBCATCHMENT 21 RUNOFF
Catch Basin 1



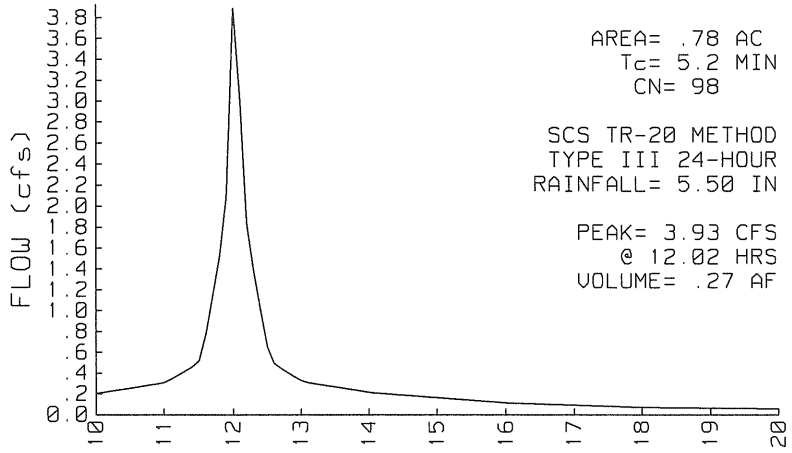
TIME (hours)

SUBCATCHMENT 22 RUNOFF
Catch Basin 2



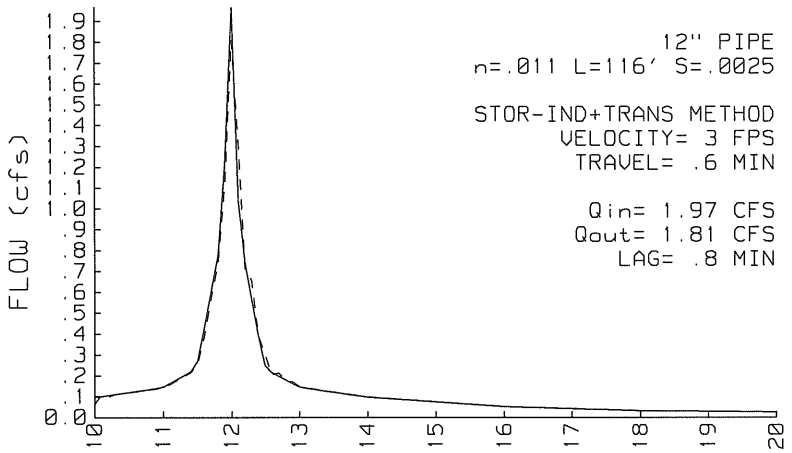
TIME (hours)

SUBCATCHMENT 23 RUNOFF
Catch Basin 4



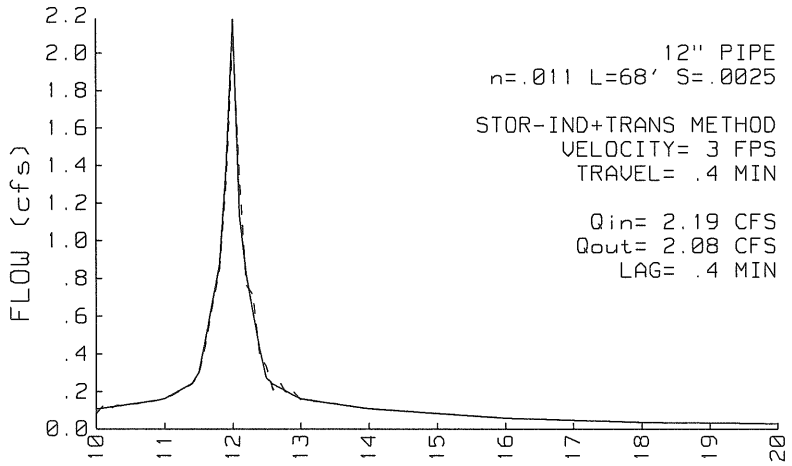
TIME (hours)

REACH 1 INFLOW & OUTFLOW
West Culvert



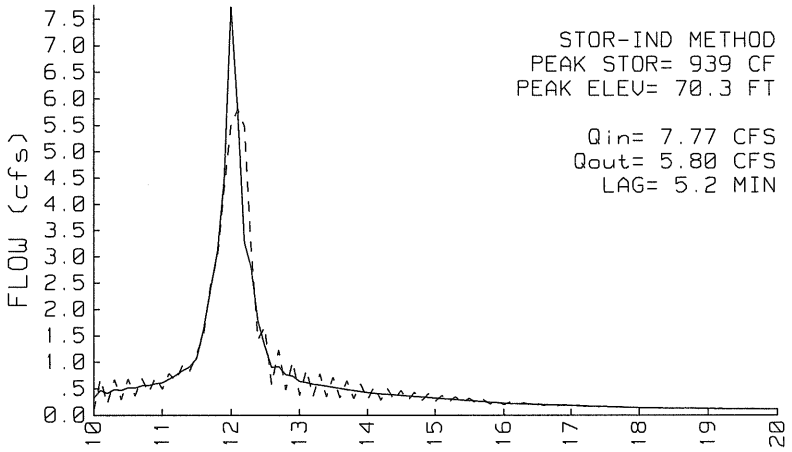
TIME (hours)

REACH 2 INFLOW & OUTFLOW
North Drain

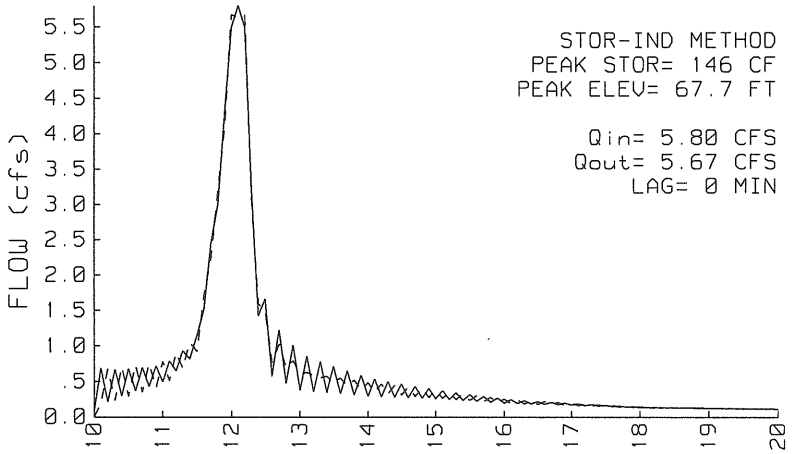


TIME (hours)

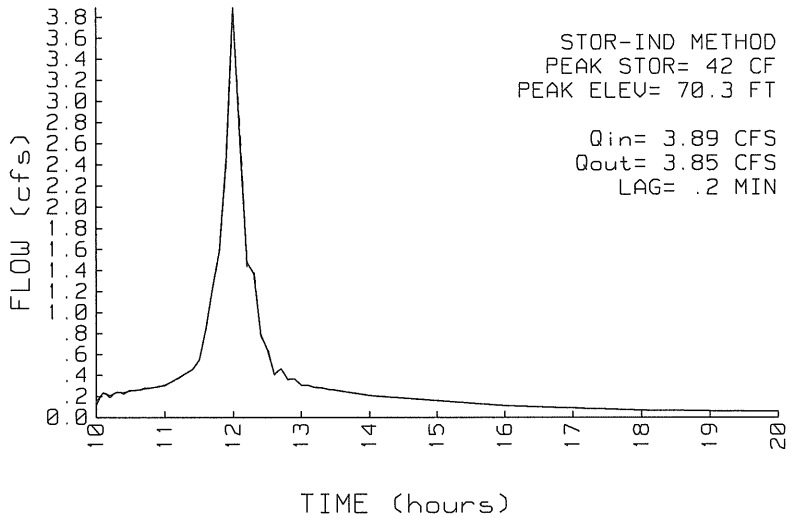
POND 1 INFLOW & OUTFLOW
CB 3



POND 2 INFLOW & OUTFLOW
Stormceptor



POND 3 INFLOW & OUTFLOW
DMH2



From: Gaylen McDougall
To: Kandi Talbot
Date: Tue, Oct 31, 2000 7:48 AM
Subject: Re: Wickes Lumber - Riverside Street

I have reviewed the above plan. The following are my recommendations:

1) Hydts must be within 250' of the stacks of lumber
2) Noncombustible material shall be stored aroung the perimeter of the yard
3) Wickes Lumber shall follow NFPA 230 for storage for other requirements

Mac

>>> Kandi Talbot 10/26 8:45 AM >>>
Just a reminder that you were going to put something in writing for your comments on Wickes Lumber. Thanks.

Planning and Development Department
Lee D. Urban, Director

Planning Division
Alexander Jaegerman, Director

January 4, 2006

Mr. Howard Roberts
Bradco Supply Co.
13 Production Way
Avenel, NJ 07001

RE: 30,790 sq. ft. Warehouse, 238 Riverside Street
ID #2005-0137, CBL #316-B-002

Dear Mr. Roberts:

A requirement of your conditional site plan approval dated October 18, 2005 for the 30,790 sq. ft. warehouse building was "that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit."

One of the recommendations of the Traffic Engineer's memo dated September 8, 2005 was that a $6,500 financial contribution was required toward the traffic improvements for the intersection of Riverside/Warren Avenue.

At this time the financial contribution of $6,500 towards traffic improvements has not been submitted. Attached is an invoice for this amount. Once the financial contribution is received by the City of Portland Planning Division, then the site plan conditions shall be satisfied.

If you have any questions, please do not hesitate to contact me at 874-8901.

Sincerely,

Kandice Talbot

Kandice Talbot
Planner

CC: Sarah Hopkins, Development Review Services Manager
Jay Reynolds, Development Review Coordinator

389 Congress Street • Portland, Maine 04101 • Ph (207) 874-8721 or 874-8719 • Fx 756-8258 • TTY 874-8936

CITY OF PORTLAND
DEPARTMENT OF PLANNING & URBAN DEVELOPMENT

389 Congress Street
Portland, Maine 04101

INVOICE FOR FEES

Application No:	2005-0137	**Applicant:**	Bradco Supply Corp.
Project Name:	Warehouse - Wickes Lumber/Bradco Suppl	**Location:**	238 Riverside Street
CBL:	316 B002	**Development Type:**	Major Site Plan
Invoice Date:	01/05/2006		

Divison/Board: -

Fee Description	Qty	Fee Charge
Miscellaneous Review	1	$6,500.00
		$6,500.00

Total Current Fees:	+	**$6,500.00**
Total Current Payments:	-	**$0.00**
Amount Due Now:		**$6,500.00**

Detach and remit with payment

CBL 316 B002
Application No: 2005-0137
Invoice Date: 01/05/2006
Invoice No: 21836
Total Amt Due: $6,500.00
Payment Amount:

Bill to: Howard Roberts, Bradco Supply
13 Production Way
Avenel, NJ 07001

Make checks payable to the ***City of Portland,*** ATTN: Jennifer Dorr, 4th Floor, 389 Congress Street, Portland, ME 04101.

Rufus Deering Company

383 Commercial St.
P.O. Box 880
Portland, Me. 04104-0880
207/772-6505

Established 1854
Lumber/Building Materials
Email: lumber@rufusdeering.com

November 17, 2000

Mr. Joseph E. Gray, Jr.
Director of Planning and Urban Development
City Hall
389 Congress Street
Portland, Maine 04101

Dear Mr. Gray,

Rufus Deering Company is located at 383 Commercial Street. We are a neighbor of North Atlantic Seafood and the Portland Fish Pier and would like to express our support for North Atlantic's project.

Thank you for the opportunity to express our thoughts.

Sincerely,

William M. Moody, Jr.
President

WMM/wmm
cc: North Atlantic Seafood

Planning & Urban Development
November 2, 2000

Joseph E. Gray Jr.
Director

CITY OF PORTLAND

Phil Lamoureux
Wickes Lumber
238 Riverside Street
Portland, ME 04103

re: 238 Riverside Street

Dear Mr. Lamoureux:

On November 1, 2000, the Portland Planning Authority approved the site plan application for the 7,920 sq. ft. lumber storage building located at 238 Riverside Street with the following conditions:

1. Hydrants must be within 250 ft. of the stacks of lumber.
2. Noncombustible material shall be stored around the perimeter of the yard.
3. Wickes Lumber shall follow NFPA 230 for storage for other requirements.

The proposed site plan was found to be in conformance with the Site Plan Ordinance of the Land Use Code.

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. Requests to extend approvals must be received before the expiration date.

2. A performance guarantee in a form acceptable to the City of Portland and an inspection fee equal to 2.0% 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.)

O:\PLAN\DEVREVW\RIVER238\APPRVLTR.DOC

From: "Steve Bushey" <srbushey@maine.rr.com>
To: "Kandi Talbot" <KCOTE@ci.portland.me.us>
Date: Thu, Oct 26, 2000 10:15 AM
Subject: Re: Wickes Lumber - Riverside Street

I'm all set with the plans
steve
-----Original Message-----
From: Kandi Talbot <KCOTE@ci.portland.me.us>
To: srbushey@maine.rr.com <srbushey@maine.rr.com>
Date: Thursday, October 26, 2000 8:50 AM
Subject: Wickes Lumber - Riverside Street

Just a reminder that I will need you to take a look at the Wickes Lumber plans. Have you been able to located them yet? If not, let me know and I'll get a set over to you. Thanks.

From: Gaylen McDougall
To: Kandi Talbot
Date: Tue, Oct 31, 2000 7:48 AM
Subject: Re: Wickes Lumber - Riverside Street

I have reviewed the above plan. The following are my recommendations:

1) Hydts must be within 250' of the stacks of lumber
2) Noncombustible material shall be stored aroung the perimeter of the yard
3) Wickes Lumber shall follow NFPA 230 for storage for other requirements

Mac

>>> Kandi Talbot 10/26 8:45 AM >>>
Just a reminder that you were going to put something in writing for your comments on Wickes Lumber.
Thanks.

Site Review Pre-Application
Multi-Family/Attached Single Family Dwellings/Two Family Dwelling
Or Commercial Structures and Additions Thereto

In the interest of processing your application in the quickest possible manner, please complete the Information below for Site Plan Review

NOTEIf you or the property owner owes real estate or personal property taxes or user charges on ANY PROPERTY within the City, payment arrangements must be made before permits of any kind are accepted.**

Applicant
Phil Lamoureux

Application Date
October 12, 2000

Applicant's Mailing Address
238 Riverside Street, Portland, ME 04103

Project Name/Description
Wickes Lumber

Consultant / Agent
Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237 26 Main Street
Gray, ME 04039

Address of Proposed Site
238 Riverside Street, Portland, Maine

316 B 007

Applicant/Agent Daytime Telephone and FAX: **(207)657-6910 Telephone**
(207) 657-6912) Fax

Assessor's Reference, Chart#, Block, Lot# **8323 / 281**

Proposed Development (Check all that apply) ☐ New Building ☐ Building Addition ☐ Change of Use ☐ Residential ☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☒ Other (Specify) **Storage shed, resurface lumber storage area**

Shed - 7,920 s.f.	**5.95 acres**	**B-4, Commercial Zone**
Proposed Building Square Footage and/or # of Units	Acreage of Site	Zoning

You must Include the Following with your application:

1) **A Copy of Your Deed or Purchase and Sale Agreement**
2) **7 sets of Site Plan packages containing the information found in the attached sample plans and checklist.**

(Section 14-522 of the Zoning Ordinance outlines the process, copies are available for review at the counter, photocopies are $0.25 per page)

I hereby certify that I am the Owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if an approval for the proposed project or use described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this approval at any reasonable hour to enforce the provisions of the codes applicable to this approval.

Signature of applicant:	**Date:**
Phil Lamoureux	10/12/00

Site Review Fee: Major $500.00 Minor $400.00

This application is for site review ONLY, a Building Permit application and associated fees will be required prior to construction.

Sebago Technics
Engineering Expertise You Can Build On

sebagotechnics.com
One Chabot Street
P.O. Box 1339
Westbrook, Maine
04098-1339
Ph. 207-856-0277
Fax 856-2206

October 4, 2005
04435

Ms. Kandice S. Talbot
Planning & Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

Supplemental Submittal
Wickes Lumber/BRADCO Supply Site Plan Review

Dear Kandi:

This supplemental submission has been prepared to address the staff review comments as noted in the memorandum from Stephen Bushey dated September 6, 2005 and e-mailed from Tom Errico dated September 8, 2005. Our responses are as follows:

Response to Memorandum from Steve Bushey

Site Plan

1. *The Space and Bulk table on the Site Plan suggests that the Maximum impervious surface area on the site will exceed the 80% allowable under the Code. The Zoning officer should review and determine the need for a waiver or other zoning action for these conditions.*

   We understand that Marge Schmuckel has reviewed the plans and concluded they are in compliance with the space and bulk requirements.

2. *The limits of sidewalk and granite curb placement on Riverside Street should be clarified. Do these limits extend to each side of the property?*

   Riverside Street currently has granite curb and bituminous sidewalks. We have identified areas where new granite curbing and sidewalks are needed. These are at the new entrance and where the existing curb cut to the south is to be closed.

3. *The parking count is proposed to be 87 spaces. Is at least a third handicap space required to meet ADA compliance?*

   We have revised the handicap space requirements to have the appropriate number per ADA compliance.

4. *The site plan should denote the snow storage locations and the applicant should provide evidence of their general snow storage and removal procedures.*

Snow storage areas have been identified on the site plan. Snow is typically stockpiled on site in locations that are not used for lumber storage or vehicle parking. As this accumulates and overflows into needed space, it is hauled off site by a private hauler.

Grading Plan

1. *The grading plan outlines a very tight development area that will require particular care and attention during construction to insure positive drainage paths and minimal ponding areas. We suggest additional spot grades be identified on the drawing to verify drainage paths directions.*

We have added spot grades and drainage flow arrows to better define the drainage patterns on site.

2. *In general, runoff is intended to sheet flow towards the sides of the property where existing drainage ditches will convey flow towards the rear of the site (north side) and the front of the site (south side). It appears that the swale on the north side of the site is actually located on the abutting property; therefore we recommend that a drainage easement be put in place to insure continued availability of this conveyance system.*

The applicant is currently pursuing the possibility of obtaining a drainage easement with Mack Louis Company, Inc. If and when an easement is obtained, this document will be forwarded to the City. We would like to question the requirement for this easement. Drainage from this site has historically flowed this way and been conveyed through the abutter's property by the existing swales. Should the abutter choose to develop their site, they would need to address drainage flows from off-site conditions and redirect it accordingly. This would hold true for any development. We have not experienced the requirement for obtaining downstream easements for existing flows.

3. *The Portland Water District should sign off on the extension of the 8" water main for sprinkler service to the new building. The Fire Department should review for the need of a new fire hydrant on the property given the building's distance from Riverside Street.*

We have included a capacity letter from the Portland Water District.

Stormwater Management Study

1. *The stormwater management study and computations document that post development runoff peak flow conditions will not exceed predevelopment conditions at three points of analysis. Our submission materials did not contain the pre and post development watershed maps therefore we did not specifically review these aspects. It appears that the peak runoff rates are slightly decreased in the post development condition simply due to an overall decrease in impervious area. Based on the site plans it is difficult to identify the exact areas where this occurs other than at the front of the site where some*

landscaping is to be installed. Towards the rear of the site it appears that a greater amount of paved area will be installed, replacing existing gravel. We recommend that evidence be provided verifying the capacity of the ditches to each side of the property since these are the primary conveyance systems. Each ditch appears to be relatively shallow in depth and slope; therefore their true capacity may be limited.

Watershed maps were included in our original submission to the City. Additional copies are enclosed for Deluca-Hoffman's use. The capacities of the ditches were analyzed using HydroCAD computer software. Hydrologic characteristics were input as a reach and calculations were performed for a 10-year storm event. The results of the HydroCAD calculations show that the peak rate of runoff will be less than the ditch capacity at full flow for a 10-year storm event. See attached calculations.

2. *The stormwater report has not provided evidence of any measures for providing stormwater runoff treatment as is required by the City's Technical Standards. The site's drainage system relies on sheet flow of runoff off hard surfaces and conveyance by the ditches to each side. The report suggests that these grassed swales will also provide water quality treatment. Generally, the swales will provide little treatment to the runoff and may be prone to clogging with excessive vegetation over time if not properly maintained. The swales will also convey little to none of the runoff from the front parking area therefore providing no treatment of runoff. We suggest the engineer explore the potential to install Low Impact Development (LID) measures such as a Bio-Retention cell along the parking lot pavement edges. The DEP is currently recommending greater consideration be given this approach to water quality treatment. Since landscaping is already proposed at the front of the site, it may be possible to install the bio-retention cell(s) to treat smaller, routine storm events.*

We have designed bio-retention basins along the front of the parking lot to provide treatment for this watershed. We have also revised our landscaping plan to incorporate species tolerant of wet conditions.

The drainage ditches on the southerly property limit will be revegetated and check dams will be constructed to reduce runoff velocity, providing water quality treatment equivalent to that of a grassed swale.

The bio-retention areas in front of the property are designed to provide water quality treatment to the first flush of runoff from the front parking area. Stormwater runoff is directed from the parking lot in sheet flow to a grassed buffer that will reduce velocity and filter sediments from the runoff. Runoff then enters the planting bed, which is graded to a depth of six inches to allow time for the ponded water to infiltrate through the organic topsoil. The organic topsoil layer provides a medium that degrades petroleum based solvents and other hydrocarbons. The treated runoff further infiltrates through a layer of crushed stone and is discharged via an underdrain that outlets to the culvert across Riverside Street. In larger storm events, water that has ponded over the underdrain will rise up through the overflow basin and be redirected to the planting bed.

Erosion and Sediment Control

1. *The plans appear to provide adequate information pertaining to erosion control during construction with details and narrative.*

   No comment required.

2. *Riprap sizing should be provided for the area between the proposed concrete pads on the north side of the site.*

   Riprap has been sized.

Details

1. *The plans contain sufficient details including lighting photometrics.*

   Per the request of the Planning Board and staff, we have added house side shields to light fixtures located near the property line to minimize light spill over onto abutting properties. A revised photometric plan is attached.

Response to E-mail from Tom Errico

1. *The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provided a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue intersection should be documented.*

   We are currently working with Jack Murphy, the City, and the utility companies to better define what these improvements will be. We will supply a more detailed intersection modification plan to you under separate cover.

2. *The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lanes. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. I would also ask that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.*

   We have added Sheet 9 to our plan set which shows truck movements through the site and entrance onto Riverside Street. This plan indicates the need for such a wide entrance. The closing of the southern curb cut severely limits how trucks can enter the site and maneuver to the rear of the property. This wide curb cut will allow these maneuvers to occur without impeding off-site traffic. Truck deliveries are received from 7:00 AM to 4:00 PM, Monday through Friday. On average, they have ten deliveries a day. This will vary due to the seasonality of their business. The types of trucks entering and existing range from tractor trailers to standard vans.

3. *The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.*

We understand through discussions with Tom Errico that no formal plan has been prepared by the City that indicates the limits of the widening. Currently, the Riverside right-of-way is limited in width in this location and we anticipated that additional right-of-way acquisition would be required for a future widening. Existing power poles and signalization equipment are already at or near the right-of-way line, and we would propose to place any new equipment as close to the right-of-way line as possible. We will explore the installation of junction boxes for signals to allow for ease of relocation of fixtures in the future.

4. *The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.*

The applicant agrees to make a monetary contribution of $6,500.00 towards the upgrade of the Riverside Street/Warren Avenue intersection. We request this payment be made prior to issuance of a building permit.

Neighborhood Meeting

Sebago Technics sent notices of a neighborhood meeting to abutters within 500 feet of the property and all individuals on the Citizen List as provided by the Planning Department. Notices were sent out via regular mail 7 days prior to the meeting at 5:00 PM on Tuesday, September 27, 2005.

The meeting was held at Sebago Technics' office at 1 Chabot Street in Westbrook with the following representatives present:

Stephen G. Doe	Sebago Technics, Inc.
Howard "Skip" Roberts	BRADCO Supply (Applicant)
David Fagnaunt	BRADCO Supply (Portland Mgr.)
Phillip Morin	PM Construction (General Contractor)

No members of the public attended or contacted Sebago Technics, and we closed the meeting at 6:00 PM. Attached is a copy of the notice.

I trust this supplemental information sufficiently addresses staff concerns and we can proceed with the scheduled October public hearing and final site plan approval with the Planning Board.

If you have questions on this material, please call me.

Sincerely,

SEBAGO TECHNICS, INC.

Stephen G. Doe, R.L.A.
Landscape Architect

SGD:sgd/kn/jc
Enc.

cc:	Howard "Skip" Roberts	BRADCO Supply
	David Fagnaunt	BRADCO Supply
	Les Friedman	Wickes Lumber
	Phillip Morin	PM Construction
	Tom Errico	Wilber Smith Associates
	Steve Bushey	DeLuca-Hoffman

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

CUSTOMER SERVICE
OFFICE HOURS
8:30 A.M. - 4:30 P.M.

September 28, 2005

Steve Doe, R.L.L.
Sebago Technics
PO Box 1339
Westbrook, Me. 04098

Re: 238 Riverside St.-Portland

Steve:

This letter is to confirm there should be an adequate supply of clean and healthful water to serve the needs of the proposed warehouse building at 238 Riverside St. in Portland. Checking District records, I find there is a 12"CI water main on the west side of Riverside St. as well as a water hydrant located in front of the property.

Service records for 238 Riverside indicate there is an 8" fire service and a 1" domestic water service tapped off the 8" fire service. See enclosed service record.

The current data from the nearest hydrant indicates there should be adequate capacity of water to serve the needs of your proposed project.

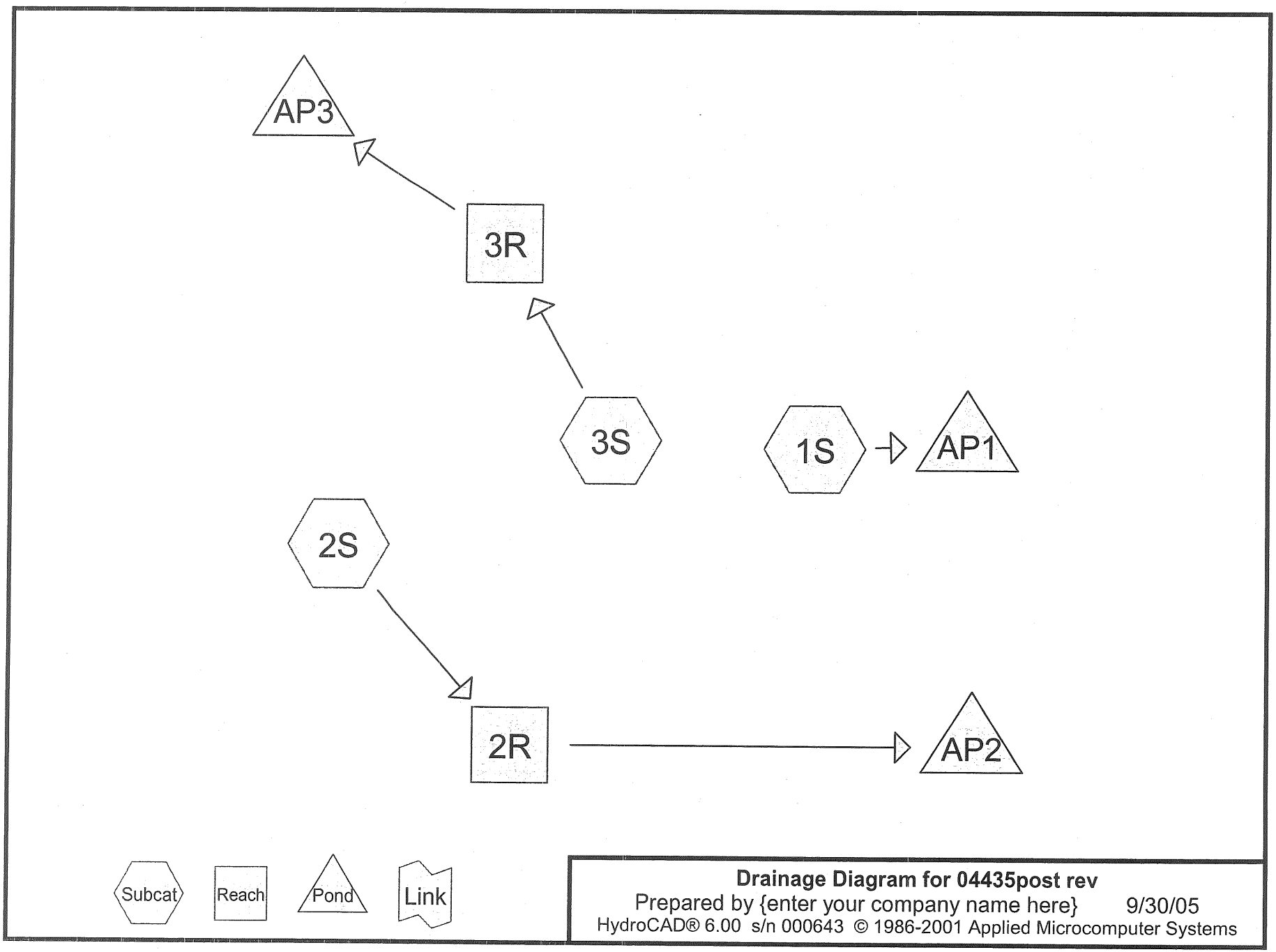
Hydrant Location: Riverside St. 300' north of Campbell St.
Hydrant # 1264
Static pressure = 82 PSI
Residual pressure = 74 PSI
Flow = 1393 GPM
Last Tested = 9/9/2004

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

Sincerely,
Portland Water District

Jim Pandiscio
Means Coordinator

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.761.8310 FAX: 207.879.5837 E-MAIL: CUSTOMERHELP@PWD.ORG WEB: WWW.PWD.ORG



Drainage Diagram for 04435post rev

Prepared by {enter your company name here} 9/30/05

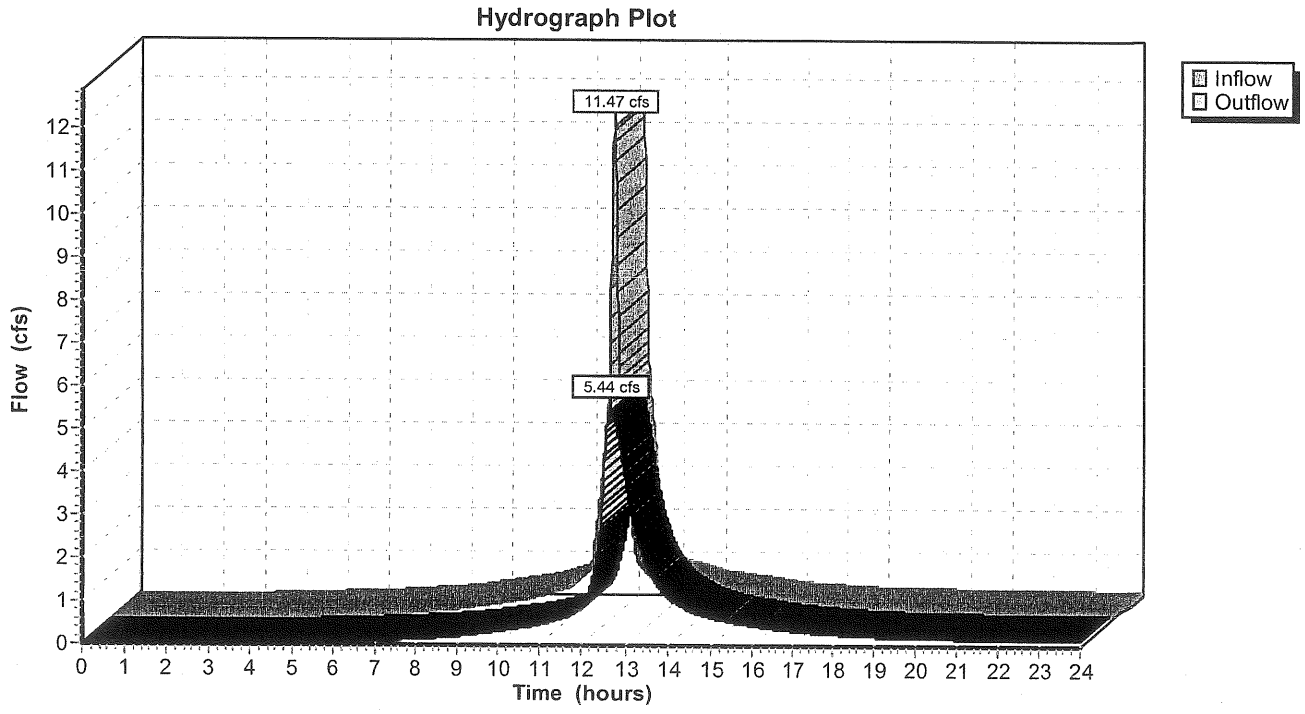
Reach 2R: Drainage Ditch (South)

Inflow = 11.47 cfs @ 12.07 hrs, Volume= 0.853 af
Outflow = 5.44 cfs @ 12.65 hrs, Volume= 0.837 af, Atten= 53%, Lag= 34.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.6 fps, Min. Travel Time= 26.4 min
Avg. Velocity = 0.3 fps, Avg. Travel Time= 62.0 min

Peak Depth= 1.42'
Capacity at bank full= 11.89 cfs
2.00' x 2.00' deep channel, n= 0.150 Length= 965.0' Slope= 0.0050 '/'
Side Slope Z-value= 3.0 '/'

Reach 2R: Drainage Ditch (South)



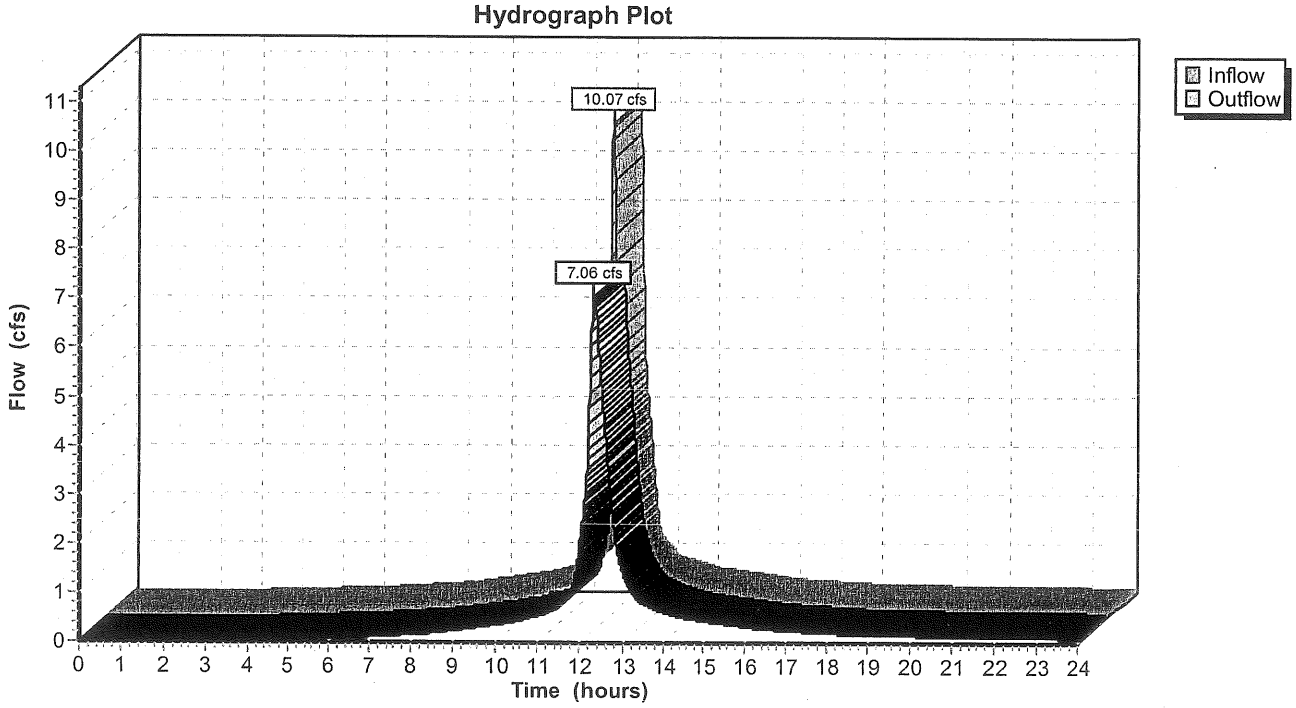
Reach 3R: Drainage Ditch North

Inflow = 10.07 cfs @ 12.07 hrs, Volume= 0.749 af
Outflow = 7.06 cfs @ 12.31 hrs, Volume= 0.743 af, Atten= 30%, Lag= 14.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.7 fps, Min. Travel Time= 10.2 min
Avg. Velocity = 0.3 fps, Avg. Travel Time= 26.5 min

Peak Depth= 1.60'
Capacity at bank full= 11.89 cfs
2.00' x 2.00' deep channel, n= 0.150 Length= 400.0' Slope= 0.0050 '/'
Side Slope Z-value= 3.0 '/'

Reach 3R: Drainage Ditch North



Public Notice
Neighborhood Meeting

You are invited to a presentation and discussion of the following Site Plan Proposal:

Bradco Supply/ Wickes Lumber Co.	238 Riverside Street Approx. 30,791 SF warehouse building in the rear of the site, paving of lot, grading, landscaping, and general site improvements.
Date:	Tuesday, September 27, 2005
Time:	5:00 PM to 6:00 PM
Location:	Sebago Technics, Inc. Conference Room One Chabot Street Westbrook, Maine ☎ 856-0277, Attn: Steve Doe

Planning and Development Department
Lee D. Urban, Director

Planning Division
Alexander Jaegerman, Director

January 4, 2006

Mr. Howard Roberts
Bradco Supply Co.
13 Production Way
Avenel, NJ 07001

RE: 30,790 sq. ft. Warehouse, 238 Riverside Street
ID #2005-0137, CBL #316-B-002

Dear Mr. Roberts:

A requirement of your conditional site plan approval dated October 18, 2005 for the 30,790 sq. ft. warehouse building was "that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit."

One of the recommendations of the Traffic Engineer's memo dated September 8, 2005 was that a $6,500 financial contribution was required toward the traffic improvements for the intersection of Riverside/Warren Avenue.

At this time the financial contribution of $6,500 towards traffic improvements has not been submitted. Attached is an invoice for this amount. Once the financial contribution is received by the City of Portland Planning Division, then the site plan conditions shall be satisfied.

If you have any questions, please do not hesitate to contact me at 874-8901.

Sincerely,

Kandice Talbot

Kandice Talbot
Planner

CC: Sarah Hopkins, Development Review Services Manager
Jay Reynolds, Development Review Coordinator

389 Congress Street • Portland, Maine 04101 • Ph (207) 874-8721 or 874-8719 • Fx 756-8258 • TTY 874-8936

CITY OF PORTLAND

DEPARTMENT OF PLANNING & URBAN DEVELOPMENT

389 Congress Street
Portland, Maine 04101

INVOICE FOR FEES

Application No:	2005-0137	**Applicant:**	Bradco Supply Corp.
Project Name:	Warehouse - Wickes Lumber/Bradco Suppl	**Location:**	238 Riverside Street
CBL:	316 B002	**Development Type:**	Major Site Plan
Invoice Date:	01/05/2006		

Divison/Board: -

Fee Description	Qty	Fee Charge
Miscellaneous Review	1	$6,500.00
		$6,500.00

Total Current Fees:	+	**$6,500.00**
Total Current Payments:	-	**$0.00**
Amount Due Now:		**$6,500.00**

Detach and remit with payment

CBL 316 B002
Application No: 2005-0137
Invoice Date: 01/05/2006
Invoice No: 21836
Total Amt Due: $6,500.00
Payment Amount:

Bill to: Howard Roberts, Bradco Supply
13 Production Way
Avenel, NJ 07001

Make checks payable to the *City of Portland,* ATTN: Jennifer Dorr, 4th Floor, 389 Congress Street, Portland, ME 04101.

EASEMENT DEED

KNOW ALL MEN BY THESE PRESENTS, that **SEGAL ASSOCIATES OF NEW JERSEY, L.P.,** a New Jersey limited partnership with a mailing address of 13 Production Way, Avenel, NJ 07001, hereby grants to the **CITY OF PORTLAND,** a Maine Municipal Corporation located in Portland, Cumberland County, State of Maine, whose mailing address is 389 Congress Street, Portland, ME 04101,

A certain easement situated on the westerly side of Riverside Street, in the City of Portland, County of Cumberland, State of Maine being depicted on a plan of land titled "Site Plan of Wickes Lumber/Bradco Supply Company" dated through October 19, 2005 by Sebago Technics, Inc., said easement being more particularly bounded and described as follows:

Beginning at a point in the westerly line of said Riverside Street, said point being N 03°-26'-48" W, 13.55 feet from 6-inch square granite monument found;

Thence S 90°-00'-00" W, passing through land of the Grantor, a distance of 24.28 feet to a point;

Thence N 00°-00'-00" E, passing through said land of the Grantor, a distance of 38.73 feet to a point;

Thence N 90°-00'-00" E, passing through said land of the Grantor, a distance of 23.67 feet to a point in the westerly side of said Riverside Street;

Thence generally southerly on a curve to the left having a radius of 629.77 feet, a central angle of 03°-31'-30", on a chord bearing and distance of S 00°-54'-05" E, 38.74 feet, by and along said Riverside Street, a distance of 38.74 feet to the point of beginning.

Meaning and intending to describe a certain easement containing 921 square feet, more or less, being depicted on a plan of land titled "Site Plan of Wickes Lumber/Bradco Supply Company" dated through October 19, 2005 by Sebago Technics, Inc.

The easement described herein is for the purpose of construction, maintenance, repair and replacement of a proposed traffic signal pole, together with aboveground and underground utilities to service said proposed traffic signal pole as necessary.

The bearings referenced herein are based upon Magnetic North 1989.

Said easement is intended to burden the land of the Grantor as described in a Quitclaim Deed from Bradco Realty Corp. to Segal Associates of New Jersey, L.P. dated June 20, 2005 and

recorded in the Cumberland County Registry of Deeds in Book 22850, Page 332 and to benefit the Grantee, its successors and assigns forever. Said easement shall run with the land.

Witness my hand and seal this 9th day of JAN., 2006.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF:

SEGAL ASSOCIATES OF NEW JERSEY, L.P.

By: BARRY SEGAL
Its General Partner

STATE OF New Jersey
COUNTY OF Middlesex

JAN. 9, 2006

Personally appeared the above-named Barry Segal, Gen. Partner of **SEGAL ASSOCIATES OF NEW JERSEY, L.P.** and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity.

Before me,

Notary Public/~~Attorney-at-Law~~
Donna A. Matulewicz
A Notary Public of New Jersey
commission expires November 15, 2010

Printed Name

Infrastructure Financial Contribution Form

Obtain an Account Number from Paul Colpitts, Chief Acct., (ext. 8665) prior to the distribution of this form.

Amount $ 6,500.00 **City Account Number:** 710-0000-236-49-00

Project Name: Warehouse Bldg

Project Job Number: 2005-0137
(from Site Plan Application Form)

Project Location: 238 Riverside Street

Project Description: 30,790 sq.ft. warehouse - upgrade of the Riverside St/Warren Ave. intersection for traffic improvements.
(attach approval letter)

Applicant's Name: Bradco Supply Co.

Applicant's Address: 13 Production Way, Avenel, NJ 07001

Expiration:

☐ If funds are not expended or encumbered for the intended purpose by _____, funds, or any balance of remaining funds, shall be returned to contributor within six months of said date.

☑ Funds shall be permanently retained by the City.

☐ Other (describe in detail) _____

Form of Contribution:

☐ Escrow Account

☑ Cash Contribution

Interest Disbursement: Interest on funds to be paid to contributor only if project is not commenced.

Terms of Draw Down of Funds: The City shall periodically draw down the funds via a payment requisition from Public Works, which form shall specify use of City Account #-shown above.

Date of Form: 1/10/06
Planner: Kandice Talbot **Person Completing Form:** Kandice Talbot

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The original form, copy of the check and any attachments shall be given to Debbie Marquis.

- The original check, copy of the form and any attachments shall be given to Jennifer Dorr.
- A copy of this form, the check and any attachments shall also be given to the following people:

Paul Colpitts (Finance), Peggy Axelson (Finance), Alexander Jaegerman (Planning), Planner for project, Michael Bobinsky (Public Works), Eric Labelle (Public Works), Penny Littell (Corporation Counsel), Applicant

December 22, 2005

Mr. Howard Roberts
Bradco Supply Co.
13 Production Way
Avenel, NJ 07001

RE: 30,790 sq. ft. Warehouse, 238 Riverside Street
ID #2005-0137, CBL #316-B-002

Dear Mr. Roberts:

On October 18, 2005, the Portland Planning Board voted unanimously (4-0, Anton, Lowry and Silk absent) to approve the site plan for the proposed 30,790 sq. ft. Warehouse building to be located at 238 Riverside Street. The approval was granted for the project with the following conditions:

i. that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit.

ii. that the developer provide an easement for any new signalization equipment which is not located within the City right-of-way, to allow the City to maintain the equipment. An executed easement shall be submitted prior to issuance of a building permit.

iii. that the City Arborist review and approve the landscape plan prior to issuance of a building permit.

iv. that the developer install a fire hydrant to be reviewed and approved by the Fire Department.

The approval is based on the submitted site plan and the findings related to site plan and subdivision review standards as contained in Planning Report #62-05, which is attached.

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

1. Where submission drawings are available in electronic form, the applicant shall submit any available electronic Autocad files (*.dwg), release 14 or greater, with seven (7) sets of the final plans.

2. A performance guarantee covering the site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

3. 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. Requests to extend approvals must be received before the expiration date.

4. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

5. Prior to construction, a pre-construction 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 pre-construction meeting.

6. 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.)

7. The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is 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 Kandice Talbot at 874-8901.

Sincerely,

Lee Lowry III, Chair
Portland Planning Board

cc: Lee D. Urban, Planning and Development Department Director
Alexander Jaegerman, Planning Division Director

O:\PLAN\DEVREVW\RIVER238\SITEPLANAPPROVALLETTER10-18-05.DOC

Sarah Hopkins, Development Review Services Manager
Kandice Talbot, Planner
Jay Reynolds, Development Review Coordinator
Marge Schmuckal, Zoning Administrator
Inspections Division
Michael Bobinsky, Public Works Director
Traffic Division
Eric Labelle, City Engineer
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Greg Cass, Fire Prevention
Assessor's Office
Approval Letter File

From: "Tom Errico" <terrico@wilbursmith.com>
To: "Kandi Talbot" <kcote@portlandmaine.gov>
Date: 09/08/2005 10:11:13 AM
Subject: Bradco Supply Corp. -- Riverside Street

Kandi-

I have reviewed the Site Plan prepared by Sebago Technics and the Traffic Study prepared by Gorrill-Palmer Consulting Engineers, Inc. and offer the following comments.

1. The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provided a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue intersection should be documented.
2. The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lanes. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. I would also ask that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.
3. The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.
4. The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.

Please contact me if you have any questions.

Best Regards,

Thomas A. Errico, P.E.

Senior Transportation Engineer

Wilbur Smith Associates

59 Middle Street

THE BACK OF THIS CHECK CONTAINS A SECURITY MARK - DO NOT ACCEPT WITHOUT HOLDING AT AN ANGLE TO VERIFY SECURITY MARK

Bradco Supply Corporation
Control Disbursement Acct #2
3 Production Way
Avenel, NJ 07001
(732) 382-3400 FAX (732) 382-6577

North Carolina

531 NC

DATE	CHECK NO	AMOUNT
01/09/06	244344	$*******6,500.00

Six Thousand Five Hundred and no/100********************************

PAY TO THE ORDER OF

CITY OF PORTLAND
ATTN: JENNIFER DORR
389 CONGRESS ST. 4TH FLOOR
PORTLAND, ME 04101

AUTHORIZED SIGNATURE

⑈244344⑈ ⑆053107989⑆ 000480152633⑈

REPORT OF RECEIPTS

64877

To the Director of Finance, City of Portland, Maine

From the Department of Planning Date 1-10-06

Source of Receipts For The Period of

HTE Description - up to 19 characters (_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _)	Amount	Revenue /Expenditure Code Project #
Land Supply - Ck. 244344 (mailed) #2005-0137 ~~Afford~~ Infrastructure ~~Reflow~~	6,500.00	710-0000-236-47-00
Keith Dunn - Ck. 1477 (mailed) #2003-0220 Insp. fee	22.50	OC
Habitat Landcommunity - Ck. 3267 (mailed) #2005-0121 Eng. fee	240.00	04

Totals
Notes/Wire Transfer $
Total Credit Card Receipts $
Total Direct Deposits $
Total Checks $
Total Cash $

Total Amount 6762.50

The undersigned certifies that this is a true, complete report of all collections made since the date of their last report.

Receipted This Day

CITY OF PORTLAND
PAID
2005 JAN 12 P 1:14
THANK YOU

Authorized Agent [signature] Phone # 8719

Forward all copies to the Treasury Department where they will be receipted and returned.

Public Notice
Neighborhood Meeting

You are invited to a presentation and discussion of the following Site Plan Proposal:

Bradco Supply/ Wickes Lumber Co.	238 Riverside Street Approx. 30,791 SF warehouse building in the rear of the site, paving of lot, grading, landscaping, and general site improvements.
Date:	Tuesday, September 27, 2005
Time:	5:00 PM to 6:00 PM
Location:	Sebago Technics, Inc. Conference Room One Chabot Street Westbrook, Maine ☎ 856-0277, Attn: Steve Doe

PLANNING REPORT #62-05

WAREHOUSE BUILDING
238 RIVERSIDE STREET
SITE PLAN REVIEW
BRADCO SUPPLY CORP., APPLICANT

Submitted to:
Portland Planning Board
Portland, Maine

Submitted by:
Kandice Talbot, Planner

October 13, 2005

I. INTRODUCTION

Bradco Supply Corp. is requesting major site plan review of a proposal to develop a 30,790 sq. ft. warehouse on the Wickes Lumber site located at 238 Riverside Street. The proposed warehouse is to be built to store product.

The property is zoned B-4 Commercial Business and is approximately 5.95 acres in size.

The applicant is proposing a one (1) story, 30,790 sq. ft. warehouse at the rear of the property. Currently there is parking and an existing 30,452 sq. ft. building on the site. The proposal is to be reviewed for compliance with the site plan standards of the land use code.

13 notices were sent to neighborhood property owners. A neighborhood meeting was held, however no citizens attended the meeting. Neighborhood meeting information is included as Attachment 11 for your review.

II. STAFF REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of the site plan ordinance. Staff comments are highlighted in this report.

Zoning

The B-4 zoning allows for a maximum impervious surface ratio of 80%. The site currently has 86% impervious surface and the proposed impervious surface is 85%. Although the impervious surface is more than the allowed impervious surface, because the developer is lessening the impervious surface, not increasing it, this is acceptable. The Zoning Administer has reviewed and approved the plans and a memo is included as Attachment 10.

III. SITE PLAN REVIEW

1/2. Traffic

Vehicular circulation patterns between customers and delivery trucks will be separated. All traffic will enter at the signalized intersection across from Home Depot. The southern curb cut will be closed and the northern curb cut reconfigured to align with Home Depot. The intersection signalization will also be modified.

Customers will have access to the front parking lot and make supply pickups to the south of the Wickes building. Delivery vehicles will travel to the north of the Wickes building and travel to the rear storage yard. Trucks will circulate in the yard, drop off supplies at both buildings and yard area, and exit via the northern truck route.

The site currently has 55 parking spaces. The applicant is proposing 32 new parking spaces for a total of 87 parking spaces. The Zoning Administrator has reviewed the parking and finds it adequate.

A traffic study has been submitted and is included as Attachment 4. Tom Errico, Traffic Engineer, has reviewed the traffic study and recommended the following (Attachment 9):

a. The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provide a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue should be documented.

b. The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lane. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. The Traffic Engineer asks that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.

c. The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.

d. The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit Union and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.

The developer has addressed the Traffic Engineer's comments, along with an agreement of the monetary contribution. However, new plans have not been submitted showing traffic improvements. The developer has stated that they are proposing to install signalization as close to the right-of-way as possible, so that in the future, when Riverside Street is widened, the signalization will be within the right-of-way. Until such time, however, an easement will be required to allow the City to maintain any signalization equipment on the Bradco Corp. property. Potential conditions of approval are:

- that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit.

- that the developer provide an easement for any new signalization equipment which is not located within the City right-of-way, to allow the City to maintain the equipment. An executed easement shall be submitted prior to issuance of a building permit.

3. Bulk, Location, Height of Proposed Buildings

The proposed structure will be a typical metal-framed building. Elevations of the building are included as Attachment 7.

4. Sewers, Stormdrains, Water

The proposed building will be entirely warehouse use with no office or restroom facilities. This building will be serviced with underground electric, gas, and an 8" fire service. These services will originate from on-site services located at the Wickes building.

A capacity letter from the Portland Water District for the extension of the 8" water main for sprinkler service to the new building is included as Attachment 11.

5. Landscaping and Existing Vegetation

The applicant is proposing additional landscaping along Riverside Street to shield cars in the parking lot and to establish street trees. Some excess pavement areas in the front yard are designated for removal so plantings and lawn areas can be established. A new landscape island is proposed in the parking lot near the entrance drive to direct traffic and improve the visual appearances of the site from the public way. The City Arborist is currently reviewing the landscape plan. A potential condition of approval is:

- that the City Arborist review and approve the landscape plan prior to issuance of a building permit.

6. Soils and Drainage

A stormwater management plan has been prepared and is included as Attachment 6. This plan indicates no increase in runoff from the site.

The drainage ditches on the north and south sides of the property will be revegetated and check dams will be constructed to reduce the velocity of the stormwater. This is proposed to provide water quality treatment equivalent to that of a grassed swale.

The Development Review Coordinator has reviewed the plans and has provided comments, which are included as Attachment 8. The DRC had concerns regarding tight development area that will require particular care and attention during construction to insure positive drainage paths and minimal ponding areas. It was recommended that additional spot grades be identified on the drawing to verify drainage path directions.

As, stated previously, the drainage is intended to sheet flow towards the sides of the property where existing drainage ditches will convey flow towards the rear of the site and the front of the site. It appears that the swale on the north side of the site is actually located on the abutting property and will require a drainage easement be put in place to insure continued availability of this conveyance system.

The DRC had also recommended that evidence be provided verifying the capacity of the ditches to each side of the property and evidence of stormwater runoff treatment.

The applicant has submitted revised plans, which the DRC has reviewed and approved. The DRC's memo is included as Attachment 12.

7. Exterior Lighting

The site will be upgraded with site lighting. A photometric plan and lighting catalogue cuts have been submitted. The applicant is proposing both pole and building mounted lights, which will be shielded fixtures. The applicant has also added house side shields to light fixtures located near the property line to minimize light spill over onto abutting properties.

8. Fire

Sprinkler service will be provided by the development. There is also a hydrant proposed in the vicinity of the proposed building.

IV. STAFF RECOMMENDATION

This project, as proposed meets the Site Plan ordinance. Staff is recommending that the Planning Board approve this proposal with conditions.

V. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report 62-05 relevant to standards for site plan regulations, and other findings as follows:

A. That the plan [is/is not] in conformance with the site plan standards of the land use code.

i. that the Traffic Engineer's comments dated September 8, 2005 be addressed, and reviewed and approved, prior to issuance of a building permit.

ii. that the developer provide an easement for any new signalization equipment which is not located within the City right-of-way, to allow the City to maintain the equipment. An executed easement shall be submitted prior to issuance of a building permit.

iii. that the City Arborist review and approve the landscape plan prior to issuance of a building permit.

Attachments:

1. Applicant's Submittal Letter dated June 23, 2005
2. Deeds
3. Letter of Financial Capability
4. Traffic Report Narrative
5. Lighting Catalogue Cuts
6. Stormwater Management Narrative
7. Building Elevations
8. DRC's Memo dated September 6, 2005
9. Traffic Engineer's Memo dated September 8, 2005
10. Zoning Administrator's Memo dated September 13, 2005
11. Applicant's Submittal dated October 4, 2005
12. DRC's Memo dated October 13, 2005
13. Plans

Sebago Technics
Engineering Expertise You Can Build On

sebagotechnics.com
One Chabot Street
P.O. Box 1339
Westbrook, Maine
04098-1339
Ph. 207-856-0277
Fax 856-2206

Att. 1

June 23, 2005
04435

Ms. Sarah Hopkins
Planning Department
City of Portland
389 Congress Street
Portland, ME 04101

Major Development Site Plan Application – Bradco Supply Corp., 238 Riverside Street

Dear Sarah:

On behalf of Bradco Supply Corp., I am pleased to submit the attached site plan application and supporting documents for a proposed 30,790 square foot warehouse building on the Wickes Lumber site at 238 Riverside Street, Tax Map 316-B-2. Wickes Lumber is a division of Bradco Supply.

Bradco Supply is proposing to consolidate their existing operations on Bishop Street to this location. They currently lease the Bishop Street facility. The Wickes and Bradco operations will occupy the current Wickes building, and the new warehouse would be built to store product.

A summary of the site improvements follows:

1. Vehicular circulation patterns between customers and delivery trucks will be separated. All traffic will enter at the signalized intersection across from Home Depot. The southern curb cut will be closed and the northern one reconfigured to align with Home Depot. The intersection signalization will be modified by John Murphy, PE. Customers will have access to the front parking lot and make supply pickup to the south of the Wickes building. This is how customer pickup currently functions. Delivery vehicles will now travel to the north of the Wickes building and travel to the rear storage yard via the truck route designated on the site plan. Trucks can circulate in the yard, drop off supply at both buildings and yard area, and exit via the northern truck route.

2. The existing gravel storage yard in the rear and north of the Wickes Lumber building will be regraded and paved with bituminous pavement. This lot is currently very flat and poorly drained, limiting its access in wet weather.

3. The site will be upgraded with site lighting. Currently, there are only inefficient building mounted lights which make it unsafe for customers and employees. The front parking lot will be upgraded to conform to City standards, thereby providing safe lighting levels for customers. This will be accomplished with both pole and building mounted lights. The storage yard will be lighted to a lesser degree appropriate for the intended use. This will

1a

also consist of pole and building mounted lights. All lights will be shielded fixtures. We have provided a site photometrics plan and catalog cut sheet on the fixtures.

4. The rear building will be entirely warehouse use with no office or restroom facilities. This building will be serviced with underground electric, gas, and an 8" fire service. These services will originate from on-site services located at the Wickes building.

5. The two existing pole storage sheds located behind the Wickes Lumber building will be removed and replaced with two new three-sided storage sheds along the northern property line. This is to improve site circulation and provide a more efficient use of the storage yard.

6. Landscaping has been added along Riverside Street to shield cars in the parking lot and to establish street trees. Some excess pavement areas in the front yard are designated for removal so plantings and lawn areas can be installed. A new landscape island is proposed in the parking lot near the entrance drive to direct traffic and improve the visual appearance of the site from the public way.

7. A staging area for assembly of deliveries to job sites is relocated to the rear of the site near the truck route to avoid conflicts with customers in the yard area.

8. A 20 foot wide paved fire lane is established along the south side of the new building. This will be maintained year round.

9. A stormwater management plan has been prepared for the project which indicates no increased runoff will be generated from the site. To improve water quality, we will be paving the gravel lot to decrease silt runoff into the side swales. The existing ditch along the southern property line will be reshaped, sodded and stone check dams installed to help filter out sediment.

In accordance with the submission requirements for a major site plan, I offer the following plans and supporting documents for your review and consideration:

A. Completed application form, checklist, and application fee of $500.00.

B. An ALTA/ACSM land title boundary survey of the property performed by ASC National, LLC.

C. Site plan of the property at a scale of 1"=40' showing existing and proposed buildings, parking areas, travel lanes, storage areas for lumber, staging areas, fencing, and other pertinent site improvements.

D. Grading & Utility Plan at a scale of 1"=40' showing existing and proposed grades, building finish floor elevation, utilities, site lighting, erosion and sedimentation control measures, construction notes, and existing fire hydrant on Riverside Street.

E. A landscape plan at a scale of 1" = 40' showing proposed plantings, quantities and installation details and notes.

F. Construction Details for Site Improvements.

16

G. We have had Tom Gorrill of Gorrill-Palmer Engineers prepare a traffic impact study. This is attached in Section 5.

H. Building elevations have been prepared by Grant Hays Associates. These are included in Section 8.

I. Lighting Photometrics Plan showing fixture location, type and intensity. Also included are cut sheets of proposed fixtures. All fixtures are full cut-off design. See Section 7.

J. Written Statement

1. The existing use on the site is retail sale of building products/lumber yard. Bradco Supply Corp., who is co-locating to the site, is the same use.

2. As shown on Sheet 3 of 7, the total land area is 5.95 acres. The existing Wickes Lumber building is 30,452 square feet. The new Bradco Supply building is 30,791 square feet. There are two existing pole barn-style lumber sheds (2,400 square feet and 3,200 square feet) that will be removed and replaced with two new three-sided metal sheds (2,500 square feet and 3,000 square feet). There is also an existing metal three-sided shed of 3,300 square feet and a yard office of 220 square feet that will remain.

3. There are two major easements located to the rear of the site. These overlap each other and consist of a 100 foot wide Central Maine Power Company easement and a 75 foot Portland Pipe Line easement. No work is proposed within these easements. Other lesser utility easements are noted on the ALTA/ACSM Land Title Survey. No new easements or burdens are proposed other than those required by CMP to service the new building.

4. Solid waste consists of waste packaging from products sold on site. This consists of cardboard, scrap wood, plastic wrap, metal banding, vinyl shingles, broken drywall, and minor office waste. This waste is stored in a 30 yard roll-off container located in the rear storage yard. This container is emptied bi-weekly. Bradco Supply Corp. may utilize a smaller six yard container within the new building for convenience. This container is emptied less frequently.

5. There is no need for additional sewer and domestic water service for this building. The 8" fire service, gas and power will be extended on site to the new warehouse. Existing utilities are adequate to serve this facility.

6. A Stormwater Management Plan is attached which describes surface drainage on site and how it is being controlled.

7. A construction schedule is included in the Erosion & Sedimentation Control Plan noted on Sheet 6.

8. No State or Federal permits are required.

9. Attached is a copy of the current deed. See Section 3.

1c

10. The project will be self-funded by Bradco Supply Corp. A letter from Bradco Supply is included in Section 4. As for technical capacity, Sebago Technics, Inc. is providing the engineering of the site. Grant Hays & Associates is providing architectural services, and PM Construction is the construction manager for the project. Bradco Supply Corp. owns and manages numerous other facilities in the United States.

11. The site is located in an urban area and is 85% impervious. There are no known unusual natural areas, wildlife habitats, or archaeological sites located on it.

12. Final plans will be submitted in an electronic format upon approval.

13. Currently, there is no recycling of waste materials on site. Cardboard has been recycled in the past, but was stopped due to difficulty in separating waste. The applicant is considering restarting this program. As noted in item 4 above, a 30 yard solid waste container is located in the rear storage yard. This yard area is shielded by the existing building from the public way. The abutting property is an unscreened stone storage yard. The dumpster for Bradco is stored within the building.

I trust the application is complete for the City's review and consideration. I would be happy to meet with you or the Planner assigned to this project to discuss the details of this application. In the interim, please feel free to call me. I look forward to working with you again on a Portland project.

Sincerely,

SEBAGO TECHNICS, INC.

Stephen G. Doe

Stephen G. Doe, R.L.A.
Landscape Architect

SGD:jc/dlf
Enc.

cc: Skip Roberts, Bradco Supply Corp.
Phil Morin, PM Construction
Les Friedman, Wickes Lumber
Dave Fagnant, Bradco Supply Corp.

Att. 2

Doc#: 61138 Bk:21621 Ps: 278

QUITCLAIM DEED

WICKES INC., a Delaware corporation, formerly known as Wickes Lumber Company, for consideration of $10, paid

grants to BRADCO REALTY CORP., a New Jersey corporation*, with Quitclaim Covenants, the land in Portland, Cumberland County, Maine.

*with a mailing address of
13 Production Way, Avenel, NJ 07001

SEE EXHIBIT A ATTACHED

For our title see deed from Wickes Companies, Inc., a Delaware corporation, to Wickes Lumber Company, a Delaware corporation, dated April 26, 1988, recorded May 12, 1988.

MAINE REAL ESTATE TAX PAID

WICKES INC., a Delaware corporation, formerly known as Wickes Lumber Company

Dated: July 26, 2004

By: James O'Grady
Its: President

THE STATE OF ILLINOIS

July 26, 2004

Then personally appeared the above named grantor James O'Grady, President of WICKES INC., a Delaware corporation, and acknowledged the foregoing instrument to their free act and deed, before me.

"OFFICIAL SEAL"
JOANN MCLAUGHLIN
NOTARY PUBLIC STATE OF ILLINOIS
COMMISSION EXPIRES 02/05/05

Notary Public
My commission expires:
2/5/05

256140.1 050495-32982

Site 267

Doc#: 61138 Bk:21621 Pg: 279

EXHIBIT "A"

LEGAL DESCRIPTION

LEGAL DESCRIPTION

FEE PARCEL:

A certain lot or parcel of land, with the buildings thereon, situated in Portland, in the County of Cumberland and State of Maine, and bounded and described as follows:

Beginning at a point on the new right of way of Riverside Street, Portland, Maine, as established by the City of Portland, which is between the property of Arthur Thibodeau and Joseph Olas;

Thence in a southerly direction along the arc of a curve to the left having a radius of 619.77 feet, a distance of one hundred fifty-two (152.00) feet, more or less, to a point;

Thence along the arc of a curve to the right having a radius of 669 feet, a distance of seventy (70.00) feet, more or less, to a point;

Thence South 81°02' West, eleven and thirty-seven hundredths (11.37) feet to an iron;

Thence South 81°02' West, four hundred thirty-nine and three-tenths (439.30) feet to an iron;

Thence North 75°33' West six hundred seventy-two (672.00) feet to an iron;

Thence North 20°50'10" West one hundred fifty-six and forty-five hundredths (156.45) feet to an iron;

Thence South 88°39' East one thousand one hundred eight and fourteen hundredths (1,108.14) feet to an iron;

Thence in the same direction nine (9.00) feet, more or less, to the point of beginning.

APPURTENANT RIGHT OF WAY:

Along with the right to use and maintain a certain sewer manhole as granted to Wickes Inc., dba Wickes Lumber Company/Wickes Lumber by an Easement Deed and Agreement from Sterling Motors, Inc. to, dated July 23, 2002 and recorded in the Cumberland County Registry of Deeds in Book 17833, Page 300.

Received
Recorded Register of Deeds
Aug 03,2004 10:41:21A
Cumberland County
John B OBrien

AH. 3

Bradco Supply Corp.

13 PRODUCTION WAY, P.O. BOX 67, AVENEL, NEW JERSEY 07001-0067
(732) 382-3400 FAX (732) 382-6577
mweinberger@bradcosupply.com

MICHAEL L. WEINBERGER
GENERAL COUNSEL

June 13, 2005

Sarah Hopkins, Development Review Manager
Planning & Urban Development
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Wickes/Bradco Supply – 238 Riverside Street, Portland, ME 04103

Dear Ms. Hopkins:

The construction of the 30,000 sq.ft. warehouse building and associated improvements at the referenced site will be entirely funded through the working capital of the Company without any external financing.

Very truly yours,

Michael L. Weinberger,
Secretary

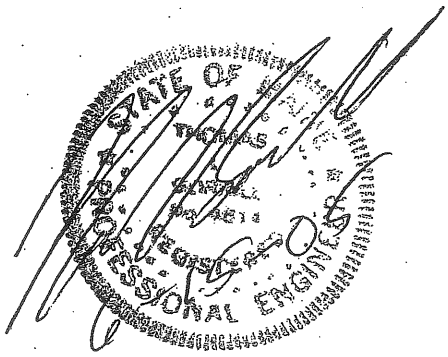
MLW/bp

A#.4

Traffic Impact Study
Wickes Lumber
Portland, Maine

Prepared for:

Sebago Technics, Inc.
One Chabot Street, PO Box 1339
Kittery, Maine 04098



June 2005

Prepared by:

Gorrill-Palmer Consulting Engineers, Inc.

Traffic and Civil Engineering Services

PO Box 1237
15 Shaker Road
Gray, ME 04039

(207) 657-6910
Fax : (207) 657-6912
E-mail: mailbox@gorrillpalmer.com

4a

Traffic Impact Study
Wickes Lumber Expansion
Portland, Maine
2005

Index

4b

Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill-Palmer Consulting Engineers, Inc. was retained by Sebago Technics, Inc. to examine the traffic impacts associated with a proposed expansion of Wickes Lumber on Riverside Street in Portland, Maine. The project will add approximately 30,700 square feet of warehouse. Access to the site is currently via two driveways on Riverside Street. As indicated the City of Portland will require the southerly driveway to be closed and the signalized driveway to be modified.

1. The proposed expansion is forecast to generate 17 and 19 trip ends for the weekday AM and PM peak hour of generator. This level of trip generation does not require a traffic permit from the Maine Department of Transportation (MaineDOT).

2. The level of service analyses show that the site driveway is forecast to operate at a level of service 'B' or better. The addition of site-generated traffic is not anticipated to affect the level of service at nearby intersections.

3. Gorrill-Palmer Consulting Engineers, Inc. obtained crash data from the MaineDOT to determine if any locations within the study area are considered High Crash Locations (HCL's). Based on this information, there are no High Crash Locations in the study area.

4. The sight distances for the proposed modified site drive at Riverside Street exceed MaineDOT requirements. Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the existing street system can accommodate the traffic generated by the site.

4c

I. *Existing and Proposed Site*

The existing Wickes Lumber site is located across from Home Depot on Riverside Street in Portland.

Proposed for the site is a 30,700 square foot expansion of the warehouse. Access to the site will be from a modification of the northern entrance, which will be under signalized control with Home Depot. It is our understanding that the southerly driveway will be closed. The project location is shown on Figure 1 of Appendix A.

II. *Background Traffic Conditions*

Gorrill-Palmer Consulting Engineers, Inc. based the study on the following information:

- Crash information for 2002-2004 provided by the Maine Department of Transportation.
- Turning movement counts from 3:30 PM to 6:00 PM collected by Gorrill-Palmer Consulting Engineers, Inc. at the following locations:
  - Wickes Lumber at Riverside Street
  - Warren Avenue at Riverside Street
- Posted speed of 35 mph on Riverside Street.

Predevelopment Traffic Volumes

Seasonal Adjustment

The MaineDOT utilizes highway classifications of I, II, or III for state and local roadways. Type I roadways are defined as urban roadways, or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Type II roadways, or arterial roadways are those that see a combination of commuter and recreational traffic and therefore experience moderate fluctuations during the year. Type III roadways, or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuation.

The study area roadways are all classified as Type I roadways by MaineDOT. Raw count volumes were adjusted to estimate volumes indicative of the 30th highest hour of the year.

Annual Growth

The proposed development is anticipated to be completed by 2006. The 2005 roadway volumes were increased by two percent per year in the study area to reflect traffic increases in the area. This rate was based on historical data published by the MaineDOT. A copy of the data is located in Appendix C of this report.

Other Development

Gorrill-Palmer Consulting Engineers, Inc. contacted the City of Portland regarding other development in the area already in the approvals process that may contribute traffic to the study area roadways. Based on this conversation, a Dunkin Donuts will be located on Warren Avenue. The forecast traffic generated by Dunkin Donuts was included on the 2006 predevelopment volumes. Other development volumes can be found on Figure 4 of Appendix A.

The raw volumes on Figure 2 were seasonally and annually adjusted to result in the 2006 predevelopment volumes shown on Figure 3 of Appendix A.

III. *Trip Generation*

For the purposes of trip generation, Gorrill-Palmer Consulting Engineers, Inc. utilized the Institute of Transportation Engineers (ITE) publication *Trip Generation,* 7th Edition. The ITE publication references Land Use Code 150, Warehousing, as an appropriate land use code for this type of development. Trip generation calculations are included in Appendix C of this report. The results are summarized in the following table:

Trip Generation for Wickes Lumber, Portland

Land Use Code	Weekday	AM Peak Hour	PM Peak Hour
LUC 150: Warehousing	152	17	19

A trip end is defined as either a trip to or from the site. Thus, a round trip would be the equivalent of two trip ends.

IV. *Trip Distribution*

Gorrill-Palmer Consulting Engineers, Inc. has obtained the ratio of entering and exiting traffic from ITE data. The trip distribution for the proposed facility is as follows:

AM Peak Hour: 60% enter, 40% exit
PM Peak Hour: 10% enter, 90% exit

V. *Trip Composition*

Gorrill-Palmer Consulting Engineers, Inc. anticipates that all trips to and from the proposed development will be primary trips, which is typical of a warehouse.

VI. *Trip Assignment*

The trip assignment has been based on turning movement counts completed by our office as well as our understanding of the study area. The trip percentages and trip assignment are shown on Figure 6 of Appendix A.

VII. *2006 Postdevelopment Traffic*

The anticipated year 2006 predevelopment traffic shown on Figure 5 of Appendix A has been combined with the traffic forecast for the development shown on Figure 6 of Appendix A to yield the 2006 postdevelopment traffic shown on Figure 7 of Appendix A.

VIII. *Study Area*

The study area for the project includes the following:

- Riverside Street at Warren Avenue
- Site drive at Riverside Street

IX. Capacity Analyses

Gorrill-Palmer Consulting Engineers, Inc. completed capacity analyses for the intersections listed in Section VIII.

The study area intersections were evaluated with Synchro traffic software for the signalized locations. Levels of service rankings are similar to the academic ranking system where an 'A' is represents little control delay and an 'F' represents significant delay. A level of service 'D' or above is desired at a signalized intersection.

The following tables summarize the relationship between control delay and level of service:

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Gorrill-Palmer Consulting Engineers, Inc. based our analyses on the existing roadway configurations at Riverside Street and Warren Avenue and post development configurations at Riverside Street and the proposed modified site drive. The analyses were based on Figure 5 for the predevelopment scenarios and Figure 7 for the post development scenarios. The results of the capacity analyses are summarized as follows. The detailed analyses are included in Appendix B.

Level of Service for Riverside Street at Warren Avenue

Approach	2006 PM Peak Hour			
	Predevelopment		Post development	
	Delay	LOS	Delay	LOS
Warren EBL	28	C	28	C
Warren EBTR	86	F	86	F
Warren WBL	91	F	91	F
Warren WBT	62	E	62	E
Warren WBR	13	B	13	B
Riverside NBL	20	C	20	C
Riverside NBTR	32	C	33	C
Riverside SBLT	74	E	74	E
Riverside SBR	13	B	13	B
Overall Intersection	**56**	**E**	**56**	**E**

Level of Service for Riverside Street at Wickes Lumber and Home Depot Site Drives

Approach	2006 PM Peak Hour			
	Predevelopment		Post development	
	Delay	LOS	Delay	LOS
Site Drive EBL	13	B	14	B
Site Drive EBR	8	A	7	A
Home Depot WBLT	19	B	18	B
Home Depot WBR	7	A	7	A
Riverside NBLTR	6	A	7	A
Riverside SBTR	5	A	5	A
Overall Intersection	**7**	**A**	**7**	**A**

Based on the above tables, the site driveway is anticipated to operate at an acceptable level of service. The intersection of Riverside Street and Warren Ave. does not meet the desired level of service 'D' or above for a signalized intersection. However, additional traffic from the development is not anticipated to affect the level of service at this location. The low volume of forecast traffic generated by the expansion will produce a negligible affect on any pre-existing conditions in the study area.

X. *Crash Data*

In order to evaluate whether a location has a crash problem, MDOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:
2. A minimum of 8 crashes over a three-year period.

Our office reviewed the MaineDOT crash records for the last three years in the study area (2002-2004). The study area was on Riverside Street from Node 06307 (Riverside Court) to Node 06310 (Warren Avenue). Based on information provided by the MaineDOT, there were a total of 16 crashes with a critical rate factor of 0.00. There are no locations that are considered High Crash Locations.

XI. *Sight Line Analysis*

The Maine Department of Transportation (MaineDOT) has guidelines for sight distances at roadways. The sight lines standards for roadways within an urban compact are as follows:

Standards for Sight Distance

Speed (mph)	MaineDOT
25	200
30	250
35	305
40	360
45	425
50	495

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight distances at the proposed modified site driveway on Riverside Street in accordance with MaineDOT standards.

The MaineDOT standards are as follows:

Roadway observation point:	10 feet off major street travelway
Height of eye at roadway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

The posted speed limit on Riverside Street is 35 mph, which results in a required sight distance of 305 feet for MaineDOT. Our office examined the sight lines at the proposed driveway and found that the sight distance in the northbound direction reached the intersection of Riverside Street and Warren Ave at approximately 360 feet. The sight distance in the southbound direction was in excess of 500 feet. We conclude that the sight distances at the proposed modified site drive meet MaineDOT requirements.

In addition, Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

XII. Conclusions

Gorrill-Palmer Consulting Engineers, Inc. has examined the impact of the traffic associated with the proposed expansion of Wickes Lumber and reached the following conclusions:

1. The proposed expansion is forecast to generate 17 and 19 trip ends for the weekday AM and PM peak hour of generator. This level of trip generation does not require a traffic permit from the Maine Department of Transportation (MaineDOT).

2. The level of service analyses show that the site driveway is forecast to operate at a level of service 'B' or better. The addition of site-generated traffic is not anticipated to affect the level of service at nearby intersections.

3. Gorrill-Palmer Consulting Engineers, Inc. obtained crash data from the MaineDOT to determine if any locations within the study area are considered High Crash Locations (HCL's). Based on this information, there are no High Crash Locations in the study area.

4. The sight distances for the proposed modified site drive at Riverside Street exceed MaineDOT requirements. Gorrill-Palmer Consulting Engineers, Inc. recommends that all plantings, which will be located within the right of way, not exceed 3 feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the existing street system can accommodate the traffic generated by the site.

TYPE:

CATALOG #:

A11.5

LUMARK®

DESCRIPTION

Dominated by flat surfaces and strong lines that emphasize the princples of architecture, the *IMPACT* Trapezoid cutoff wall luminaire make it ideal complement to site design. These luminaires are U.L. Listed and CSA Certified for wet location when mounted down and damp location up mounted.

APPLICATION

The *IMPACT's* rugged die-cast construction, full cutoff classified optics is perfect for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities providing facade and security lighting needs.

SPECIFICATION FEATURES

A···Housing

The housing is a two-piece design of die-cast aluminum for precise control of tolerances and repeatability.

B···Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" J-Box or wall with "Hook-N-Lock" mechanism for quick installation. Secured with two (2) captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom.

C···Optical Modules

All optical modules utilizes high performance 95% reflective sheet. Strong Type II optical module is standard.

D···Ballast

HID luminaires supplied with high power factor ballast with Class H insulation. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-20°F) for MH. Compact Fluorescent luminaires feature program start, high efficient multi-voltage 50/60Hz ballast with -18°C (0°F) minimum starting.

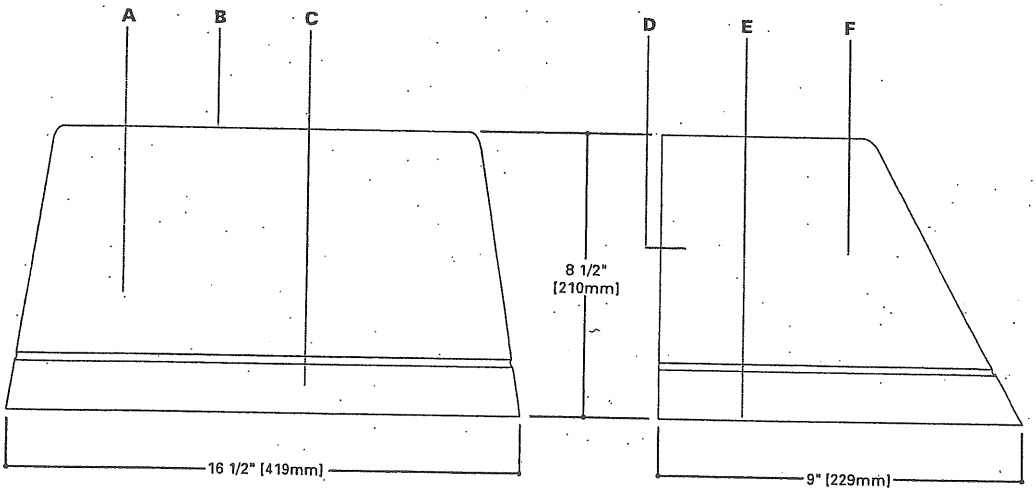
E···Door

Die-cast door mounted with, 1/8" heat- and impact-resistant clear tempered glass lens, with internal plated steel clips and sealed with EPDM gasketing. Hinged door secured in place via two (2) captive fasteners.

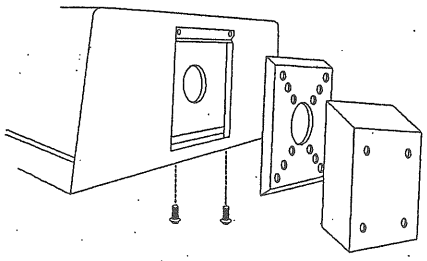
F···Finish

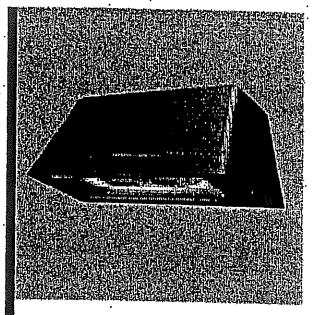
Durable polyester powder coat finish. Standard color is bronze. Optional white, black and silver colors available. Other finish colors available. Consult your Cooper Lighting Representative concerning special color requirements.

Dark Sky Friendly



HOOK-N-LOCK MOUNTING (Mounting attachment included. J-Box not included.)





IP IMPACT TRAPEZOID

50-175W
High Pressure Sodium
Metal Halide

26-52W
Compact Fluorescent

WALL MOUNTED
LUMINAIRE

iMPACT™
Cutoff Wall Luminaires

TECHNICAL DATA

25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

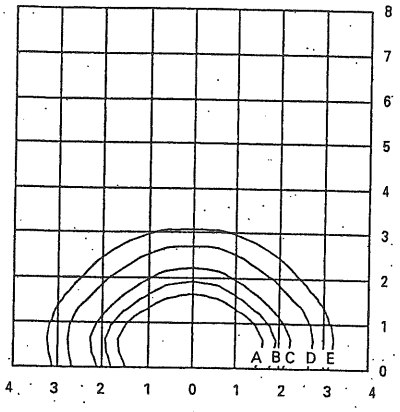
IES FILES

Metal Halide
175W (MHI_17)
High Pressure Sodium
150W (HPI_15)
Compact Fluorescent
26W (PLIP26)
32W (PLIP32)
42W (PLIP42)
52W (PLIP52)

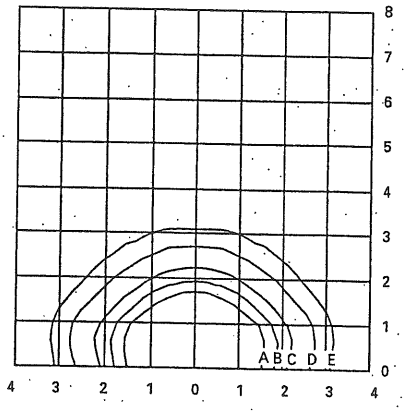
ENERGY DATA

High Reactance Ballast Input Watts
50W HPS HPF (66 Watts)
50W MH HPF (72 Watts)
70W HPS HPF (91 Watts)
70W MH HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MH HPF (129 Watts)
150W HPS HPF (190 Watts)
150W MH HPF (185 Watts)
CWA Ballast Input Watts
175W MH HPF (210 Watts)
Electronic Ballast Input Watts
26W PL HPF (29 Watts)
32W PL HPF (36 Watts)
42W PL HPF (46 Watts)
52W PL HPF (55 Watts)

PHOTOMETRICS



MHIP-T-175-MT-LL
175-Watt MH
14,000-Lumen Clear Lamp



HPIP-T-150-MT-LL
150-Watt HPS
16,000-Lumen Clear Lamp

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
10'	4.50	2.25	1.13	0.45	0.23
15'	2.00	1.00	0.50	0.20	0.10
20'	1.12	0.56	0.28	0.11	0.06

ORDERING INFORMATION

SAMPLE NUMBER: MHIP-T-150-MT-LL

[ ]	IP	T	[ ]	[ ]	[ ]
Lamp Type MH=Metal Halide HP=High Pressure Sodium PL=Compact Fluorescent	Fixture Type IP=IMPACT	Fixture Shape T=Trapezoid	Lamp Wattage HID[1] 50=50W[2] 70=70W[2] 100=100W 150=150W 175=175W[4] Compact Fluorescent 26/32/42=26, 32, or 42W[5] 52=52W[5]	Voltage[6] 120V 208V 240V 277V 347V 480V DT=Dual-Tap[7] MT=Multi-Tap[8] TT=Triple-Tap[8] E=Electronic Ballast[10]	

[ ]

Options (add as suffix)
F1=Single Fuse—120, 277 or 347V (Must Specify Voltage)
F2=Double Fused—208 or 240V (Must Specify Voltage)
PE=Button Photocontrol (Must Specify Voltage)
Q=Quartz Restrike[11]
EM/SC=Emergency Separate Circuit[11]
TR=Tamper Resistant Screw (Door and Mounting Plate)
___=Standard Color Bronze
WH=White
BK=Black
SY=Silver
LL=Lamp Included (Must Specify Wattage on PL)

STOCK SAMPLE NUMBER: MHIT17

[ ]	IT	[ ]
Lamp Type HP=High Pressure Sodium MH=Metal Halide	Fixture Type[12] IT=IMPACT Trapezoid	Lamp Wattage 10=100W 15=150W 17=175W

NOTES: Options not available with stock products. Order Accessories as separate items for field installation. Refer to standard ordering information to add options and accessories.

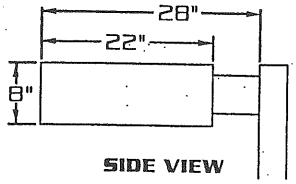
Catalog Number	Lamp Wattage	Lamp Type/Base	Voltage	Ballast Type/ Power Factor	Net Wt. (lbs.)	Shipping Volume (cu. ft.)
Wedge						
MHIP-T-50-MT-LL	50	MH/Medium	Dual-Tap	Hi. X/HPF	16	1.64
MHIP-T-70-MT-LL	70	MH/Medium	Multi-Tap	CWA/HPF	16	1.64
HPIP-T-50-DT-LL	50	HPS/Medium	Dual-Tap	Hi. X/HPF	16	1.64
HPIP-T-70-MT-LL	70	HPS/Medium	Multi-Tap	Hi. X/HPF	16	1.64
PLIP-T-26/32/42-E	26/32/42	PL/GX24Q-3&4	120-277V	Electronic	16	1.64
PLIP-T-52-E	52	PL/GX24Q-3	120-277V	Electronic	16	1.64
Stock Catalog Number						
HPIT10	100	HPS/Medium	Multi-Tap	Hi. X/HPF	12	1.45
MHIT10	100	MH/Medium	Multi-Tap	Hi. X/HPF	12	1.45
HPIT15	150	HPS/Medium	Multi-Tap	Hi. X/HPF	18	1.45
MHIT17	175	MH/Medium	Multi-Tap	CWA/HPF	17	1.45

NOTES: [1] All lamps are medium-base. [2] Available only in 120, 277V and Dual-Tap. [3] Not available in 480V. [4] Metal Halide construction only. [5] (2) 26W quad tube lamps only. [6] HID products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Lighting Representative for availability and ordering information. [7] Dual-Tap ballast are 120/277V wired 277V. [8] Multi-Tap ballast are 120/208/240/277V wired 277V. [9] Triple-Tap ballast are 120/277/347V wired 347V. [10] Supplied with 120V through 277V 50/60Hz for Compact Fluorescent. [11] The power might need to cycle and allow HID lamp to cool in warm climates. Use a 100W maximum HID lamp. [12] Painted bronze. Supplied with lamp and Multi-Tap HPF ballast wired 277V.

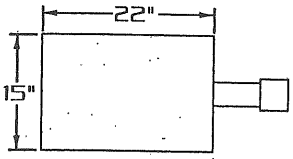
5b

VERSALUX

[400 WATT MAX.]

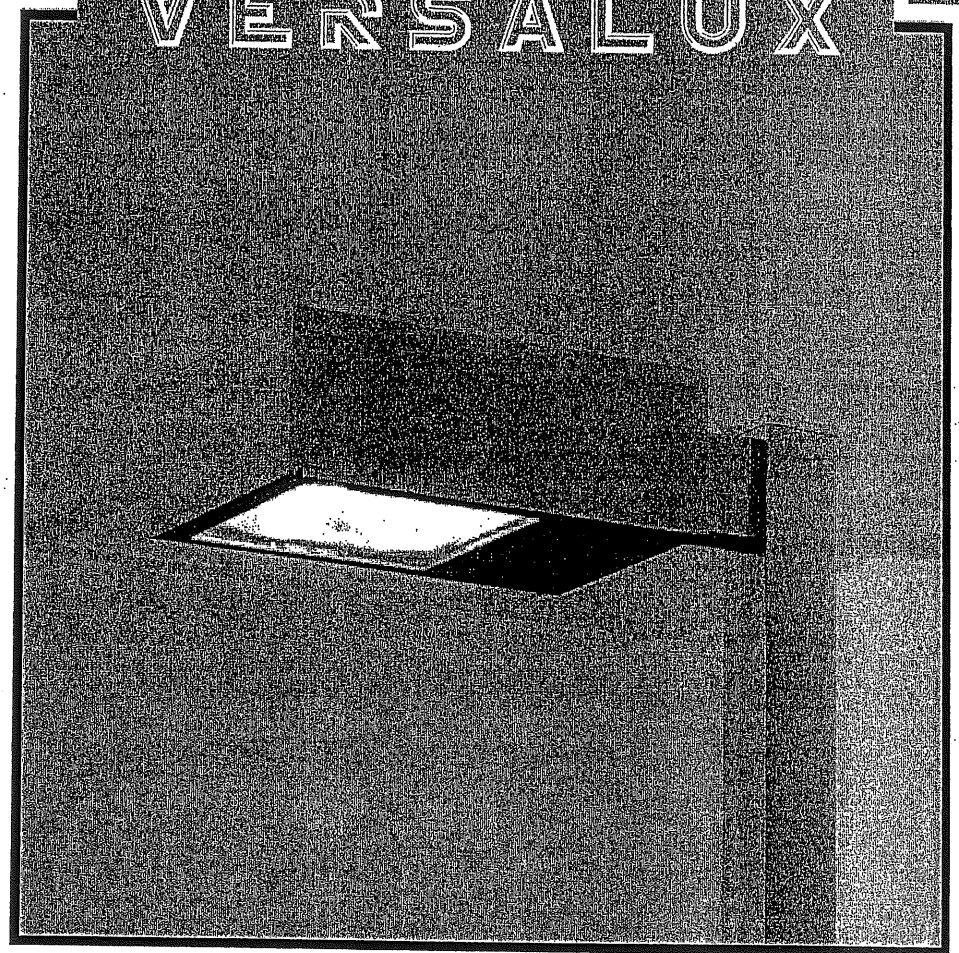


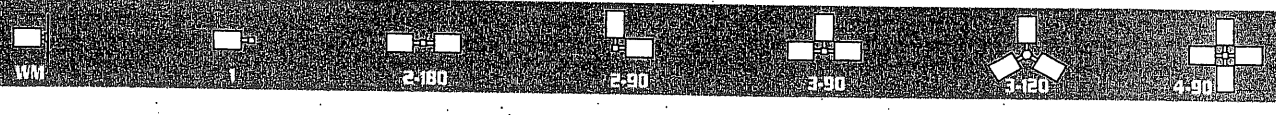
SIDE VIEW



TOP VIEW

E.P.A.= 1.72





SPECIFICATIONS

HOUSING: ONE PIECE HEAVY GAUGE DIE FORMED ALUMINUM CONSTRUCTION WITH SEPARATE BALLAST COMPARTMENT.

LENS ASS'Y: ONE PIECE HINGED HEAVY GAUGE DIE FORMED ALUMINUM DOOR FRAME SURROUNDS 3/16" CLEAR TEMPERED GLASS LENS. GLASS IS SEALED TO DOOR WITH HIGH TEMPERATURE SILICONE SEAL. TWO CAPTIVE THUMB SCREWS DISENGAGE LENS ASSEMBLY FROM HOUSING WITHOUT THE USE OF TOOLS.

OPTICS: COMPUTER DESIGNED ONE PIECE SEMI SPECULAR HYDROFORMED REFLECTOR COMBINES WITH LENS TO PRODUCE A HIGHLY EFFICIENT, SHARP CUTOFF. OPTICS ARE FIELD ROTATABLE.

GASKETING: CLOSED CELL EPDM GASKETING COMPRESSED BETWEEN DOOR AND HOUSING SEALS OPTICAL CHAMBER.

LAMP HOLDER: MOGUL BASE PORCELAIN.

LAMP: (BY OTHERS)

BALLAST: H.P.F./C.W.A. AUTOTRANSFORMER, -20° STARTING TEMPERATURE. ELECTRICAL COMPONENTS ARE MOUNTED TO HINGED REMOVABLE TRAY FOR EASY ACCESS.

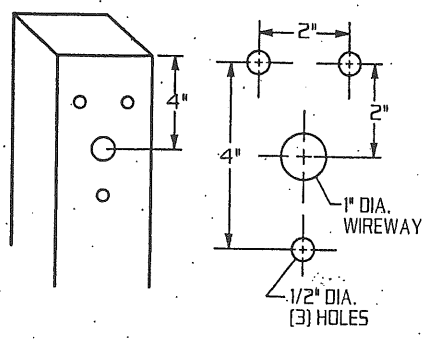
ARM: 3"X5"X6" LONG HEAVY WALL EXTRUDED ALUMINUM. ARM IS SECURED TO HOUSING AND TO POLE WITH STAINLESS STEEL RODS.

FINISH: POLYESTER POWDER COAT-STATE OF THE ART 20 PSI PRESSURE POWER WASH AT 140° TEMPERATURE INCORPORATES FOUR STEP IRON PHOSPHATE PROCESS TO CLEANSE AND PRETREAT THE METAL SURFACE FOR MAXIMUM PAINT ADHESION. ELECTROSTATICALLY APPLIED TEXTURED POLYESTER POWDER TOP COAT IS BAKED AT 400° TEMPERATURE FOR MAXIMUM HARDNESS AND EXTERIOR DURABILITY.

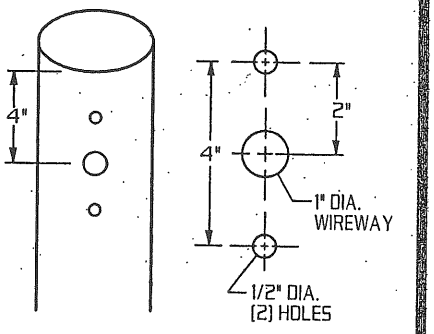
U.L. Listed for wet location

USA ARCHITECTURAL LIGHTING
7900 CLYBOURN AVENUE, SUN VALLEY, CA. 91352
(818) 767-3031 (323) 875-1186
FAX NO. (818) 767-4631
www.usaltg.com

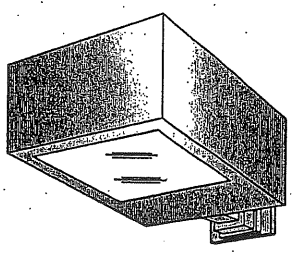
TYPICAL SQUARE POLE TEMPLATE

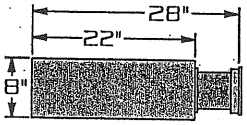


TYPICAL ROUND POLE TEMPLATE



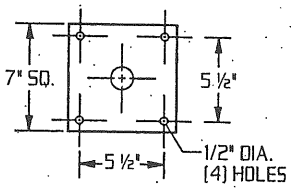
WALL MOUNT



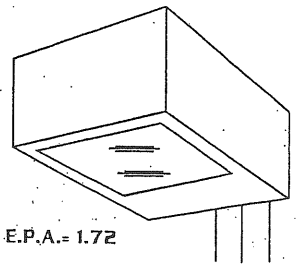


EXTRUDED ALUMINUM ARM AND CAST ALUMINUM WALL BRACKET ASSEMBLY PROVIDED WITH BUILT IN GASKETED WIRE ACCESS FOR FIXTURE/SUPPLY WIRE CONNECTION.

WALL PLATE



LAMP SIZE: 100 - 400 WATT



E.P.A.= 1.72

RECTILINEAR HEAVY GAUGE ALUMINUM HOUSING.

FIELD ROTATABLE OPTICS.

FIELD ADJUSTABLE OPTICS. TYPE II AND III LIGHT DISTRIBUTION.

HINGED BALLAST TRAY, WITH QUICK DISCONNECT PLUG FOR EASY ACCESS TO ELECTRICAL COMPONENTS.

TOOLESS LUMINAIRE ACCESS.

ORDERING INFORMATION

MODEL NO.: VRS	OPTICS	WATTAGE TYPE VOLTAGE	MOUNTING	FINISH	OPTIONS

MODEL NO.: VRS

OPTICS

- ☐ TYPE I — I..... (hydroform)
- ☐ TYPE II — II..... (hydroform)
- ☐ TYPE III — III..... (hydroform)
- ☐ TYPE IV (FORWARD THROW) — IV..... (segmented)
- ☐ TYPE V — V-SQ.. (segmented)

LAMP

WATTAGE	TYPE	VOLTAGE
☐400	☐ HPS	☐120
☐250	☐ MH	☐208
☐200	☐ MV	☐240
☐175		☐277
☐150		☐480
☐100		☐MT

METAL HALIDE UNITS ONLY
USE ED28 LAMP FOR 400 W.
USE MEDIUM BASE LAMP FOR 100 W.

MOUNTING

ARM MOUNT
☐1 .....

STREET LIGHTING ARM MOUNT
☐ST23 ..... (TO FIT OVER 2 3/8" O.D. ARM)

ADJUSTABLE KNUCKLE
☐NKLE23 ..... (TO FIT OVER 2 3/8" O.D.)
☐NKLE27 ..... (TO FIT OVER 2 7/8" O.D.)

WALL MOUNT
☐WM .....

SEE ACCESSORIES SECTION FOR ST23 AND NKLE DETAILS

FINISH

- ☐DARK BRONZE **DBM**
- ☐MEDIUM BRONZE **MBM**
- ☐BLACK **BKM**
- ☐WHITE **WTM**
- ☐SILVER **SLM**

OPTION:
☐ANODIZED **AZ**
ANODIZED HOUSING MUST HAVE PAINT FINISH COAT
EXAMPLE: **AZDBM**

SEE PAGE 3 FOR ADDITIONAL COLORS

OPTIONS

- ☐ CLEAR POLYCARBONATE DIFFUSER ..... LEX
- ☐ HOUSE SIDE SHIELD ..... HS
- ☐ PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) ..... PC+V
- ☐ TWIST LOCK PHOTO CELL+VOLTAGE (EXAMPLE TPC120V) ..... TPC+V
- ☐ TWIST LOCK RECEPTACLE ONLY ..... TPR
- ☐ SINGLE FUSE (120V., 277V) ..... SF
- ☐ DOUBLE FUSE (208V., 240V) ..... DF
- ☐ TAMPER PROOF ..... TP

USA ARCHITECTURAL LIGHTING
7900 CLYBOURN AVENUE, SUN VALLEY, CA 91352
(818) 767-3861 (323) 875-1196
FAX NO. (818) 767-4631
www.usaltg.com

Quick Summary

5d

Site

Calculation Summary:	Attained	Target
Zonal Cavity Illum*:	N/A fc	N/A fc
Unit Power Density:	0.00 W/sq. ft.	N/A W/sq. ft.

*Zonal cavity illuminance does not take into account objects within the space, or daylighting.

Front Parking Statistics

AVE: 1.97 MAX 6.69 Min 0.52

AVE/Min 3.77:1 MAX/Min 12.77:1

Room Summary:

Overall Size: 2613.42 ft x 1327.83 ft x N/A ft

Reflectances: Ceiling: N/A
Walls: N/A
Floor: N/A

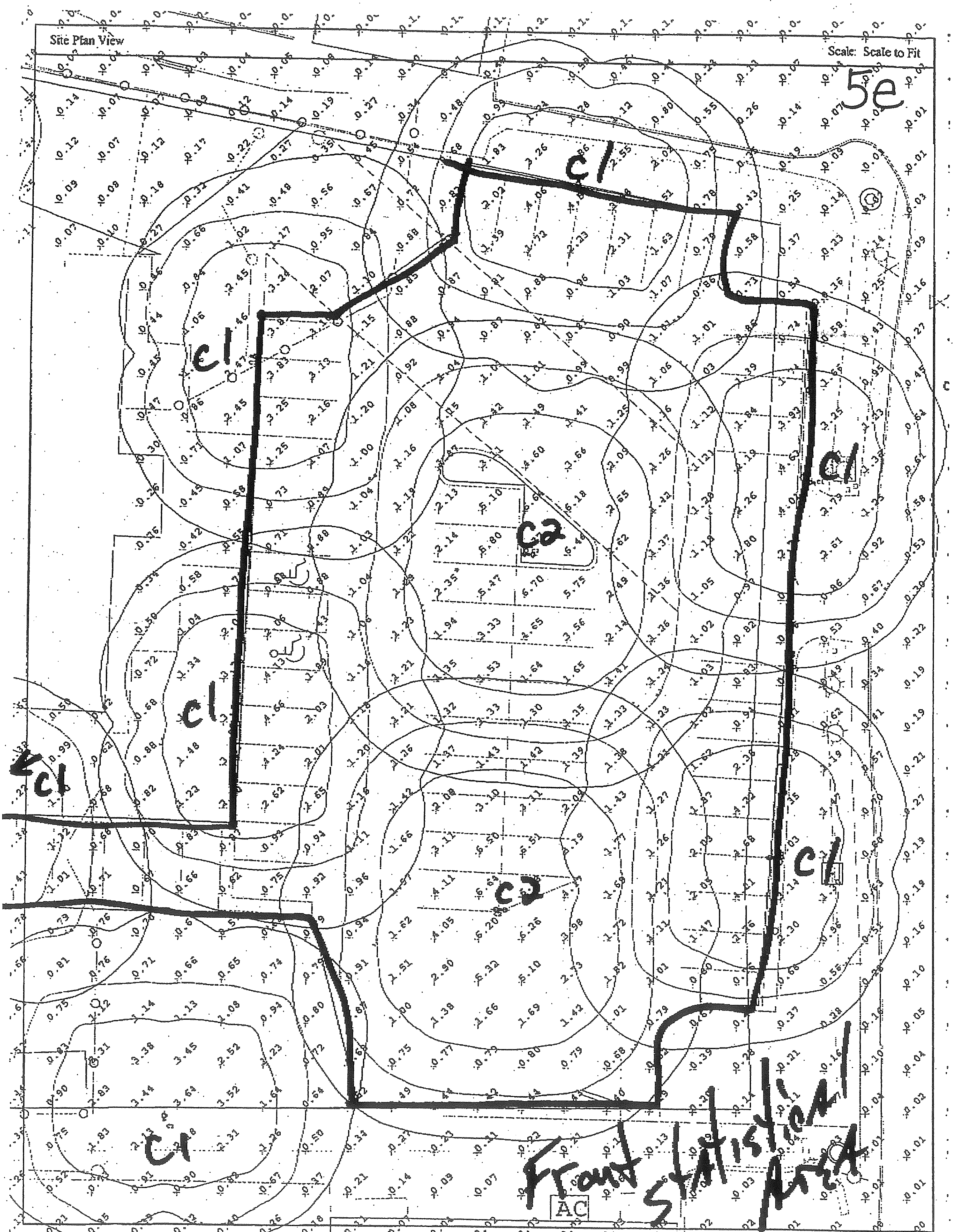
Total Cost: $0.00

Luminaire Type Summary

Type	Catalog Number	Quantity
A1	VRS-III-250-MH-MT-1/20' MTG HGT	2
A2	2-VRS-III-250-MH-MT-1/20' MTG HGT	4
AW	VRS-III-250-MH-MT-WM/ WALL MTD 18' AFG	2
C1	VRS-III-175-MH-MT-1/20' MTG HGT	7
C2	2-VRS-III-175-MH-MT-1/20' MTG HGT	2
WM	MHIPT-100/ WALL MTD AT 12' AFG	5
WM2	MHIPT-100 WALL MTD AT 15' AFG	5

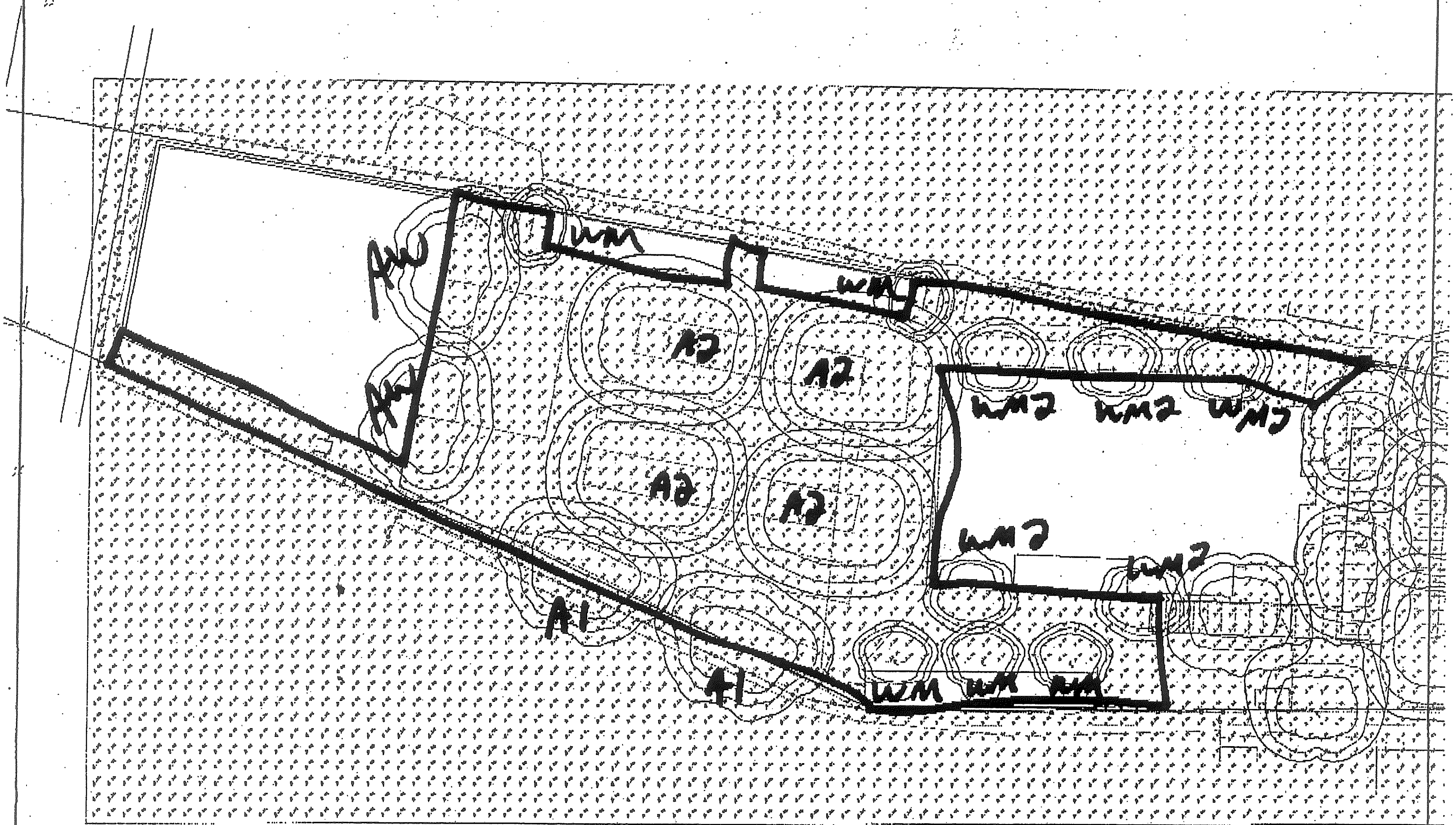
Luminaire Location Summary

Type	X	Y	Z	Rotate	Tilt	Spin	AimX	AimY	AimZ	LLF
A1	1829.93	500.99	0.00	-20.00	0.00	0.00	n/a	n/a	n/a	0.80
A1	1727.47	548.19	0.00	-20.00	0.00	0.00	n/a	n/a	n/a	0.80
A2	1783.16	706.29	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
A2	1908.23	684.09	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
A2	1770.06	618.42	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
A2	1891.63	594.04	0.00	-10.00	n/a	n/a	n/a	n/a	n/a	n/a
AW	1637.24	751.14	0.00	-100.00	0.00	0.00	n/a	n/a	n/a	0.80
AW	1620.79	656.13	0.00	-100.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2223.16	643.48	0.00	-90.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2219.50	557.21	0.00	-90.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2154.58	537.83	0.00	-180.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2204.87	464.86	0.00	0.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2345.83	527.79	0.00	-275.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2354.87	615.71	0.00	-275.00	0.00	0.00	n/a	n/a	n/a	0.80
C1	2299.45	685.38	0.00	-190.00	0.00	0.00	n/a	n/a	n/a	0.80
C2	2288.43	598.23	0.00	-275.00	n/a	n/a	n/a	n/a	n/a	n/a
C2	2282.44	514.98	0.00	-92.00	n/a	n/a	n/a	n/a	n/a	n/a
WM	1931.79	496.59	0.00	-2.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	1988.19	496.30	0.00	-2.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	2045.17	495.73	0.00	-2.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	1939.83	734.61	0.00	-100.00	0.00	0.00	n/a	n/a	n/a	0.80
WM	1701.53	778.36	0.00	-280.00	0.00	0.00	n/a	n/a	n/a	0.80


Site Plan View
Scale: Scale to Fit
5e
C1
C2
AC
Front statistical Area

Site Plan View

Scale: Scale to Fit



C1 / L1

5F

Att. 6

04435

Stormwater Management Report
Wicke's Lumber Expansion
238 Riverside Street, Portland, Maine
June 2, 2005

Introduction

This Stormwater Management Report has been prepared on behalf of Bradco Supply Corp. in order to evaluate the pre- and post-development conditions of the proposed Wicke's Lumber Expansion project on Riverside Street in Portland, Maine. This project is proposed for an existing retail site, and includes the construction of one new building and the paving of a yard area currently consisting of compacted gravel.

The development area is approximately 6.0 acres in size and is currently developed and operated as Wicke's Lumber. The existing facility includes a single retail building with associated parking, and a storage shed to the south. The back (westerly) part of the site consists of a graveled building supply storage area behind the structure. Included in this area are two (2) canopied lumber storage areas and a small shed. There is also a small area at the most westerly end of the project which is set aside as a Central Maine Power (CMP) easement. The proposed improvements affect the back of the site and include removing the two canopies and shed, constructing a new building on the back (west) end of the site, and grading and paving the existing gravel storage area. The CMP easement will not be modified. Stormwater will be allowed to continue to runoff the north and south sides of the property to existing ditches. No detention is proposed on the site.

Methodology

In order to evaluate drainage characteristics as a result of the proposed development activities, a quantitative analysis was performed to determine peak rates of runoff for the 2, 10, and 25-year storm events in the pre-development and post-development conditions. The evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software was utilized to perform the calculations.

Peak runoff rates were analyzed for the 2, 10, and 25-year frequency, 24-hour duration storm events. A Type III rainfall distribution was applied to these storms. The rainfall amounts for southeast Cumberland County are as follows:

Storm Frequency	Precipitation (in./24 hr)
2-year	3.0
10-yr	4.7
25-year	5.5
100-year	6.7

The HydroCAD Data output sheets from this analysis are appended to this report, along with pre-development and post-development watershed maps.

Soils

Soil information was obtained from the USDA/SCS Medium Intensity Soil Survey. The survey indicates the predominant site soil as Swanton. The easterly portion of the site, under the existing parking area, is classified as Au Gres. The Hydrologic Soil Group (HSG) of each soil is classified by Technical Release #55 of the Soil Conservation Service as follows:

Au Gres.....B
Swanton.....C/D

Existing Conditions

The site is relatively flat, and existing stormwater currently flows as surface runoff to the perimeter of the site. For modeling, the site was divided into three subcatchments (labeled 1S, 2S, and 3S), each of which flows to a different analysis point (AP1, AP2, and AP3). Subcatchment 1S is comprised of the existing parking area on the easterly end of the site, fronting Riverside Street. Runoff flows to Riverside Street. Analysis Point 1 is located at the property line along the street. Subcatchment 2S includes the southerly portion of the site. Runoff flows to the south where it enters a ditch along the property line, and is conveyed easterly to a culvert under Riverside Street. Analysis Point 2 is located at the southeasterly corner of the property, at the culvert entrance. Subcatchment 3S includes the northerly portion of the site. Runoff flows to the north where it enters a ditch along the property line, and is conveyed westerly to an existing open channel. Analysis Point 3 is located near the northwesterly corner of the site, where the ditch enters the open channel.

Proposed Site Improvements

In the stormwater model, subcatchment delineations in the pre- and post-developed conditions remain essentially the same. Subcatchment 1S is unchanged. Improvements to the existing parking area (i.e. construction of grassed traffic islands) reduce the total impervious area of the subcatchment and lower the peak runoff rate. The boundary between Subcatchments 2S and 3S changed somewhat based on grading and the pitched roof of the new building, though the total area of each remains the same. In Subcatchment 2S, the proposed improvements resulted in a shorter time of concentration, and thus an increased peak runoff rate. This was addressed in the model by increasing the roughness coefficient of the ditch to represent proposed check dams. These will increase the time of concentration and reduce the peak runoff rate below existing conditions. In Subcatchment 3S, proposed improvements resulted in slightly less impervious area. The pavement will provide a "cleaner" line, so small parts of the existing gravel along the northerly ditch can be grassed. This had the effect of lowering the peak runoff rate slightly below pre-development levels.

Water Quality

The drainage ditches on the north and south sides of the property will be revegetated and check dams will be constructed to reduce the velocity of the stormwater. This will provide water quality treatment equivalent to that of a grassed swale.

Results

Sub-catchment Data - Summary Table						
Sub-catchment	Pre-Development			Post-Development		
	Area (ac)	CN	Tc (min)	Area (ac)	CN	Tc (min)
1S	0.73	98	3.3	0.73	93	3.7
2S	2.49	95	7.5	2.49	95	8.4
3S	2.73	96	4.3	2.73	95	4.2
Total:	5.95			5.95		

Stormwater Runoff - Summary Table						
Analysis Point	Peak Runoff Rate (cfs)					
	Pre-Development			Post-Development		
	2-yr	10-yr	25-yr	2-yr	10-yr	25-yr
AP-1	2.35	3.71	4.35	2.05	3.44	4.09
AP-2	6.44	10.52	12.42	6.25	10.22	12.07
AP-3	8.12	13.09	15.42	7.95	12.98	15.32

Conclusion

As summarized in the above table, the proposed improvement of the commercial site will slightly reduce the peak rate of runoff leaving the site. As described above, this is due to a decrease in impervious area in Subcatchments 1S and 3S, and improvements to the drainage ditch in Subcatchment 2S.

Prepared By:

Patrick M. Martin

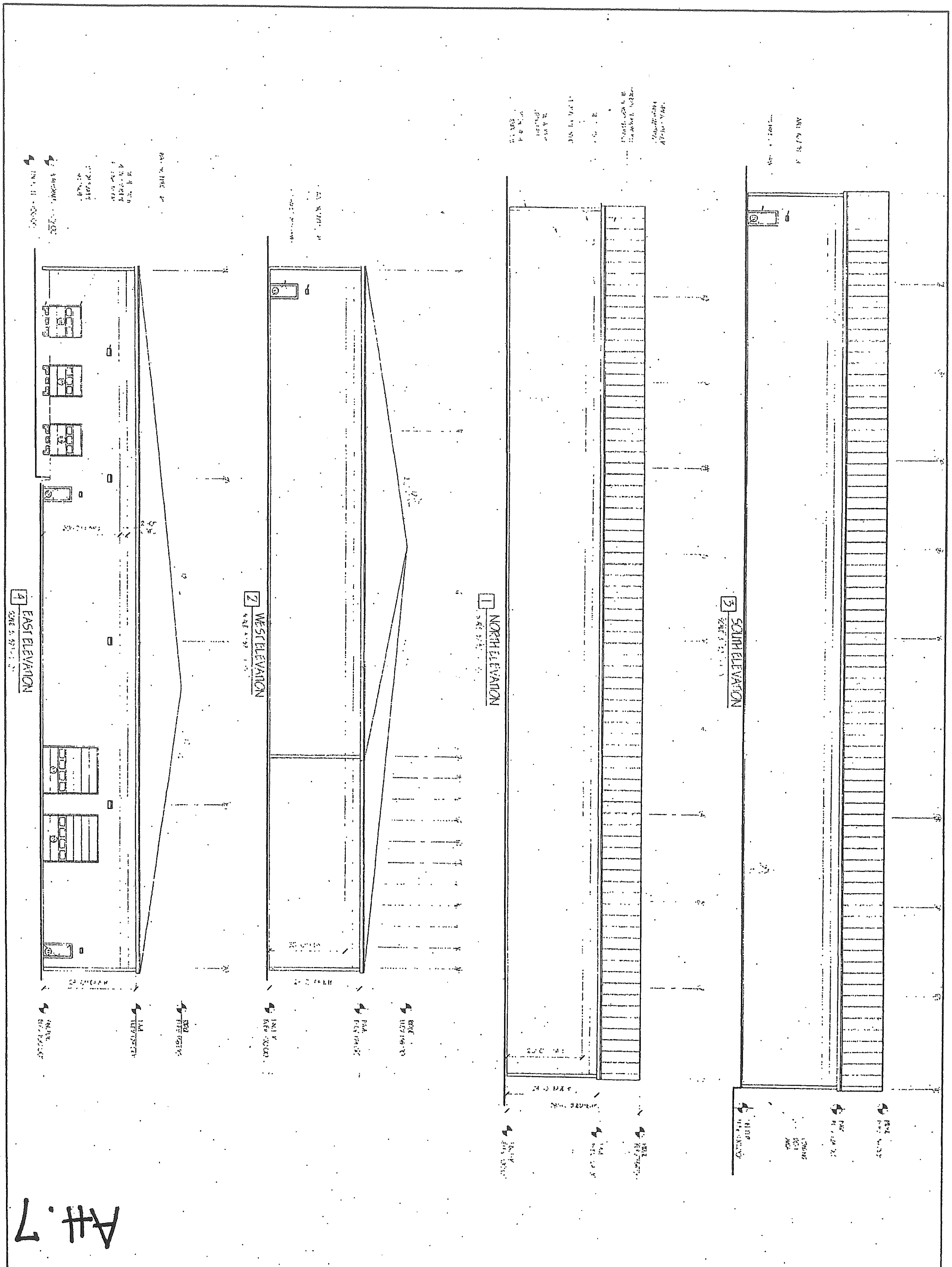
Patrick M. Martin
Design Engineer

Reviewed By:

STATE OF MAINE
JON H. WHITTEN, JR.
NO. 10414
REGISTERED PROFESSIONAL ENGINEER

Jon H. Whitten, II, P.E.
Sr. Project Engineer

PMM/JHW:pmm/dlf
June 2, 2005



GRANT HAYS ◆ ASSOCIATES

DRAWING NO A3

EXTERIOR ELEVATIONS

DRAWING TITLE

ARCHITECTURE INTERIOR DESIGN

P.O. BOX 6170 FALMOUTH, MAINE 04105

(207) 871-5900 (207) 871-2308

NEW STORAGE BUILDING FOR BRADCO / WICKES SUPPLY

PORTLAND, MAINE

JOB TITLE

REVISIONS

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

Att. 8

MEMORANDUM

DATE: **September 6, 2005**

TO: **Kandi Talbot, Portland Planning**

C: **Steve Doe, Sebago Technics**

FROM: Stephen R. Bushey, P.E.

SUBJECT: **Wickes Lumber/Bradco Supply Site Plan Review**

Kandi,

DeLuca-Hoffman Associates, Inc. has reviewed the submission materials prepared by Sebago Technics on behalf of Bradco Supply Co. dated June 23, 2005. The submission package included the Site Plan application and supporting documents including the stormwater management study and a plan set consisting of seven drawings. The proposed project consists of a new building and site modifications for parking, paving and general storage. The site is characterized by a narrow width that extends back from Riverside Street to a power line easement some 1,000 feet from the street. Existing development abuts the property to each side.

We offer the following comments regarding the proposal:

~~Site Plan~~

1. The Space and Bulk table on the Site Plan suggests that the Maximum impervious surface area on the site will exceed the 80% allowable under the Code. The Zoning officer should review and determine the need for a waiver or other zoning action for these conditions.

2. The limits of sidewalk and granite curb placement on Riverside Street should be clarified. Do these limits extend to each side of the property?

3. The parking count is proposed to be 87 spaces. Is at least a third handicap space required to meet ADA compliance?

4. The site plan should denote the snow storage locations and the applicant should provide evidence of their general snow storage and removal procedures.

~~Grading and utility Plan~~

1. The grading plan outlines a very tight development area that will require particular care and attention during construction to insure positive drainage paths and minimal ponding areas. We suggest additional spot grades be identified on the drawing to verify drainage paths directions.

2. In general, runoff is intended to sheet flow towards the sides of the property where existing drainage ditches will convey flow towards the rear of the site (north side) and the front of the site (south side). It appears that the swale on the north side of the site is actually located on the abutting property; therefore we recommend that a drainage easement be put in place to insure continued availability of this conveyance system.

3. The Portland Water District should sign off on the extension of the 8" water main for sprinkler service to the new building. The Fire Department should review for the need of a new fire hydrant on the property given the building's distance from Riverside Street.

Stormwater Management Study

1. The stormwater management study and computations document that post development runoff peak flow conditions will not exceed predevelopment conditions at three points of analysis. Our submission materials did not contain the pre and post development watershed maps therefore we did not specifically review these aspects. It appears that the peak runoff rates are slightly decreased in the post development condition simply due to an overall decrease in impervious area. Based on the site plans it is difficult to identify the exact areas where this occurs other than at the front of the site where some landscaping is to be installed. Towards the rear of the site it appears that a greater amount of paved area will be installed, replacing existing gravel. We recommend that evidence be provided verifying the capacity of the ditches to each side of the property since these are the primary conveyance systems. Each ditch appears to be relatively shallow in depth and slope; therefore their true capacity may be limited.

2. The stormwater report has not provided evidence of any measures for providing stormwater runoff treatment as is required by the City's Technical Standards. The site's drainage system relies on sheet flow of runoff off hard surfaces and conveyance by the ditches to each side. The report suggests that these grassed swales will also provide water quality treatment. Generally, the swales will provide little treatment to the runoff and may be prone to clogging with excessive vegetation over time if not properly maintained. The swales will also convey little to none of the runoff from the front parking area therefore providing no treatment of runoff. We suggest the engineer explore the potential to install Low Impact Development (LID) measures such as a Bio-Retention cell along the parking lot pavement edges. The DEP is currently recommending greater consideration be given this approach to water quality treatment. Since landscaping is already proposed at the front of the site, it may be possible to install the bio-retention cell(s) to treat smaller, routine storm events.

Erosion and Sediment Control

1. The plans appear to provide adequate information pertaining to erosion control during construction with details and narrative.

2. Riprap sizing should be provided for the area between the proposed concrete pads on the north side of the site.

Details

86

1. The plans contain sufficient details including lighting photometrics.

We trust these comments are useful. At this time the plans and application materials are satisfactory for consideration by the Planning Board and we recommend Conditional Approval for the project pending the applicant's addressing the comments above.

Kandi Talbot - Bradco Supply Corp. -- Riverside Street

Att. 9

From: "Tom Errico" <terrico@wilbursmith.com>
To: "Kandi Talbot" <kcote@portlandmaine.gov>
Date: 09/08/2005 10:11 AM
Subject: Bradco Supply Corp. -- Riverside Street
CC: "Katherine Earley" <KAS@portlandmaine.gov>

Kandi—

I have reviewed the Site Plan prepared by Sebago Technics and the Traffic Study prepared by Gorrill-Palmer Consulting Engineers, Inc. and offer the following comments.

1. The project proposes to reconfigure existing curb cuts on Riverside Street and create one two-way entrance opposite the existing Home Depot Driveway. The applicant should provided a conceptual plan that illustrates modifications to the existing traffic signal including equipment, signal phasing and lanes configuration/alignment. Information on impact to signal operations at the Riverside Street/Warren Avenue intersection should be documented.
2. The project proposes a 60' curb cut with two 12.5' exit lanes, a 10' raised island and a 25' entry lanes. The applicant should provide vehicle turning template graphics that supports the need for such a wide driveway. I would also ask that the applicant provide information on truck deliveries, including vehicle types, frequency, and time of delivery.
3. The City has plans to widen Riverside Street from the recently improved area implemented as part of the Maine Motors project to Warren Avenue. Coordination of this project and how it may impact this project should be considered.
4. The applicant should make a monetary contribution to the upgrade of the Riverside Street/Warren Avenue intersection. Based upon previous contributions for Evergreen Credit and Dunkin Donuts, this project should contribute $6,500.00 for traffic improvements at the previously noted intersection.

Please contact me if you have any questions.

Best Regards,

Thomas A. Errico, P.E.
Senior Transportation Engineer
Wilbur Smith Associates
59 Middle Street
Portland, Maine 04101
(207) 871-1785 Phone
(207) 871-5825 Fax

Att. 10

From: Marge Schmuckal
To: Kandi Talbot
Date: 09/13/2005 10:47:26 AM
Subject: 238 Riverside Street -Wickes/Bradco

Kandi,
I have reviewed this project for compliance with the B-4 zoning regulations. They are meeting all the B-4 requirements, including setbacks, F.A.R. and parking. The impervious surface ratio is currently legally nonconforming at 86% and it will be reduced to 85%, lessening the nonconformity which is encouraged.

I have spoken to Stephen Doe concerning a readable elevation plan to determine compliance. He has e-mailed me a readable copy of the building elevation which shows that the building height is well the maximum allowed.

Marge Schmuckal
Zoning Administrator