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

2002-0069
Application I. D. Number

Olympia Equity Investors V Llc
Applicant

02/28/2002
Application Date

50 Monument Sq 2nd Floor , Portland , ME 04101
Applicant's Mailing Address

Hilton Garden Inn
Project Name/Description

Consultant/Agent

65 - 65 Commercial St, Portland, Maine
Address of Proposed Site

Applicant Ph: (207) 874-9990 **Agent Fax:**
Applicant or Agent Daytime Telephone, Fax

029 K003001
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☐ Building Addition ☐ Change Of Use ☐ Residential ☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☑ Other (specify) **6 story, 125 room hotel**

76,500 sq. Ft.
Proposed Building square Feet or # of Units

Acreage of Site

B-3
Zoning

Check Review Required:

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

Fees Paid: Site Plan **$500.00** Subdivision Engineer Review Date **03/12/2002**

Insp Approval Status:

Reviewer

☐ **Approved**
☐ **Approved w/Conditions** See Attached
☐ **Denied**

Approval Date Approval Expiration Extension to ☐ Additional Sheets Attached

☐ Condition Compliance signature date

Performance Guarantee ☐ **Required*** ☐ **Not Required**

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

☐ Performance Guarantee Accepted — date / amount / expiration date
☐ Inspection Fee Paid — date / amount
☐ Building Permit Issue — date
☐ Performance Guarantee Reduced — date / remaining balance / signature
☐ Temporary Certificate of Occupancy — date / ☐ Conditions (See Attached) / expiration date
☐ Final Inspection — date / signature
☐ Certificate Of Occupancy — date
☐ Performance Guarantee Released — date / signature
☐ Defect Guarantee Submitted — submitted date / amount / expiration date
☐ Defect Guarantee Released — date / signature

SEBAGO TECHNICS, INC.
One Chabot Street
P.O. Box 1339
WESTBROOK, ME 04098-1339

Phone (207) 856-0277 FAX (207) 856-2206

LETTER OF TRANSMITTAL

HAND DELIVER

DATE 3/12/2 JOB NO. 01529

ATTENTION JONATHAN SPENCE

RE: HILTON GARDEN INN

TO PLANNING/ECONOMIC DEVELOPMENT
PORTLAND CITY HALL

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
9			PRELIMINARY SITE PLAN APPLICATION
			$500 APPLICATION FEE

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☑ FOR WORKSHOP
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO PETE PELLETIER, ALLIED/COOK

SIGNED: JEFF PERRY

If enclosures are not as noted, kindly notify us at once.

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

March 12, 2002
01529

Jonathan Spence, Planner
City of Portland Planning & Urban Development
Portland City Hall
389 Congress Street
Portland, Maine 04101

Preliminary Site Plan Application, Hilton Garden Inn
65 Commercial Street, Chart 29-Block K-Lot 3

Dear Members of the Board:

On behalf of Olympia Equity Investors V, LLC, we are pleased to submit the enclosed Preliminary Site Plan Application for the Hilton Garden Inn. Proposed is an 120 room hotel with surface parking at the corner of Franklin Arterial and Commercial Street. The site is located in the B-3 Zoning District.

The existing 35,235 SF parcel is currently used as a gravel surface parking lot. Access is provided from curb cuts on Franklin Arterial and Commercial Street. Olympia has entered into an agreement with the City to acquire an additional 3,079 SF within the Franklin Arterial R/W as part of the reconfiguration of the Franklin/Commercial Street intersection.

The proposed 76,500+/- SF hotel will be 6-storys. The base of the building will be brick masonry, with granite at the ground plane. The building's upper levels will be finished with titanium panels. All windows will have black anodized aluminum frames and clear glass.

Utilities including water, sewer, telephone, electric and gas are available to the site, either from Commercial or Fore Streets.

We look forward to presenting this project in greater detail at the March 26 meeting. After your review of the enclosed materials, please contact me with any questions.

Sincerely,

SEBAGO TECHNICS, INC.

Jeffrey R. Perry
Project Manager

cc James Brady, Kevin Mahaney, Olympia Equity Investors V, LLC
Philip Kaminsky, SMRT, Inc
Pete Pelletier, Allied/Cook Construction Corp.

City of Portland Site Plan Application

If 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.

Location/Address of Construction: 65 Commercial Street		
Total Square Footage of Proposed Structure 76,500± sf	Square Footage of Lot 38,314 sf	
Tax Assessor's Chart, Block & Lot Chart# 29 Block# K Lot# 3	Property owner, mailing address: Olympia Equity Investors V, LLC 50 Monument Square Portland, Maine 04101	Telephone: 874-9990
Consultant/Agent, mailing address, phone & contact person Jeffrey R. Perry 856-0277 c/o Sebago Technics, Inc. P.O. Box 1339 Westbrook, ME 04098	Applicant name, mailing address & telephone: Same as property owner	Project name: Hilton Garden Inn
Proposed Development (check all that applies) ___New Building ___Building Addition ___Change of Use ___Residential ___Office ___Retail ___Manufacturing ___Warehouse/Distribution ___Parking lot ___Subdivision, amount of lots_____ X Other: 6 story, 125 room hotel Major Development X $500.00 Minor Development_____ $400.00		
Who billing will be sent to: Sebago Technics, Inc. Mailing address: P.O. Box 1339 State and Zip: Westbrook, ME 04098 Contact person: Jeffrey Perry Phone: 856-0277		

Nine (9) separate packets must include the following:

a. copy of application
b. cover letter stating the nature of the project
c. site plan containing the information found in the attached sample plans check list

All plans must be folded neatly and in packet form

Section 14-522 of the Zoning Ordinance outlines the process, copies are available at the counter at .25 per page, you may also visit the web site: ci.portland.me.us chapter 14

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work 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 a permit for work 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 permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: James H. Brady	Date: 2-28-02

This application is for site review ONLY, a building Permit application and associated fees will be required prior to construct

01529

SITE PLAN APPLICATION

Project Description

The hotel will be located at the southeasterly corner of the site. Hotel customers will drive onto the site via a single curb cut from Commercial Street under a porte cochere, to a surface parking lot for 44 vehicles. Pedestrians will enter the building under the porte cochere through a vestibule. A second means of ingress is provided on Commercial Street. The building will be set at the property line to align with other buildings in the neighborhood. Exterior finishes at the street level will be brick, granite, and black anodized aluminum storefront glazing. It is designed to be warm and inviting with large windows framing views into the lobby. Upper levels will be finished with titanium panels and similar window glazing. Titanium is a long lasting material that is well suited for use on the Portland waterfront. To date, the project has been through two constructive workshops with the Historic Preservation Committee.

The hotel's 120 rooms will be located on the upper floors. On the ground level the major interior spaces will include the lobby, pool, exercise room, laundry, support functions and restaurant. The restaurant will serve a complimentary breakfast to hotel guests only and not be open to the general public.

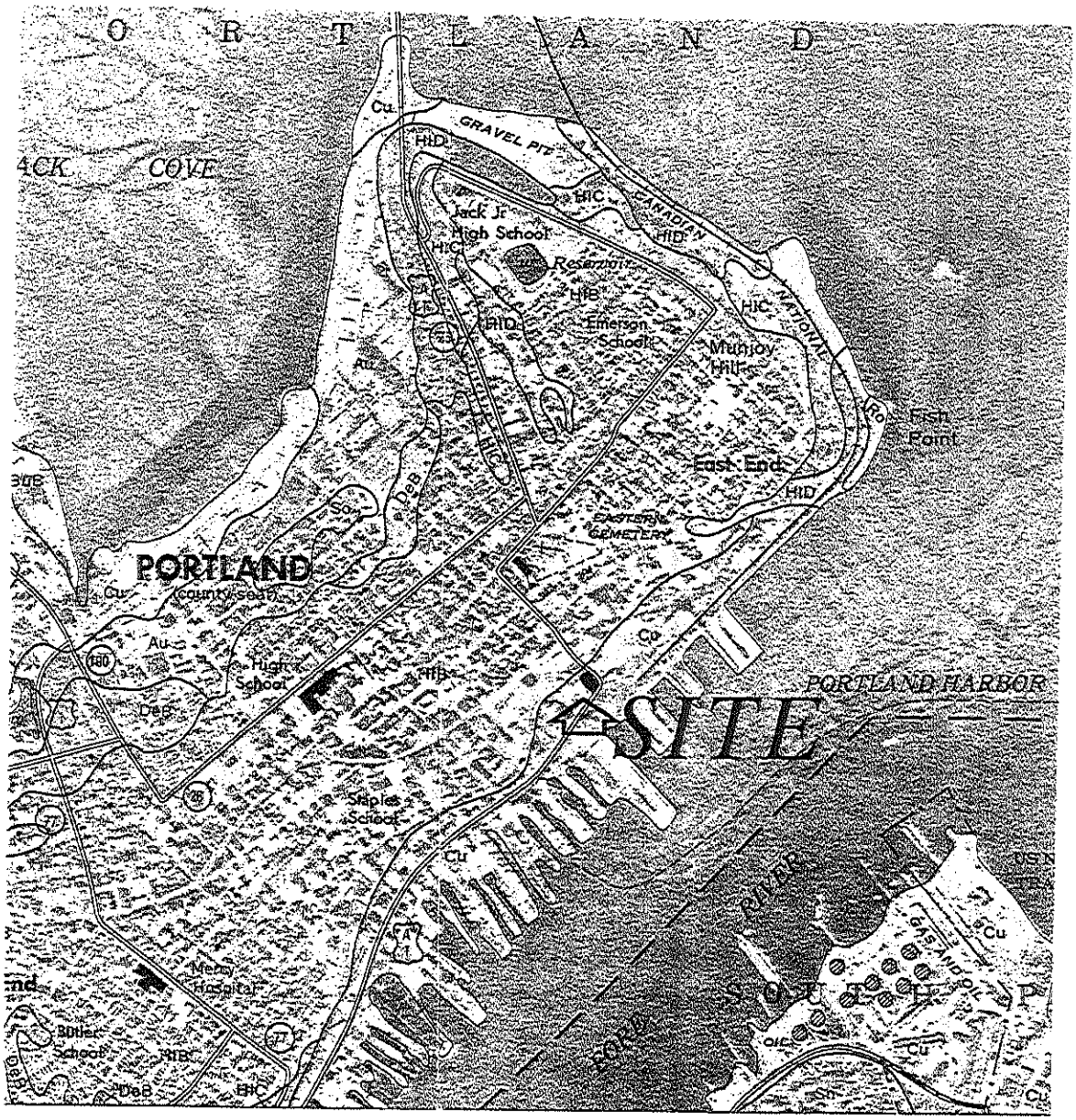
Along both the Commercial Street and Franklin Arterial frontages, pedestrian circulation will be enhanced with a continuation of brick sidewalks. The sidewalks will be complimented with benches, street trees and a wide plaza area to accommodate the increase in pedestrian activity forecast for this intersection.

Site Lighting

The building will be light with decorative fixtures at the porte cochere entrance. Within the parking area, lighting will be provided via pole-mounted fixtures. Wall mounted fixtures will be located over the egress doors and bollard lights will guide drivers through the porte cochere. Area lights will be cut-off, metal halide luminaries. Overall, the lighting plan has been designed to provide safe levels of illumination, add interest to the streetscape and minimize off site impacts. A photometric plan meeting the City's lighting design standards is included in the plan set.

Soil Conditions

The soils underlying the site are designated as cut and fill land. Cut and fill land consists of excavated soil and bedrock that has been redistributed. Please refer to the following Medium Intensity Soil Survey. On site investigations revealed loose to medium-dense layers of silt, sand and clay ranging from 15 to 40 feet over bedrock. As a result, the building will be constructed on piles.

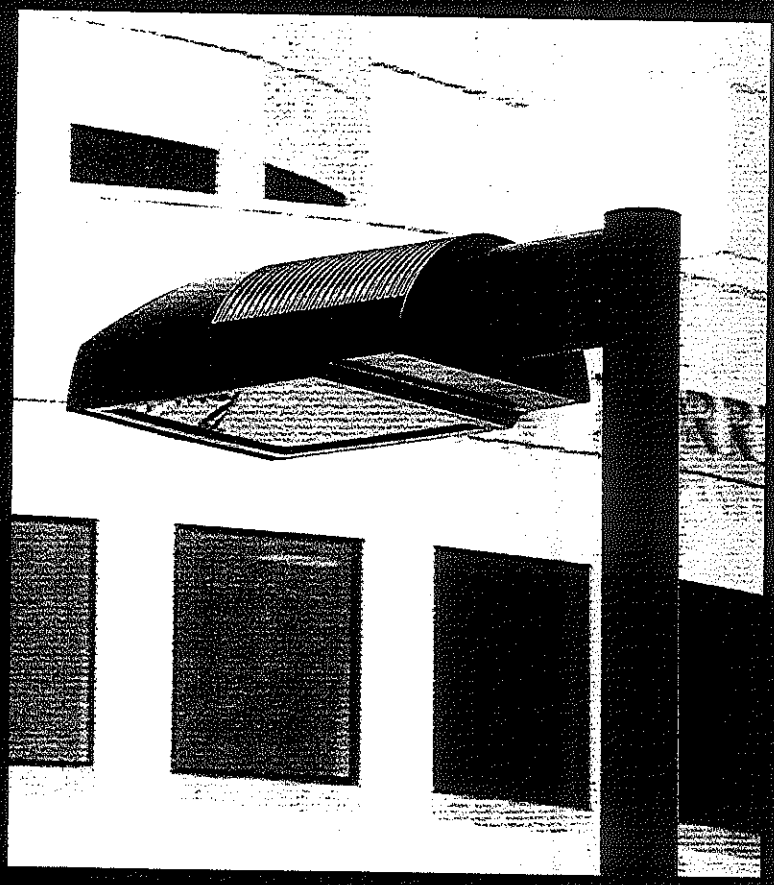


Cut and Fill Land

Cut and fill land (Cu) consists of excavated soil material and bedrock at highway, airport, and building sites that have been redistributed in adjacent areas to depths of from 2 to 15 feet. The material consists of sandy, clayey, silty, cobbly, and gravelly sediment separately or in various combinations.

Because of the variability of the material of cut and fill land at any one location, onsite investigation is needed to determine the suitability of this land type for a particular use. Capability unit, unclassified; woodland group, needs onsite investigation; wildlife group, needs onsite investigation.

Archetype®



Because of a continuing product improvement program Kim Lighting reserves the right to change specifications without notice.

KIM LIGHTING

Ordering Information – SAR Model

Medium Base – 70 to 175 Watt

Ordering Guide

Fixture and pole are described by a single number sequence as illustrated at right.

1 Mounting Arrangement
2 Fixture
3 Electrical Module
4 Finish
5,6,7,8 Options
10 Pole – See Pole spec. sheets designated for SAR fixtures only. (Omit for 1W Wall Mount).
11 Optional Vertical Slipfitter Mount

1SA / SAR2 / 175MH277 / WH-P / LS / SF / PRA14-34188SA / WH-P/ VSF-1SA

Example

9 Special Options for Street Lighting

1 Mounting Arrangement

Cat. No. 1SA
EPA — 0.7

Cat. No. 2SB
EPA — 1.4

Cat. No. 2SL
EPA — 1.2

Cat. No. 3ST
EPA — 1.9

Cat. No. 3SY
EPA — 1.9

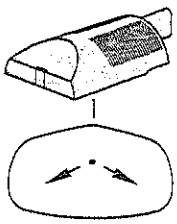
Cat. No. 4SC
EPA — 2.5

Cat. No. 1W
Wall Mount

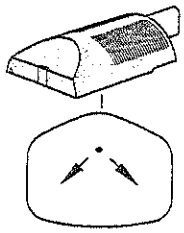
2 Fixture

Catalog number indicates light distribution.

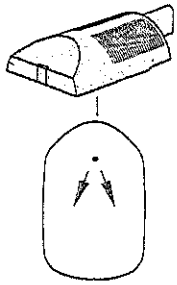
Cat. No. SAR2
Type II



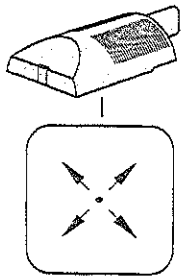
Cat. No. SAR3
Type III



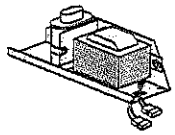
Cat. No. SAR4
Type IV



Cat. No. SAR5
Type V Square



3 Electrical Module

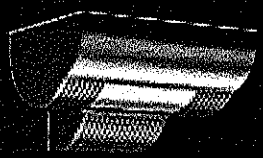


Lamp (by others)	Ballast Module Cat. No.	Line Volts	Line Watts	Max. Amps.
70 Watt Clear	**70HPS120**	120	91	1.45
High Pressure Sodium	**70HPS208**	208	91	0.85
ED17 Medium Base	**70HPS240**	240	91	0.75
	70HPS277	277	91	0.65
	70HPS347	347	93	0.62
100 Watt Clear	**100HPS120**	120	130	2.20
High Pressure Sodium	**100HPS208**	208	130	1.27
ED17 Medium Base	**100HPS240**	240	130	1.10
	100HPS277	277	130	0.85
	100HPS347	347	130	0.70
150 Watt Clear	**150HPS120**	120	188	2.80
High Pressure Sodium	**150HPS208**	208	188	1.60
ED17 Medium Base	**150HPS240**	240	188	1.40
	150HPS277	277	188	1.25
	150HPS347	347	188	0.92
70 Watt Clear	**70MH120**	120	90	1.80
Metal Halide	**70MH208**	208	90	1.00
ED17 Medium Base	**70MH240**	240	90	0.90
	70MH277	277	90	0.80
	70MH347	347	94	0.65
100 Watt Clear	**100MH120**	120	129	2.60
Metal Halide	**100MH208**	208	129	1.50
ED17 Medium Base	**100MH240**	240	129	1.30
	100MH277	277	129	1.15
	100MH347	347	129	0.90
175 Watt Clear	**175MH120**	120	215	1.80
Metal Halide	**175MH208**	208	215	1.05
ED17 Medium Base	**175MH240**	240	215	0.90
	175MH277	277	215	0.80
	175MH347	347	215	0.65

Note: For lamp/ballast information outside of the U.S.A. and Canada, please consult your local Kim representative.

WALL MOUNTED

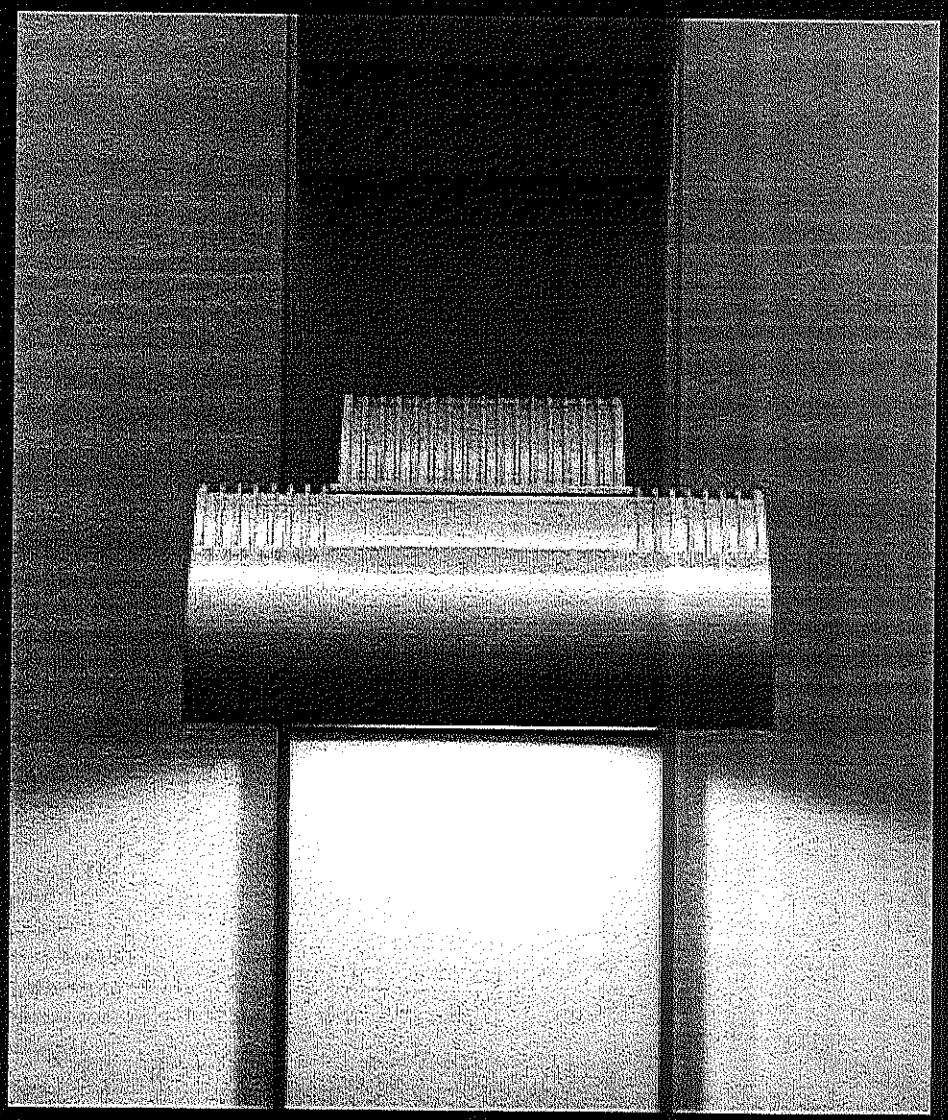
WD
SERIES



Wall Director®

WALL MOUNTED LUMINAIRES

70 - 400 WATT



KIM LIGHTING

Ordering Information

Small Wall Director

WD14
Medium Base
70 to 175 Watt

Ordering Example:
For Standard Fixture

Fixture	Electrical Module	Finish	Options
WD14D3 /	175MH277 /	BL-P /	A-33
1	2	3	4-11

1 Fixture:

Cat. No. designates WD14 fixture, Up (U) or Down (D) configuration, and light distribution (2, 3, 4, G or S).

Fixture:	Light Distribution:	Type II	Type III	Type IV	Wall Grazer	Spot
UP 14'	Cat. No.:	WD14U2	WD14U3	WD14U4	WD14UG	WD14US
DOWN 14'	Cat. No.:	WD14D2	WD14D3	WD14D4	WD14DG	WD14DS

2 Electrical Module:

HPS = High Pressure Sodium
MH = Metal Halide

Lamp Watts 150 | Lamp Type HPS | Line Volts 120

70HPS120	100HPS120	150HPS120	
70HPS208	100HPS208	150HPS208	
70HPS240	100HPS240	150HPS240	
70HPS277	100HPS277	150HPS277	
70HPS347	100HPS347	150HPS347	
70MH120	100MH120	150MH120	175MH120
70MH208	100MH208	150MH208	175MH208
70MH240	100MH240	150MH240	175MH240
70MH277	100MH277	150MH277	175MH277
70MH347	100MH347	150MH347	175MH347

3 Finish:

Super TGIC powder coat paint over chromate conversion coating

Color:	Black	Dark Bronze	Light Gray	Platinum Silver	White	Custom Colors
Cat. No.:	BL-P	DB-P	LG-P	PS-P	WH-P	CC-P

Consult representative for custom colors.

4 Optional Photocell:

Line Volts:	120V	208V	240V	277V	347V
Cat. No.:	A-30	A-31	A-32	A-33	A-35

5 Optional Houseside Shield:

Cat. No.: **HS**

Combination louver shield and black end-panel for reflector. Factory installed to reflector module. Reduces light toward wall by the following amounts.

Approximate light reduction toward wall	Type II	Type III	Type IV
WD14	-43%	-74%	-77%

Cat. No.: **HSC** For fixtures with optional convex glass lens, or LS lens option.

6 Optional 5° Shield:

Cat. No.: **5DS14** Aluminum shield field-attached to lens frame. Maintains a horizontal cutoff fixture edge when the luminaire is tilted 5°. Finished to match the fixture.

7 Optional Polycarbonate Shield:

Cat. No.: **LS** **For DOWN fixture models only.** Fully gasketed one piece vacuum formed clear UV stabilized polycarbonate shield replaces standard tempered glass lens.

8 Optional Convex Glass Lens:

Cat. No.: **CGL** Tempered convex glass lens replaces standard flat lens.

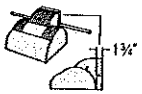
9 Optional Fusing:

Line Volts:	120V	208V	240V	277V	347V
Cat. No.:	SF	DF	DF	SF	SF

10 Optional Quartz Standby:

Cat. No.: **QS** Integral electronic device energizes a T-4 mini-can socket during initial lamp start-up or after a power interruption. De-energizes prior to H.I.D. lamp reaching full brightness. T-4 halogen lamp by others; 100W maximum.

11 Optional Surface Conduit Mount:



Cat. No.: **SCM14U** For WD14 fixtures, UP only.
Cat. No.: **SCM14D** For WD14 fixtures, DOWN only.

Easements

The property is subject a utility easement granted to W.L. Blake and Company to Central Maine Power and New England Telephone and Telegraph. We anticipate additional utility easements will be required as a result of the proposed development.

Solid Waste Disposal

There are two screened dumpster shown on the site plan. Olympia will enter into a contract with a private waste hauler for the timely and periodic removal of solid waste.

Utilities

Water. There is a 12" water main in Commercial Street that has adequate capacity to service the hotel both in terms of fire suppression and domestic use. Please refer to the attached capacity letter from the Water District.

Sewer. There is a 48" sewer interceptor line in Commercial Street that appears to have adequate capacity to support the hotel.

Power. Preliminary discussions with Central Maine Power confirm there is adequate capacity and proximity to serve the hotel.

Telephone. Preliminary discussions with Verizon confirm telephone/communication services are available.

Gas. There is an existing 6" gas main in Commercial Street. Discussions with Northern Utilities (Bay State Gas) confirm adequate capacity to service the hotel.

Traffic

The project will not generate over 100 vehicle trips during the peak hour, therefore, a traffic movement permit from MDOT is not required. Please refer to the attached traffic report.

Drainage

The majority of the site is relatively level compacted gravel with grades between 12 and 13 feet above sea level. At the northwest corner of the site a 2 to 6 foot retaining wall exists, where the grade rises approximately 8 feet to Fore Street. Overall, the site drains in a southerly direction to existing catch basins in Commercial Street.

The existing site is almost totally impervious. The proposed development will not result in a net increase in impervious area or a change in existing drainage patterns, thus no stormwater quantity calculations are provided. The proposed stormwater system of catch basins and drains will connect into an existing catch basin that is drained by a 12" pipe, located in the Commercial Street stormwater system. The existing site drains to the same inlet, so the capacity of the inlet and downstream stormwater system will not be impacted.

Portland Water District

225 Douglass St. • P.O. Box 3553 • Portland, ME 04104-3553
(207) 774-5961
FAX (207) 761-8329
www.pwd.org

March 4, 2002

Jeffrey R. Perry
Sebago Technics
PO Box 1339
Westbrook, Me. 04098

Re: Hilton Garden Inn- Portland

Jeff:

This letter is to confirm there should be an adequate supply of clean and healthful water to serve the needs of the proposed Hotel at the intersection of Commercial St.. and Franklin Arterial. Checking District records, I find there is an 12" water main in both Commercial St. and Franklin Arterial. There is also an 8" water main in Fore Street. A map of the area hydrants and water mains is included.

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: Commercial St. @ Franklin Arterial
Hydrant # 47
Static pressure = 93 PSI
Flow = 1404 GPM
Last Tested = 7/24/90

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

Sincerely,
Portland Water District

Jim Pandiscio
Means Coordinator

Estimated Time to Complete Development

The hotel and site improvements are forecast to take up to 9 months to complete from receipt of all necessary approvals.

State and Federal Regulatory Approvals

There are no federal regulatory approvals required for this project. State Fire Marshall approval will be required for life safety issues.

Maine Department of Environmental Protection

There are no wetlands on the site nor will there be an increase in impervious surface on the site. No permits are required from MDEP.

Financial Capacity

The applicant has secured a commitment letter from Peoples Bank, see attached letter.

Peoples
A division of Bankworth, N.A.

February 26, 2002

Jaimey Caron
Planning Board
City of Portland
389 Congress St.
Portland, Maine 04101

Re: Kevin Mahaney/Olympia Equity Investors V
Hilton Garden Inn Project: estimated at $8,500,000.00 to complete

To Whom It May Concern:

This letter will confirm that, based on our preliminary due diligence and subject to our standard underwriting requirements, Kevin Mahaney/Olympia Equity Investors V, LLC will have the financial capacity to complete the above referenced project. Please call me at 207-761-8783, should you have any questions.

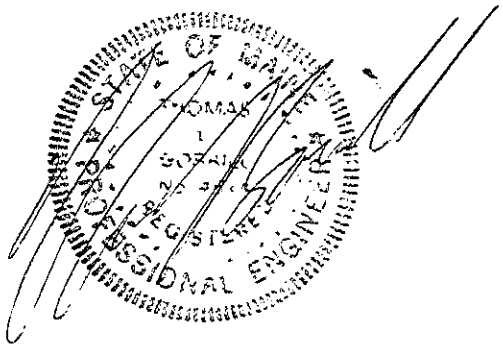
Very truly yours,

Lawrence A. Wold
Senior Vice President

Traffic Study
For Proposed
Hotel
Portland, Maine

Prepared for:

Sebago Technics
One Chabot Street
Westbrook, ME 04098



March 2002

Prepared by:

Gorrill-Palmer Consulting Engineers, Inc.

Traffic and Civil Engineering Services

PO Box 1237
26 Main Street
Gray, ME 04039

(207) 657-6910
Fax : (207) 657-6912
E-mail: gpcei@maine.rr.com

Traffic Impact Study
Proposed Hotel

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 to complete a traffic impact study for a proposed hotel and luxury hotel at the corner of Franklin Arterial and Commercial Street in Portland. The proposed project is located on the block bound by Commercial Street, Franklin Street Arterial, and Fore Street. The new building will consist of 120 rooms total. In addition, there will be a small restaurant serving only breakfast and a 1,500 s.f. meeting room.

The following is a summary of the major findings of the traffic study:

1. The proposed development is forecast to generate 74 new trip ends in the PM peak hour. This level of trip generation does not require a traffic permit from the Maine Department of Transportation (MDOT).

2. The intersection of Franklin Street Arterial and Commercial Street will need to be reconfigured in order to accommodate the development. This will consist of eliminating the right turn slip lane from Franklin Street Arterial onto Commercial Street and reconfiguring the intersection to provide a traditional dedicated right lane at the intersection. A sketch of the proposed intersection reconfiguration is enclosed in Appendix A as Figure 1. It is our understanding that the reconfiguration of this intersection will require approval from the MDOT and that the developer and the City have obtained this approval.

3. The analyses show that the intersections within the study area will operate at an acceptable level of service.

4. The crash history indicates there are four high crash locations in the vicinity of the project. This project is not expected to have a significant impact on the high crash locations.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the existing street system can accommodate the additional traffic generated by the site with the intersection reconfiguration at Franklin Street Arterial and Commercial Street.

I. *Existing Conditions*

The proposed hotel is planned to be located on the southwest corner of the intersection of Commercial Street and The Franklin Arterial. The proposed project will consist of a hotel 120 rooms. There will also be a restaurant serving only breakfast and a 1,500 s.f. meeting room. The project location is shown on Figure A in Appendix A. Currently the site is occupied with a parking lot and a building. The site also extends into the right turn slip lane at the intersection of Franklin Arterial / Commercial. This will require the reconfiguration of the intersection. A sketch of the proposed reconfiguration is included in Appendix A. The sketch was based on available plans and a complete survey of the intersection should be done to verify the reconfiguration presented in the sketch can be constructed.

II. *Background Traffic Conditions*

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

- A site plan prepared by Sebago Technics Inc. dated March 11, 2002.
- Computerized accident information for the period 1996 – 1998 supplied by the MDOT.
- Turning movement volumes collected by Gorrill-Palmer Consulting Engineers, Inc from 4:00 to 5:45 PM during the week of February 14, 2000 at the following locations:
  - Fore Street / Franklin Arterial
  - Franklin Arterial / Middle Street
  - Commercial Street / Union Street
  - Commercial Street / Center Street
  - Commercial Street / Franklin Arterial
  - Fore Street / Pearl Street

Predevelopment traffic volumes

The project is expected to be occupied in the year 2003. The year 2003 predevelopment design hour volumes were developed utilizing the following methodology:

- The raw turning movement volumes collected by Gorrill-Palmer Consulting Engineers, Inc. in 2000 are presented in Appendix B.

- The volumes were adjusted to the approximate 30th highest hour of the year, balanced and increased by 3% per year to the year 2003. These pre-development volumes are shown in Figure 3.

- Gorrill-Palmer Consulting Engineers, Inc. contacted the City of Portland to determine whether there are any projects approved or in the approval process whose traffic should be added into this projects predevelopment volumes. The projects that were identified are Harbor View Block located at 145 Commercial Street and the W.L. Blake Office and Retail Building. The W.L. Blake Buildings have been included in the predevelopment volumes. The increase in traffic from the Harbor View Block is accounted for in the background rates.

Crash Information

Gorrill-Palmer Consulting Engineers, Inc. based the crash history of this study area on data obtained from the MDOT for the period 1996 through 1998.

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

Crash data was provided by the MDOT for the study area and intersections that were identified as high crash locations are listed below:

High Crash Locations Based on MDOT Criteria – 1996-1998

Location	# of Accidents (1996-1998)	CRF
Commercial Street at Dana Street	10	1.31
Commercial Street at Market Street	11	1.52
Commercial Street at Pearl Street	9	1.30
Commercial from Pearl St. to Silver St.	10	2.85

There were four high crash locations identified in the study area. For each of the high crash locations, collision diagrams were constructed and then analyzed. The collisions diagrams are included in Appendix C. Each of the high crash locations are discussed in detail below:

Commercial Street at Dana Street

The crashes that occurred at this intersection consisted of 3 rear-end type accidents, 6 turning related accidents and one accident involving a parking maneuver. There is not an identifiable crash pattern at intersection, and the accidents are all typical of crashes that can be expected within a central business district area.

Commercial Street at Market Street

The crashes that occurred at this intersection consisted of 4 rear-end type crashes, 4 turning related crashes, 1 accident involving a parking maneuver and one pedestrian-vehicle crash. One of the rear-end crash involved three vehicles and was responsible for three non-incapacitating injuries. This high number of injuries for one crash was most likely the reason that this intersection was classified as a high crash location. There did not appear to be any correctable pattern to the crashes that occurred.

Commercial Street at Pearl Street

The crashes that occurred at this intersection consisted of 4 rear-end type crashes, 3 turning related crashes, 1 crash involving a parking maneuver and one pedestrian-vehicle crash. The pedestrian crash involved a drunk pedestrian who was seriously injured and this appears to be the largest contributing factor towards the classification of this intersection as a high crash location. There did not appear to be any correctable pattern to the crashes that occurred.

Commercial from Pearl Street to Silver Street

The crashes that occurred at this intersection consisted of 7 parking related crashes, and 3 rear-end type crashes. Two of the parking crashes that occurred involved vehicles that were parked in the center turning lane and were backed into by vehicles exiting the diagonal parking. This proposed project should not have a negative impact on this location because the project proposes to use on site parking.

III. *Trip Generation*

Gorrill-Palmer Consulting Engineers, Inc. has completed the potential trip generation estimate utilizing the Institute of Transportation Engineers publication "Trip Generation", 6th Edition. The trip generation was estimated based upon Land Use Code 310, Hotel. The site does contain some existing uses, but for a conservative analysis we will not subtract the existing trips from the trips expected to be generated by the proposed hotel. We also expect that there will be numerous pedestrian trips associated with the hotel since it is located in Portland's Old Port District. The trip estimates are summarized in the following table:

Land Use Code 310 – Trip Estimate Based on 120 Rooms
Estimated Trip Ends

Weekday	PM Peak Adjacent Street Traffic	Weekday PM Peak	Saturday	Saturday Peak Hour
705	57	74	859	88

IV. *Trip Distribution*

Gorrill-Palmer Consulting Engineers, Inc. has estimated the trip distribution based on the information contained in the ITE publication "Trip Generation" for Land Use Code 310, Hotel. Based upon this information we estimate that 50% of the trips will be entering and 50% will be exiting traffic. We estimate, by the ratio of parking spaces, that 40% of exiting traffic will exit from the upper level and 60% of the exiting traffic will exit on the lower level.

V. *Trip Composition*

Gorrill-Palmer Consulting Engineers, Inc. has based the trip composition on 100% of the trips being primary for the project.

VI. *Trip Assignment*

Gorrill-Palmer Consulting Engineers, Inc. has based the trip assignment on existing traffic patterns in the project area. There will be on site parking for this project. The traffic has been assigned to the proposed entrance on Commercial Street. The resulting trip assignment is shown in Figure 5.

VII. *2003 Post-development Traffic*

The anticipated year 2003 predevelopment traffic is shown in Figure 3 and has been combined with the traffic forecast for the development in Figure 5 to yield the 2003 post development traffic shown in Figure 6.

VIII. *Study Area*

The Maine Department of Transportation (MDOT) traffic permit requirements apply to facilities projected to generate 100 or more trip ends during the peak hour of the generator. Between 100 and 200 trip ends, the extent of the traffic study is determined based on conversations with the MDOT. However, if the project is forecast to create more than 200 trip ends during the peak hour of the generator, a full traffic study and permit application are required. As discussed in Section III of this study, the proposed development site is expected to generate 74 new trip ends during the PM peak hour and, therefore, not be required to file an application.

We included the following intersections in the study area:

- Fore Street / Franklin Arterial
- Franklin Arterial / Middle Street
- Commercial Street / Union Street
- Commercial Street / Center Street
- Commercial Street / Franklin Arterial
- Fore Street / Pearl Street

IX. *Capacity Analyses*

Gorrill-Palmer Consulting Engineers, Inc. completed capacity analyses for the intersections listed above. The signalized intersections were evaluated using the SYNCHRO computer model. Level of service rankings are similar to the academic ranking system where an 'A' is very good with little delay and a 'F' represents very poor conditions. A level of service 'D' and higher is desirable for a signalized intersection.

The following table summarizes the relationship between delay and level of service for a signalized intersection:

Level of Service Criteria for Signalized Intersections

Level of Service	Total Control Delay per Vehicle (sec/veh)
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 configuration except at the Franklin Arterial/Commercial Street intersection. The intersection of Franklin Street Arterial and Commercial Street will need to be reconfigured in order to accommodate the development. This will consist of eliminating the right turn slip lane from Franklin Street Arterial onto Commercial Street and reconfiguring the intersection to provide a traditional dedicated right lane at the intersection. A sketch of the proposed intersection reconfiguration is enclosed in Appendix A as Figure 1. It is our understanding that the reconfiguration of this intersection has been approved by the MDOT and the City of Portland. The analyses have been based on Figures 3 and 6. The results of the capacity analyses for the weekday PM peak hour are summarized below. The detailed computer printouts are included Appendix B.

Level of Service for Signalized Intersections

Intersection	Approach / Movement	Level of Service	
		Predevelopment	Postdevelopment
Franklin Arterial / Fore Street			
	Fore - Northbound	D	D
	Fore – Southbound	C	C
	Franklin – Eastbound	A	A
	Franklin – Westbound	A	A
Franklin Arterial / Middle Street			
	Middle – Northbound	D	D
	Middle – Southbound	C	C
	Franklin – Eastbound	A	A
	Franklin – Westbound	A	A
Franklin Arterial / Commercial Street			
	Commercial – Northbound	B	B
	Commercial – Southbound	C	C
	Franklin – Eastbound	B	B
	Franklin – Westbound	C	C
Commercial Street / Center Street			
	Commercial – Northbound	A	A
	Commercial – Southbound	B	B
	Center – Eastbound	C	C
	Center – Westbound	B	B
Commercial Street / Union Street			
	Commercial – Northbound	A	A
	Commercial – Southbound	B	B
	Union – Eastbound	B	B
	Union – Westbound	A	A
Fore Street / Pearl Street			
	Fore –Northbound	A	A
	Fore – Southbound	A	A
	Pearl – Eastbound	A	A
	Pearl – Westbound	A	A

As can be seen from the table, all the intersections within the study area should operate at an acceptable level of service.

X. *Storage Analysis*

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the queue lengths at the intersection of Franklin Arterial at Commercial Street to identify any interference with the operation of the proposed site drives. The analysis was based on the SimTraffic software, animation software for SYNCHRO. The results of these analyses are summarized below:

Summary of Queue Lengths (feet)

Approach	SimTraffic Average Queue	SimTraffic Maximum Queue	Distance to Site Drive
Commercial Street NB Left Turn Lane	100	220	140
Commercial Street NB Thru Lane	100	230	140

The analysis indicates on Commercial Street during the peak traffic conditions the average queues will not interfere with the driveway operations, however at certain times during the peak hour when the maximum queues occur they will potentially queue beyond the site drives. At the Commercial Street drive, the length of the queue from the intersection may require vehicles trying to turn left out of the site drive to wait for the stacked vehicles to clear. The queue should not have any effect on vehicles trying to enter the site or cause any interference with the traffic flow on Commercial Street.

XI. *Sight Lines*

The Maine Department of Transportation has recently adopted new guidelines for sight distances. The following table illustrates the new driveway sight distance standards:

MDOT Standards for Sight Distance

Speed	Desirable Sight Distance (feet)
25	200
30	250
35	305
40	360
45	425
50	495
55	570

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight lines at the proposed driveways in accordance with MDOT standards.

The MDOT standards are as follows:

Driveway observation point:	10 feet off major street travelway
Height of eye at driveway:	3.5 feet above ground
Height of approaching vehicle:	4.25 feet above road surface

The design speed used for the major road is generally the 85th percentile travel speed. This is the speed which 85% of the traffic is traveling at or below. The results of this sight line analysis are summarized on the following table:

Sight Distance Evaluation for Site Drive

Direction	Estimated 85th Percentile Speed (mph)	Required Sight Lines (feet)	Actual Sight Lines (feet)
Exiting Drive looking:			
Left	25	300	Over 400
Right	25	300	To Intersection

As shown, the sight lines for the site drives meet the MDOT standards. The site lines exiting the Commercial Street site drive looking to the left can be temporarily obstructed by delivery trucks parked in the center turn lane of Commercial Street. 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 as well as Fore Street and Commercial Street, that appropriate measures such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

XII. *Conclusions*

The following is a summary of the major findings of the traffic study:

1. The proposed development is forecast to generate 74 new trip ends in the PM peak hour. This level of trip generation does not require a traffic permit from the Maine Department of Transportation (MDOT).

2. The intersection of Franklin Street Arterial and Commercial Street will need to be reconfigured in order to accommodate the development. This will consist of eliminating the right turn slip lane from Franklin Street Arterial onto Commercial Street and reconfiguring the intersection to provide a traditional dedicated right lane at the intersection. A sketch of the proposed intersection reconfiguration is enclosed in Appendix A as Figure 1. It is our understanding that the reconfiguration of this intersection has been approved by the MDOT and the City of Portland.

3. The analyses show that the intersections within the study area will operate at an acceptable level of service.

4. The crash history indicates there are four high crash locations in the vicinity of the project. This project is not expected to have a significant impact on the high crash locations.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the existing street system can accommodate the additional traffic generated by the site with the intersection reconfiguration at Franklin Street Arterial and Commercial Street.

Appendix A

Location Map
Intersection Sketch