15-A-1

1999-0176

North and Walnut
Island View Dev.
Silver St. Development

on Spreadsheet

3585/78

13093

KNOW ALL MEN BY THESE PRESENTS

That Portland Water District, a quasi-municipal corporation organized and existing under the laws of the State of Maine and located at Portland, in the County of Cumberland and State of Maine (hereinafter called the "Water District"), conveyed to Union Mutual Life Insurance Company, a corporation organized and existing under the laws of the State of Maine and located at Portland, in the County of Cumberland and the State of Maine (hereinafter called "Union Mutual"), by deed dated October 20, 1972 and recorded with the Registry of Deeds of Cumberland County, Book 3314, Page 221, certain real estate located in said Portland, Maine.

WHEREAS, in addition to conveying said real estate by said deed, the Water District also granted to Union Mutual by said deed an easement over a certain reserved parcel described in said deed.

WHEREAS, under the terms of said easement, without the prior written consent of the Water District, Union Mutual, its successors or assigns, may not erect any building of any kind or permanent structure, except pavement, on said reserved parcel and it shall not remove earth from said reserved parcel or fill thereon without the written permission of the Water District.

WHEREAS, said deed is made upon certain express conditions and restrictions which conditions and restrictions are set forth at the bottom of page 2 and the top of page 3 of said deed, which the Water District is willing to waive.

NOW, THEREFORE, for One Dollar ($1.00) and other good and

This instrument shall bind and inure to the benefit of the Water District and Union Mutual and their respective successors and assigns.

IN WITNESS WHEREOF, the Water District has caused this instrument to be sealed with its corporate seal and signed in its corporate name by William D. Monie, its Treasurer, this 16 th day of May 1974.

Signed, Sealed and Delivered
within presence of:

PORTLAND WATER DISTRICT

James R Carson

By William D. Monie
Its Treasurer

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. May 16, 1974

Personally appeared the above-named William D. Monie, Treasurer of said Portland Water District, and acknowledged the above instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Everett B Price
Notary Public

My Commission Expires: April 4, 1980

JUN 26 1974
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 1:54 P.M., and recorded
BOOK 3525 PAGE 78 Register

13094

QUIT-CLAIM DEED

Without Covenant (Release)

KNOW ALL MEN BY THESE PRESENTS, that PORTLAND WATER DISTRICT, a quasi-municipal corporation organized and existing under the laws of the State of Maine, and located at Portland, in the County of Cumberland, and State of Maine, hereinafter called Grantor, in consideration of One Dollar ($1.00) and other valuable consideration paid by UNION MUTUAL LIFE INSURANCE COMPANY, a Corporation organized and existing under the laws of the State of Maine, and located at Portland, in the County of Cumberland, and State of Maine, hereinafter called Grantee, the receipt whereof it does hereby acknowledge, does hereby remise, release, bargain, sell and convey, and forever quit-claim unto the said UNION MUTUAL LIFE INSURANCE COMPANY, its successors and assigns forever,

> All of the Grantor's rights, title and interest in and to a reconveyance of the premises and a reconveyance of the easement all as described in that certain Deed from Grantor to Grantee dated the 20th day of October, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3314, Page 221.

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging, to the said UNION MUTUAL LIFE INSURANCE COMPANY,; its successors and assigns forever.

IN WITNESS WHEREOF, the said PORTLAND WATER DISTRICT has caused this instrument to be sealed with its corporate seal and signed in its corporate name by William D. Monie, its Treasurer, this 16th. day of May in the year of our Lord, One Thousand Nine Hundred and Seventy Four.

Signed, Sealed and Delivered in Presence of

PORTLAND WATER DISTRICT

Thomas L. Lothrop

By William D. Monie
Treasurer

STATE OF MAINE

COUNTY OF CUMBERLAND SS.

MAY 16, 1974

Personally appeared the above-named William D. Monie, Treasurer of said Grantor corporation as aforesaid, and acknowledged the above instrument to be his free act and deed, in his said capacity, and the free act and deed of said corporation.

Before me,

Notary Public

MY COMMISSION EXPIRES OCTOBER 6, 1976

JUN 26 1974

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE

Received at 1:55 P.M. and recorded in

BOOK 3545 PAGE 82 Register

52821

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, THAT H. PAGE BURNHAM and PATRICIA G. BURNHAM, of Scarborough, County of Cumberland, State of Maine in consideration of one dollar and other valuable consideration paid by PROMENADE EAST CONDOMINIUM ASSOCIATION, INC., a Maine corporation, whose mailing address is: 340 Eastern Promenade, Portland, Maine 04101 the receipt whereof is hereby acknowledged, does hereby give, grant, bargain, sell and convey unto the said PROMENADE EAST CONDOMINIUM ASSOCIATION, INC., its successors and assigns forever,

A certain lot or parcel of land with any buildings thereon, located northerly of, but not adjacent to Walnut Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Being Lot 2 as shown on plan entitled "Proposed Property Transactions, Located on North Street and Walnut Street, Portland, Maine", dated November 1994, prepared for Burnham Enterprises, Scarborough, Maine, which plan is recorded in Cumberland County Registry of Deeds in Plan Book 195, Page 292, and more particularly described as follows:

Beginning at a 5/8 inch rebar found at the northeasterly corner of land of the Grantor as described in Cumberland County Registry of Deeds in Book 10789, Page 228;

Thence South 20°-45'-00" East by land now or formerly of Promenade East Condominium Association, Inc., 73.17 feet to a 5/8 inch rebar found;

Thence North 69°-15'-00" East, by land of said Promenade East Condominium Association, Inc., 12.50 feet to a P.K. nail found;

Thence South 20°-45'-00" East by land of said Promenade East Condominium Association, Inc., 147.00 feet to a P.K. nail found;

Thence South 69°-15'-00" West, by land of said Promenade East Condominium Association, Inc., 41.99 feet to a 5/8 inch rebar found;

Thence South 20°-45'-00" East by land of said Promenade East Condominium Association, Inc., 185.73 feet to a 5/8 inch rebar found and land now or formerly of Portland Water District as reserved in said Registry of Deeds in Book 3314, Page 221;

Thence North 82°-27'-35" West, by land of said Portland Water District, 15.77 feet to a 5/8 inch rebar set;

Thence North 07°-32'-25" East, through land of the Grantor, 14.59 feet to a 5/8 inch rebar set;

Thence North 20°-45'-00" West, by land retained by the Grantor, 250.00 feet to a 5/8 inch rebar set;

Thence North 49°-59'-56" West, By land retained by the Grantor, 28.65 feet to a 5/8 inch rebar set;

Thence North 20°-45'-00" West, by land retained by the Grantor, 108.83 feet to a 5/8 inch rebar set and land now or formerly of the City of Portland as described in said Registry of Deeds in Book 1943, Page 106;

Thence North 67°-15'-30" East, by land of said City of Portland, 50.49 feet to the point of beginning.

Bearings are based on magnetic north, 1972.

Above described lot is a portion of the land conveyed by Apex, Inc. to H. Page Burnham and Patricia G. Burnham by deed dated June 25, 1993, recorded in the Cumberland County Registry of Deeds in Book 10789, Page 226.

The above described lot is subject to all easements and restrictions of record.

Grantors also hereby convey to Grantee any rights by easement or otherwise acquired by it in said Apex deed as to property of Promenade East Condominium Association, Inc. other than the conveyance and those rights confirmed by deed of recent date from said Promenade East Condominium Association, Inc., including specifically all rights to the swimming pool located on said Promenade East Condominium Association, Inc. properties and all rights by easement or otherwise to that parcel located northerly of Walnut Street designated as N/F Promenade East Condominium BK 3769 PG 123 on said Plan, except to reserve to itself specifically a view easement more specifically set forth in the recent deed from Promenade East Condominium Association, Inc. to the Grantors herein. Grantors further reserve all easement rights referenced in said Apex deed for the connection of utilities over, through and across said first above described parcel on the condition that if the use of said rights causes any disturbance of the land, grass or shrubbery on said premises, the Grantors will restore the same to its

condition prior to said disturbance. Grantors further reserve the right to existing drainage across property of the Grantee and more specifically the right to construct new drainage by means of underground storm sewers along the common property line of Grantee and Jack Elementary School to channel storm water off of its premises, which said underground storm sewer shall cross the premises first above described.

TO HAVE AND TO HOLD, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said PROMENADE EAST CONDOMINIUM ASSOCIATION, INC., its successors and assigns, to its and their use and behoof forever.

AND we do COVENANT with the said Grantee, its successors and assigns, that we are lawfully seized in fee of the premises, that they are free of all encumbrances, that we have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that we and our heirs shall and will warrant and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, H. Page Burnham and Patricia A. Burnham have hereunto set their hands and seals this 10 day of the month of October, 1995.

SIGNED, SEALED and DELIVERED
in presence of:

H. Page Burnham

Patricia G. Burnham

STATE OF MAINE
Cumberland, ss.

Oct 10, 1995

Personally appeared the above named H. Page Burnham and Patricia G. Burnham and acknowledged the foregoing instrument to be their free act and deed.

Before me,

~~Notary Public~~ Attorney-At-Law
Print Name KENNETH M. COLE
~~Commission Expires~~

~~Affix Notarial Seal Here~~

RECEIVED
RECORDED REGISTRY OF DEEDS
95 OCT 11 AM 10:20
CUMBERLAND COUNTY

MAINE REAL ESTATE TAX PAID

52822

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, THAT PROMENADE EAST CONDOMINIUM ASSOCIATION, INC., a Maine corporation with a place of business in Portland, County of Cumberland, State of Maine in consideration of one dollar and other valuable consideration paid by H. PAGE BURNHAM and PATRICIA G. BURNHAM, whose mailing address is: P.O. Box 1449, Scarborough, Maine 04074 the receipt whereof is hereby acknowledged, does hereby give, grant, bargain, sell and convey unto the said H. PAGE BURNHAM and PATRICIA G. BURNHAM, as tenants in common and not as joint tenants, their heirs and assigns forever,

A certain lot or parcel of land with any buildings thereon, located on the northerly side of Walnut Street and the easterly side of North Street, in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Being Lot 1 as shown on plan entitled "Proposed Property Transactions, Located on North Street and Walnut Street, Portland, Maine", dated November 1994, prepared for Burnham Enterprises, Scarborough, Maine, which plan is recorded in Cumberland County Registry of Deeds in Plan Book 195, Page 292, and more particularly described as follows:

Beginning at a 5/8 inch rebar set at the intersection of the northerly sideline of Walnut Street and the easterly sideline of North Street;

Thence North 20°-21'-30" West, along the easterly sideline of said North Street, 184.00 feet to a 5/8 inch rebar found and land now or formerly of H. Page Burnham and Patricia G. Burnham as described in a deed recorded in Cumberland County Registry of Deeds in Book 10789, Page 226;

Thence North 69°-38'-30" East by land of said Burnham, 90.00 feet to a 5/8 inch rebar found and land now or formerly of the Portland Water District as reserved in deed recorded in said Registry of Deeds in Book 3314, Page 221;

Thence South 20°-21'-30" East, by land of Portland Water District, 167.49 feet to a 5/8 inch rebar set on the northerly sideline of Walnut Street;

Thence South 59°-15'-00" West, along the northerly sideline of said Walnut Street, 91.50 feet to the point of beginning.

Bearings are based on magnetic north, 1972.

The above described lot is a portion of land as described in said Registry of Deeds in Book 3769, Page 123, Promenade East Condominium Declaration, and as recently amended.

Grantor also releases any rights by easement or otherwise in adjoining land of Grantees and/or the Portland Water District, as shown on said Plan, except as set forth in a deed from Grantees of even date to be recorded herewith or except as reserved below. Grantor reserves the right for utilities and for passage by foot or vehicle in a northeasterly or southwesterly direction over a strip of land owned by Portland Water District which strip of land runs westerly from Walnut Street between the premises of Grantor as shown on said Plan. Grantor further hereby conveys to Grantees a view easement for the benefit of Grantees adjoining premises over that parcel located northerly of Walnut Street designated as N/F Promenade East Condominium BK 3769 PG 123 on said Plan and agrees that its sole use of said parcel will be for parking and/or related purposes.

TO HAVE AND TO HOLD, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said H. PAGE BURNHAM and PATRICIA G. BURNHAM, as tenants in common and not as joint tenants, their heirs and assigns, to them and their use and behoof forever.

AND it does COVENANT with the said Grantees, their heirs and assigns, that it is lawfully seized in fee of the premises, that they are free of all encumbrances, that it has good right to sell and convey the same to the said Grantees to hold as aforesaid; and that it and its successors shall and will warrant and defend the same to the said Grantees, their heirs and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, the said PROMENADE EAST CONDOMINIUM ASSOCIATION, INC. as Grantor has hereunto set its hand and seal this 10 day of the month of Oct., 1995.

SIGNED, SEALED and DELIVERED
in presence of:

PROMENADE EAST CONDOMINIUM ASSOCIATION, INC.

By: Edwin P. McDuffie, Jr.
Edwin P. McDuffie, Jr.
Its President

13096

DECLARATION OF EASEMENTS
(Construction)

DECLARATION made as of the 25th day of June, 1974, by UNION MUTUAL LIFE INSURANCE COMPANY, a Maine Corporation, having its principal place of business at 2211 Congress Street, Portland, Maine, (hereinafter called "Declarant").

WITNESSETH:

(a) Declarant is the owner of or has easement rights over certain real property situated in the City of Portland, Cumberland County, Maine, more particularly described in Schedule A attached hereto and made a part hereof;

(b) The property described in Schedule A is sometimes referred to in this instrument as the "Entire Premises";

(c) The Entire Premises has been divided into two phases, namely, Phase I (described in Schedule B attached hereto and made a part hereof) and Phase II (described in Schedule C attached hereto and made a part hereof) both of which are shown on a plan dated March 28, 1974 by H. I. and E. C. Jordan - Surveyors and approved by the Portland, Maine Planning Board on April 2, 1974, which plan is to be recorded with the Cumberland County Registry of Deeds. Plase I consists of Parcels A, B, C and D on said Plan and Phase II consists of Parcel E on said Plan. The Plan attached hereto as Exhibit D reflects the location of said Phase I and Phase II and the location of said Parcels A, B, C, D and E.

(d) Phase I is intended to be developed by Declarant under a condominium regime pursuant to Chapter 10 of Title 33, Section 560 et seq., of the Revised Statutes of Maine, as amended;

(e) Phase II may be developed, in whole or in part, for residential purposes as either a rental apartment project, a condominium or single family residences;

(f) The improvements which may be constructed on Phase II may be located in such proximity to Phase I that it would be desirable for the owner of Phase II to have the right to come onto Phase I for the purpose of constructing the improvements on Phase II;

(g) The improvements which are to be constructed on Phase I may be located in such proximity to Phase II that it would be desirable for the owner of Phase I to have the right to come onto Phase II for the purpose of constructing the improvements on Phase I.

NOW, THEREFORE, Declarant, as owner of the Entire Premises, for itself, its successors and assigns, declares as follows:

1. Declarant does hereby establish and create for the benefit of Phase I and does hereby give, grant and convey to the owner from time to time of Phase I, the easement, license, right and privilege for the purpose of constructing the improvements on Phase I of entering upon Phase II with such material, persons, vehicles and equipment as is necessary or convenient to accomplish such construction on Phase I.

2. Declarant does hereby establish and create for the benefit of Phase II and does hereby give, grant and convey to the owner from time to time of Phase II the easement, license, right and privilege for the purpose of constructing the improvements on Phase II of entering upon Phase I with such material, persons, vehicles and equipment as is necessary or convenient to accomplish such construction on Phase II.

3. The easement, license, right and privilege herein granted is on the expressed condition that they shall be exercised in a reasonable manner so as to cause the least possible disturbance to the owner of the servient parcel and the owner so exercising such easement, license, right and privilege agrees to indemnify and save the owner of the servient parcel harmless from such construction and from all loss, cost or expense arising therefrom.

4. This instrument shall become null and void in the event all of Phase II shall be included in a condominium which includes both Phase I and Phase II or on October 1, 1980, whichever of the two shall first occur.

5. The terms, covenants, conditions and warranties herein shall run with the land and inure to the benefit of and shall be binding upon the Declarant and the respective executors, administrators, legal representatives, successors and assigns of the Declarant.

IN WITNESS WHEREOF, Declarant has caused this Declaration of Easement to be duly executed this 25th day of June, 1974.

UNION MUTUAL LIFE INSURANCE COMPANY

By James F. Kissin
Second Vice President and Counsel

STATE OF MAINE

COUNTY OF CUMBERLAND, ss:

June 26, 1974

Personally appeared before me the above named James F. Kissin Second Vice Pres.-Counsel, of Union Mutual Life Insurance Company, and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said corporation.

Before me,

Louis A. Wood
Notary Public
~~Justice of the Peace~~

LOUIS A. WOOD NOTARY PUBLIC MAINE

94

SCHEDULE A

A certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, being bounded and described as follows: Beginning at a point which marks the intersection of the northwesterly sideline of Walnut Street with the northeasterly sideline of North Street; thence northwesterly by North Street, a distance of five hundred forty-six and six tenths (546.6) feet, more or less, to land now or formerly of the City of Portland; thence North 67° 15' 30" East, five hundred forty-six and three hundredths (546.03) feet, more or less, to the southwesterly side of Eastern Promenade; thence southeasterly by Eastern Promenade, four hundred eighty-eight and thirty-two hundredths (488.32) feet, more or less, to the northwesterly line of Walnut Street; thence southwesterly by Walnut Street, seven hundred ninety-eight and seventy-five hundredths (798.75) feet, more or less, to the northeasterly side of North Street and the point of beginning.

SCHEDULE B

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

Beginning at the intersection of the Northerly sideline of said Walnut Street and the Easterly sideline of North Street in said Portland;

Thence by said sideline of North Street N 20° 21' 30" W 184.00 feet to a point;

Thence N 69° 38' 30" E 90.00 feet to land, now or formerly of the Portland Water District;

Thence by land of said Portland Water District on the following described courses and distances:

N 20° 21' 30" W 190.67 feet to a point;

Thence N 73° 18' E 221.93 feet to a point;

Thence S 16° 43' 30" E 172.60 feet to a point;

Thence S 82° 27' 35" E 67.63 feet to a point;

Thence the following described courses and distances:

N 20° 45' W 185.73 feet to a point;

Thence N 69° 15' E 41.99 feet to a point;

Thence N 20° 45' W 147.00 feet to a point;

Thence S 69° 15' W 12.50 feet to a point;

Thence N 20° 45' W 73.17 feet to land, now or formerly of the City of Portland, Maine;

Thence by land of said City N 57° 15' 30" E 158.59 feet to the Westerly sideline of the Eastern Promenade in said City;

Thence by said sideline S 49° 48' 30" E 488.32 feet to said Northerly sideline of Walnut Street;

Thence by said Northerly sideline of Walnut Street S 59° 15' W 798.75 feet to the point of beginning.

96

SCHEDULE C

A certain lot or parcel of land in the City of Portland, County of Cumberland, State of Maine situated on the Easterly side of North Street in said City bounded and described as follows:

Beginning on the Easterly sideline of said North Street at a point being 184.00 feet distant from and on a course of N 20° 21' 30" W from the intersection formed by said Easterly sideline of North Street and the Northerly sideline of Walnut Street in said Portland;

Thence N 69° 38' 30" E 90.00 feet to land, now or formerly, of the Portland Water District;

Thence by land of said Portland Water District on the following described courses and distances:

N 20° 21' 30" W 190.67 feet to a point;

Thence N 73° 18' E 221.93 feet to a point;

Thence S 16° 43' 30" E 172.60 feet to a point;

Thence S 82° 27' 35" E 67.53 feet to a point;

Thence the following described courses and distances:

N 20° 45' W 185.73 feet to a point;

Thence N 69° 15' E 41.99 feet to a point;

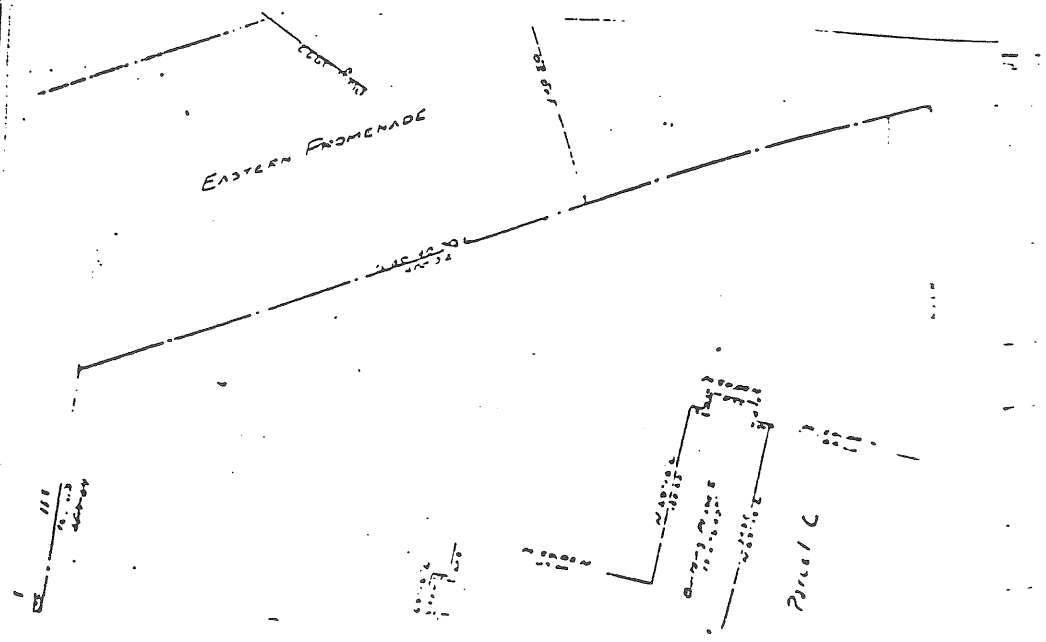
Thence N 20° 45' W 147.00 feet to a point;

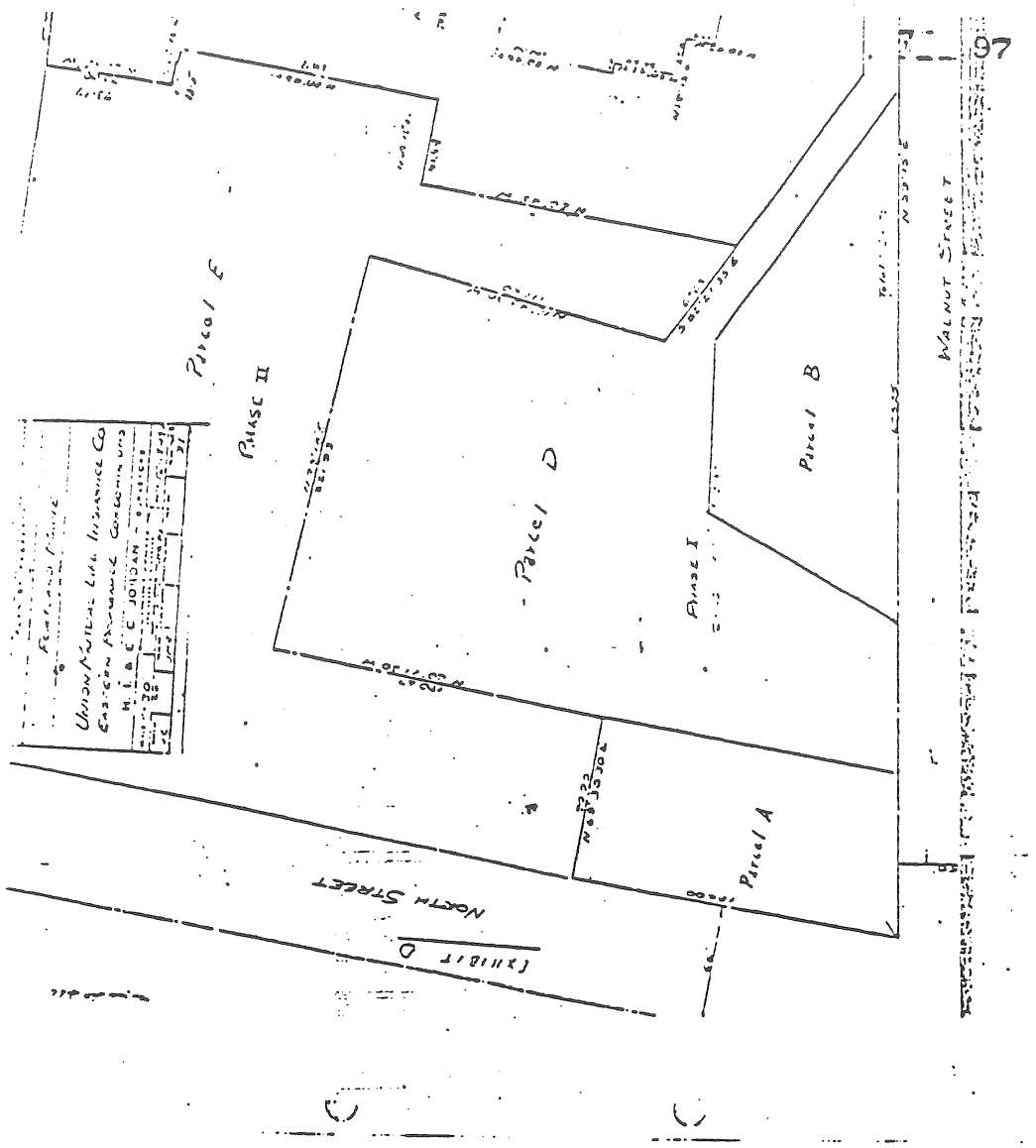
Thence S 69° 15' W 12.50 feet to a point;

Thence N 20° 45' W 73.17 feet to land, now or formerly, of the City of Portland, Maine;

Thence by land of said City of Portland S 67° 15' 30" W 387.36 feet to said Easterly sideline of North Street;

Thence by said Easterly sideline of North Street S 20° 21' 30" E 362.50 feet to the point of beginning.





STATE OF MAINE

CUMBERLAND, ss. REGISTRY OF DEEDS

Received at 1 H. 58 M. P M on JUN 26 1974 and recorded in Book 3565 Page 92 Attest [signature] Register

3865

[illegible]

KNOW ALL MEN BY THESE PRESENTS, that Promenade East Condominium Association Inc., a Maine corporation organized and existing by law having a place of business at 136 Eastern Promenade

of Portland, in the County of Cumberland, and State of Maine, in consideration of One Dollar and other valuable consideration (the sum being less than One Hundred Dollars) paid by CENTRAL MAINE POWER COMPANY, a Maine corporation having its principal office at 9 Green Street, Augusta, Maine, 04330, and NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, a New York corporation having an office and place of business at 45 Forest Avenue, Portland, Maine, 04101, the receipt whereof is hereby acknowledged, does hereby give, grant, bargain, sell and convey unto the said Central Maine Power Company and New England Telephone and Telegraph Company, their successors and assigns, the right and easement to construct, erect, rebuild, operate, maintain and remove electric distribution and communication lines for the transmission of electricity and intelligence; together with the necessary poles, wires, cables, cross-arms, braces, anchors, guys and other electrical equipment and appurtenances connected therewith, over, along and across premises owned by the Grantor(s) in the City/~~Town~~ of Portland, County of Cumberland, and State of Maine, along the route as now staked out, extending in a southeasterly direction from pole 20 Walnut Street to pole 21, also, the further right to place poles and anchors that in the future may be requested by this Grantor, locations to be agreed on at that time.

This location crosses a portion of the premises conveyed to the Grantor(s) by deed of .... dated ...., 19 ...., recorded in the .... County Registry of Deeds, Book ...., Page ....

Also the right to cut down and keep trimmed and/or spray or treat with a chemical preparation of the Grantees' selection such trees, branches and underbrush as in the judgment of the Grantees, interfere with or endanger the proper operation and maintenance of the lines constructed along the above described location, together with the right to enter upon the Grantor's premises for any and all of the foregoing purposes.

It is understood and agreed that the rights and easements hereby conveyed are to be jointly owned by Central Maine Power Company and New England Telephone and Telegraph Company, their successors and assigns. If either Central Maine Power Company or New England Telephone and Telegraph Company, or the successors or assigns of either, shall relinquish or abandon the rights and easements hereby conveyed, the same shall become the sole property of the remaining company.

TO HAVE AND TO HOLD the above granted rights and easements to the said Central Maine Power Company and New England Telephone and Telegraph Company, their successors or assigns, to their own use and behoof forever.

IN WITNESS WHEREOF, the said Promenade East Condominium Association Inc. has caused this instrument to be sealed with its corporate seal and signed in its corporate name by ~~and~~ Theodore J. Bernard, Jr. ~~[illegible]~~ its President hereunto duly authorized ~~[illegible]~~ this 5th day of ...., 19 76.

Signed, Sealed and Delivered
in the presence of

[signature]

PROMENADE EAST CONDOMINIUM ASSOCIATION, INC.
By [signature]
Its President

CORPORATE SEAL

Theodore J Bernard Jr

STATE OF MAINE Cumberland ss. 19 76

Personally appeared the above named Theodore J. Bernard, Jr. and acknowledged the foregoing instrument to be his free act and deed, ~~before me~~ in his said capacity and the free act and deed of said corporation, before me,

[signature]
Justice of the Peace
~~Notary Public~~

STATE OF MAINE

CUMBERLAND, ss. REGISTRY OF DEEDS

Received at 9 H 30 M A M on JUN 17 1976 and recorded in

Book 3820 Page 71 Attest

Margaret L. Hayes [signature]

Acting Register

FIRST AMERICAN TITLE INSURANCE COMPANY

PURCHASER(S)/BROKER(S) AFFIDAVIT
(Real Estate Licensee's Mechanic's Lien)

Name(s) of Purchaser(s): Concord Square Development Company, Inc.

Property Address: 129-155 North Street, Portland, Maine

The above-named Purchaser(s) and the undersigned Licensee(s) understand that First American Title Insurance Company (the "Company") has been asked to issue a Loan Policy to TBD, for the referenced property, without exception for licensee (broker) mechanics' liens.

The Purchaser(s) hereby certifies that he/she (they) has (have) no knowledge of, nor has (have) received notice of any lien or potential lien filed or to be filed by a real estate licensee who provided professional services to facilitate the sale of the property described above.

The Licensee(s) hereby certifies that he/she (they) has (have) been fully paid for all professional services rendered by him/her (or the agency) to facilitate the sale of the property described above, and therefore agrees to waive any right to assert a mechanic's lien against said property pursuant to the provisions of Title 10 MRSA §3251, et seq., as amended.

The undersigned Licensee further certifies that he/she has full authority to execute this Waiver on behalf of his/her employer or principal, if any.

Dated: _____, 1997

Concord Square Development
Company, Inc.

By: _____
Print Name: _____
Agency: _____

_____
By:
Its:

By: _____
Print Name: _____
Agency: _____

STATE OF MAINE
Cumberland County, ss.

Subscribed and sworn to this ____ day of _____, 1997.

Before me,

_____
Notary Public/ Attorney at Law

FIRST AMERICAN TITLE INSURANCE COMPANY

Seller(s) Affidavit

On oath, the undersigned depose(s) that in connection with the premises at

129-155 North Street, Portland, Maine

which I am (we are) today conveying to

Concord Square Development Company, Inc.

I (we) hereby certify that there are:

___ No tenants or other occupants; or
___ There are the following tenants or other persons in possession of the premises, with terms as noted: _____

_____; and

I (we) further certify that there is no person to whom a debt is due for personal labor or services performed or materials used in the erection, alteration, repair, improvement or removal of a building or structure upon the above land and buildings, by virtue of an agreement with, or by the consent of the undersigned, or by a person having authority from or rightfully acting for the undersigned in promising or furnishing such labor, services or materials, for work actually performed during the past one hundred twenty (120) days, and have no knowledge of any real estate licensee (broker or agent) who may assert a lien against the property based on nonpayment of professional services rendered by the licensee to facilitate the sale of the property. In the event that a debt is due for such work done, materials used or services rendered, the undersigned hereby agree(s) to indemnify and hold harmless the BUYER(S) and FIRST AMERICAN TITLE INSURANCE COMPANY from any and all debts and costs of collection in connection with said debts.

Dated this ____ day of _____, 1997.

_____
H. Page Burnham

_____
Patricia G. Burnham

STATE OF MAINE
Cumberland County, ss.

Subscribed and sworn to this _____ day of _____, 1997.

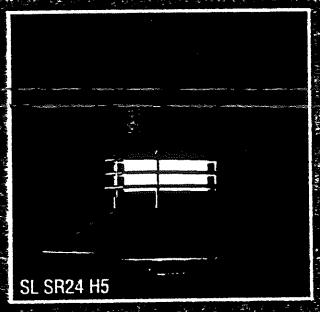
Before me,

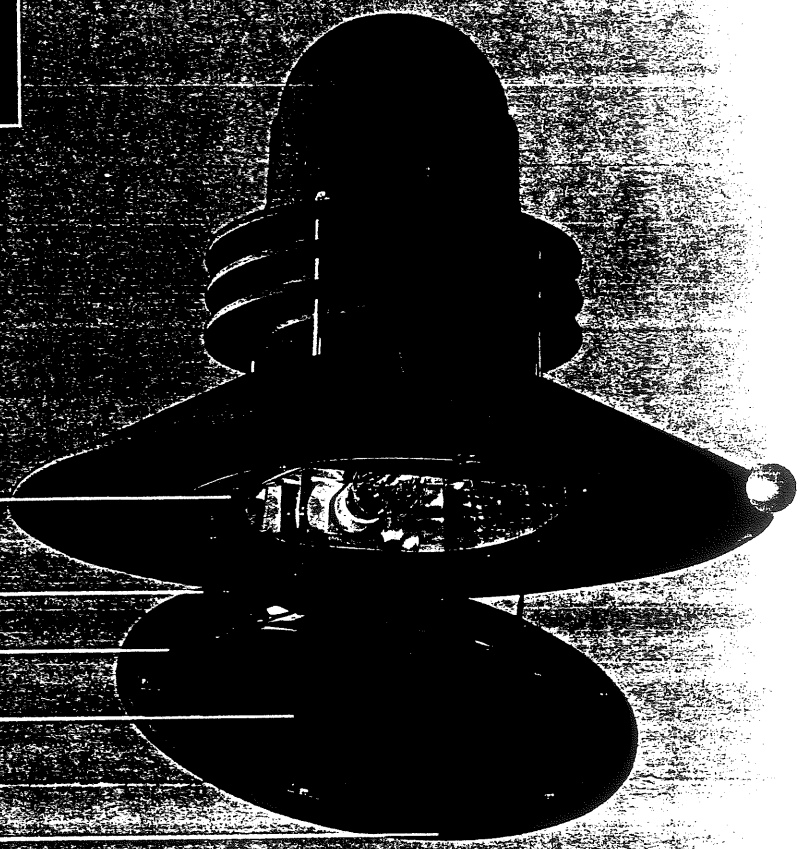
_____
Notary Public/ Attorney at Law

PRECISION OPTICS

When lighting performance is as high a priority as aesthetics, you have a choice with AAL. Optical systems that meet IES standards for full cut-off luminaires and conform to local ordinances for glare control.

These optical systems are available on the SL SH20, ALLO 502, and SL SR24 fixture series.


SL SR24 H5



Precision reflector trays can be field rotated on 90° centers for proper orientation.

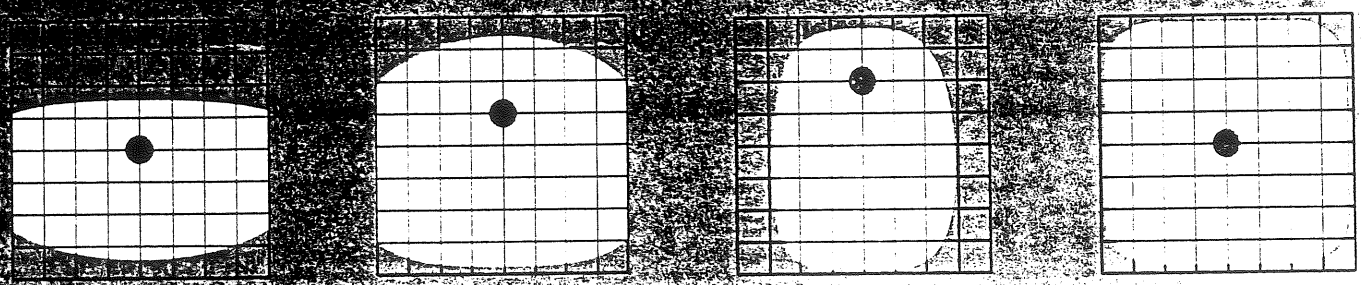
Rigid cast door frame insures a tight seal for the silicone gasket.

Full perimeter molded silicone gasket seals the fixture from the elements.

Tempered sag glass lens.

Captive, simple-point fastener for easy access to the lamp.

FOUR LIGHT DISTRIBUTION PATTERNS FOR PRECISE CONTROL



TYPE 2
- pathways
- streets

TYPE 3
- parking areas

Secs. 14-478—14-490. Reserved.

ARTICLE IV. SUBDIVISIONS*

Sec. 14-491. Authority and purpose.

This article is adopted pursuant to the terms and provisions of 30-A M.R.S.A. Sections 3001 and 4403, as amended. The purpose of this article is to provide for the harmonious and economic development of the city; for the orderly subdivision of land and its development; for the orderly development of the general area surrounding such subdivision; for the coordination of streets within the general area; for adequate provisions for drainage, flood control, light, air and other public purposes; for the adequate and proper installation of streets, drainage, sanitary sewers, water and other utilities and facilities; for the dedication to the city of land for streets, alleys or other public purposes or the transfer to the city of easements or other rights or privileges; for the reservation for the city of land to be acquired for public facilities; and to protect public safety.

(Code 1968, § 603.1; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 155-89, § 1, 11-20-89)

Sec. 14-492. Jurisdiction.

This article shall govern each and every subdivision of land within the limits of the city unless specifically exempted in section 14-508. When application is made for the resubdividing of a previously recorded subdivision under the provisions of these regulations, it shall be treated as a new subdivision provided the applicant is the owner of rights in the recorded subdivision.

(Code 1968, § 603.3; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-493. Definitions.

The following words and phrases, when used in this article, shall have the meanings respectively ascribed to them:

Alley shall mean any way designed primarily for vehicular or utility access to the back or side of premises otherwise abutting on a street, except driveways unless officially designated otherwise.

Easement shall mean a right, privilege or liberty which one has in land owned by another for some special and definite purpose.

Engineer shall mean a registered professional engineer in good standing with the state board of registration for engineers.

---

*Cross reference—Ordinances dedicating or accepting any plat or subdivision in the city saved from repeal, § 1-4.8.

State law reference—Land subdivisions, 30-A M.R.S.A. § 4403.

(2) *Collector street* shall mean a nonarterial street which carries traffic from a minor street to arterial streets, including the principal entrance to streets of a residential development and streets for circulation within such a development.

(3) *Marginal access street* shall mean a minor street which is adjacent to and substantially parallel with an arterial street and which provides access to abutting properties and protection from through traffic.

(4) *Minor street* shall mean a street which services one (1) or more minor streets used primarily for access to abutting properties.

(5) *Cul-de-sac or dead-end street* shall mean with only one (1) outlet.

Subdivider or applicant shall mean any individual, firm, association, syndicate, partnership, corporation, trust or any other legal entity commencing proceedings under these regulations to effect a subdivision of land hereunder for himself or for another.

Subdivision shall mean the division of a lot, tract or parcel of land into three (3) or more lots, including lots of forty (40) acres or more, within any five-year period whether accomplished by sale, lease, development, buildings or otherwise and as further defined in 30-A M.R.S.A. Section 4401. The term subdivision shall also include the division of a new structure or structures on a tract or parcel of land into three (3) or more dwelling units within a five-year period and the division of an existing structure or structures previously used for commercial or industrial use into three (3) or more dwelling units within a five-year period. The area included in the expansion of an existing structure is deemed to be a new structure for the purposes of this paragraph. A dwelling unit shall include any part of a structure which, through sale or lease, is intended for human habitation, including single-family and multi-family housing condominiums, time-share units and apartments.

Subdivision plat shall mean a plan of the proposed subdivision for presentation to the planning board and the public.

Surveyor shall mean a qualified registered surveyor of good standing with the state board of registration.

Tract (or parcel) of land shall mean all contiguous land in the same ownership, provided that lands located on opposite sides of a public or private road shall be considered each a separate tract or parcel of land unless such road was established by the owner of land on both sides thereof.

Vicinity sketch shall mean a sketch of the proposed subdivision location, not necessarily drawn to scale, showing the proximity of the subdivision to surrounding streets and highways. (Code 1968, § 603.5; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 127-87, § 1, 2-18-87; Ord. No. 247-88, 11-28-88; Ord. No. 155-89, § 2, 11-20-89)

Cross reference—Definitions and rules of construction generally, § 1-2.

Sec. 14-494. Guidance to subdivider.

The purpose of the preapplication procedure is to afford the subdivider an opportunity to avail himself of the advice and assistance of the planning board, and to consult early and

(c) *Engineering requirements:*

(1) The applicant shall furnish the public works authority with all engineering data and plans necessary for the completion of the required improvements, as enumerated in section 14-496(2). Such plans may be furnished apart from but at the same time as the subdivision plat and vicinity sketch and shall be certified by a registered professional engineer.

(2) The public works authority shall review the plans submitted as required in subsection (c)(1) above and shall approve, approve conditionally, or disapprove same within ten (10) days of submission as to whether such plans are in conformance with the standards set forth in this article.

(d) *Subdivision plat approval:* The planning board shall approve, approve conditionally or disapprove such subdivision plat at a public meeting. If approved conditionally, the conditions and reasons shall be stated and given in writing to the subdivider and, if necessary, the planning board may require the subdivider to submit a revised subdivision plat. If the planning board should disapprove the subdivision plat, the reasons for such action shall be stated and given in writing to the subdivider, and the board may state the conditions under which the proposed subdivision would be approved. One (1) copy of the subdivision plat as acted upon by the planning board shall be retained in its office, one (1) copy forwarded to the public works authority and one (1) copy returned to the subdivider.

(e) *Effect of subdivision plat approval:* Receipt of the approved copy of the subdivision plat of the subdivider is not authorization that he may proceed with the construction of any improvements. No construction will proceed until the recording plat has been approved by the planning board and has been properly recorded as required hereinafter in subsection (g).

(f) *Recording plat approval:*

(1) The applicant shall submit the recording plat and five (5) copies thereof to the planning authority at least fifteen (15) days prior to the date of the meeting of the planning board at which it is intended to be considered, which copies shall be distributed as hereinafter provided.

(2) Consideration of the recording plat, however, shall not take place until approvals required in subsections (c) and (d) are obtained.

(g) *Recording:*

(1) When the recording plat is approved, the subdivider shall pay the actual cost of recording and reproducing five (5) copies of the plat, one (1) of which shall be on mylar for the public works authority records.

(2) The recording plat shall be recorded in the office of the county registry of deeds by the subdivider.

(3) The registry book and page numbers will then be recorded on the five (5) copies of the plan, of which one (1) shall be kept at the office of the planning board, one (1) sent to

d. Locations, widths and purposes of other rights-of-way or easements to be reserved;

e. All appropriate street curve information, including point of curvature, point of tangency, tangent distance, radii and interior angle, in standard engineering format;

f. Location of those utilities existing on or adjacent to the tract to be subdivided, including size and elevation of buried or underground utilities (may be shown on separate plan);

g. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered;

h. Names of adjacent property owners with parcels over twenty-five thousand (25,000) square feet or names of adjacent subdivision;

i. Designation of flood hazard areas, as defined by the National Flood Insurance Program and shown on the city flood hazard boundary map, as well as any other areas in the subdivision subject to inundation by storm water or storm sewer overflow;

j. Existing historic sites and structures which either appear on the National Register or are nominated to the National Register by the state historic preservation officer;

k. Proposed private and public utility system including water, gas, telephone, fire hydrants, and any other services which shall supply the area (may be shown on separate plan);

l. Sanitary sewer and storm drain plans and profiles showing size, kind and slope of pipe, proposed manhole rim and invert elevations and catch basin locations and drains (may be shown on separate plan);

m. Lighting plan showing the location, design, height and spacing from each other of the support poles, in accordance with standards and specifications established by the public works authority (may be shown on separate plan);

n. Tree plan showing groups of existing, sizeable trees which the subdivider intends to preserve (may be shown on separate plan);

o. A detailed plan of the entire subdivision and the immediate vicinity showing all existing and proposed drainage both on and off-site including drainage swales, ditches, etc., with directional flow arrows and approximate slope grades, and showing proposed finished "spot elevations" around the perimeter of the subdivision. Proposed drainage shall be shown as it may affect or restrict development on individual lots and with reference to improvements for which a performance guarantee is required under this article. Where deemed feasible by the public works authority, proposed finished contours at intervals of two (2) feet shall be provided on the drainage plan upon request (may be shown on separate plan);

p. Location and designation of any zoning district boundaries affecting the subdivision;

q. All future phases and sections of the subdivision proposed by the subdivider (may be shown on separate plan);

accepted street or a proposed street under construction and intended for construction. This plat also shall show the following:

a. Title, date, graphic scale, north arrow, name, signature and registration number or seal of a registered land surveyor licensed in the state, name and address of developer and owner;
b. Tract boundary lines and property lines of lots, with accurate dimensions and either bearings or deflection angles. All lots shall be numbered;
c. All appropriate street curve information, including point of tangency, tangent distance, radii and interior angles, in standard engineering form;
d. Street names, width of street rights-of-way and typical cross section showing only surface dimensions of roadway pavement, esplanade and sidewalk reservation;
e. Street and right-of way monuments and property markers. Iron pipes shall be designated by a small circle at the point of installation;
f. Locations, dimensions and purposes of any easement or right-of-way;
g. Purpose for which sites, other than residential lots, are dedicated or reserved; it being understood that any reservations of areas shall be subject to the proper zoning thereof;
h. Reference to recorded subdivision plats of adjoining platted land by book and page number;
i. Space for the signatures of the planning board and date of approval;
j. Where required by 30-A M.R.S.A. Section 4406, the fact that initial approval or subsequent amendment of a subdivision is based in part upon the granting of a variance from any of the applicable subdivision approval standards.

(3) *Alterations to an approved plat.* The planning authority may approve alterations to an approved recording plat when all of the following conditions are met; otherwise, a new subdivision plat must be submitted to the planning board:

a. The rearrangement of lot lines does not increase the number of lots within a block or other subdivision unit or area;
b. The alteration will not affect any street, alley, utility easement or drainage easement;
c. The alteration meets all of the minimum requirements of this article, article III of this chapter on zoning and other applicable state and local codes;
d. The alteration is approved by the public works authority and the fire department.

Such approved alterations shall be properly recorded in the registry within thirty (30) days thereof or they shall be null and void. Recording of approved alterations also shall be in accordance with the requirements of 30-A M.R.S.A. Section 4406.

(4) *Vacation of plats.* Any such plat recorded, or any portion thereof, may be vacated with the consent of the city council as follows:

a. At any time before the sale of any lot therein, by written instrument, signed by the city and the owners of such subdivision, declaring the same to be vacated and describing therein the part or portion to be so vacated.

(8) Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the department of inland fisheries and wildlife or by the city, or rare and irreplaceable natural areas or any public rights for physical or visual access to the shoreline. For subdivisions within historic districts designated pursuant to article IX of this chapter, the planning board shall apply the standards of section 14-651(3) of article IX. The planning board may request that the historic preservation committee prepare an evaluation of the proposed subdivision based upon the standards of section 14-651(3);

(9) Is in conformance with the land development plan or its successor;

(10) The subdivider has adequate financial and technical capacity to meet the standards of this section;

(11) Whenever situated, in whole or in part, within the watershed of any pond or lake or within two hundred fifty (250) feet of any wetland, great pond or river as defined in Title 38, chapter 3, subchapter I, article 2-B, will not adversely affect the quality of such body of water or unreasonably affect the shoreline of such body of water;

(12) Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater;

(13) Is or is not in a flood-prone area, based on the Federal Emergency Management Agency's Flood Boundary and Floodway Maps and Flood Insurance Rate Maps, and information presented by the applicant. If the subdivision, or any part of it, is in such an area, the subdivider shall determine the 100-year flood elevation and flood hazard boundaries within the subdivision. The proposed subdivision plan must include a condition of plan approval requiring that principal structures in the subdivision will be constructed with their lowest floor, including the basement, at least one (1) foot above the 100-year flood elevation;

(14) All potential wetlands within the proposed subdivision shall be identified on any maps submitted as part of the application, regardless of the size of those wetlands. Any mapping of wetlands may be done with the help of the local soil and water conservation district; and

(15) Any river, stream or brook within or abutting the proposed subdivision shall be identified on any maps submitted as part of the application. For purposes of this section, "river, stream or brook" has the same meaning as in Title 38 M.R.S.A. Section 480-B, subsection 9.

(b) *Burden of proof.* In all instances the burden of proof shall rest upon the person proposing the subdivision.

(c) *Conformity with Code.* Any proposed subdivision shall be in conformity with all relevant provisions of this Code.

(d) *Reserved.*

Proposed subdivisions along existing, or dedicated, or platted streets where rights-of-way are inadequate shall provide additional land to meet the minimum standards.

(5) Streets shall not occupy more land than needed to provide access nor create unnecessary fragmentation of the subdivision into small blocks. Streets will be designed to discourage outside traffic from traversing the development.

(6) All dead-end streets shall provide for a cul-de-sac or, in the case of a dead-end street which will be extended, a temporary turn-around at the end of the street, subject to the approval of the public works authority.

(7) The minimum roadway width including esplanades and sidewalks shall be:

a. Fifty (50) foot right-of-way, thirty-two (32) foot pavement, five (5) foot sidewalks and four (4) foot esplanades and curb.
b. Sixty (60) foot right-of-way, forty (40) foot pavement, five (5) foot sidewalks and five (5) foot esplanades and curb.
c. Street right-of-way on the islands in Casco Bay shall comply with article III of chapter 25.

(8) Sidewalks and curbs:

a. Sidewalks shall be constructed on each side of each street in accordance with article III of chapter 25. Sidewalks to be used by pedestrians are to be so located as to minimize contacts with normal automotive traffic, with preference given to interior walks away from streets in common open space in block interiors.
b. Curbs shall be constructed on each side of each street. The curbing shall be constructed as provided in article VI of chapter 25.

(c) *Street design:*

(1) Profiles of each street or way in the subdivision shall be shown on the subdivision plat. They shall be drawn to a longitudinal scale of forty (40) feet to one (1) foot and a vertical scale of four (4) feet to one (1) inch. Such profiles shall include separate profiles of each side line and center line of the street or way. Any buildings abutting on the street shall be shown in standard engineering format as requested by the public works authority.

(2) Street grades in all proposed subdivisions shall be subject to the approval of the public works authority.

(3) The public works authority shall establish the sequence in which work is to be accomplished. Where it is determined by the public works authority that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of this section and of chapter 25, the director of parks and public works or an inspector from the public works authority may issue a stop work order. Work shall recommence only after the stop work order has been lifted by the director of parks and public works or an inspector

(2) Subdivision names for plats shall be subject to approval by the planning board and not duplicate the name of any plat already recorded.

(e) *Exception for private streets within PRUD's and manufactured housing parks.* Private streets within PRUD's and manufactured housing parks shall be exempt from the street right-of-way and roadway width requirements set forth above, provided that no such street shall be accepted by the city unless it is first improved to the standards set forth above at the expense of those persons requesting the street acceptance. Private streets within a PRUD or a manufactured housing park shall meet specifications established by the public works department. All private streets shall be designed by a professional engineer and shall be built according to accepted engineering standards.

(f) *Sewers and storm drains:*

(1) The design of all sewers and storm drains shall be subject to approval by the public works authority.

(2) All subdivisions shall be provided with adequate storm drain systems within the subdivision separate from any sanitary sewer system required in article III of chapter 25.

(3) Any natural or manmade areas, systems or facilities designated for stormwater control purposes and intended for city maintenance shall, except for detention or retention ponds or basins and regularly free-flowing watercourses, be structurally enclosed in accordance with the standards of the public works authority, and shall be dedicated with sufficient land for maintenance purposes. Warranty deeds to such areas shall be submitted for acceptance by the city council at the same time as the acceptance of streets. All such areas as are not intended for city maintenance shall be permanently protected and maintained by private agreement, deed covenant or restriction, as appropriate, in form approved by the corporation counsel.

(4) The approval of the plumbing inspector is required for all subdivisions involving the use of septic tanks and drainage fields for sewage disposal.

(5) The subdivider shall be responsible for the construction of all sewers and storm drains including manholes, catch basins and any other appurtenances as may be deemed necessary by the public works authority. All work shall be in accordance with public works specifications.

(6) The public works authority shall establish the sequence in which work is to be accomplished. Where it is determined by the public works authority that work has been completed prior to the receipt of all approvals required by this article or which is out of sequence or is not in compliance with the standards of this section and of chapter 24, the director of parks and public works or an inspector from the public works authority may issue a stop work order. Work shall recommence only after the stop work order has been lifted by the director of parks and public works or an inspector from the public works authority. Violation of the stop work order shall be considered an offense.

disapproval under section 14-497 a., general requirements, the planning board may require provision of land for park or recreational purposes. Such lands may be designated for public or private ownership in accordance with the conditions stated in this section, subject to the approval of the planning board.

(2) If a tract or parcel is intended for public ownership and is so designated on the subdivision plat, the acceptance of such land shall be first recommended by the various departments and the planning board and sent to the city council for final determination.

(3) If a tract or parcel is designed or intended to be owned and used in common for recreational or other public or semipublic purposes and such intent is so designated on the subdivision plat, appropriate documents in form approved by the corporation counsel shall be submitted to the planning board. Such documents shall clearly:

a. Set forth the nature of the permanent organization under which common ownership is to be established, including its purpose; how it shall be governed and administered; the provisions made for permanent care and maintenance of the common property for its share of the cost of administering and maintaining such common property;

b. Set forth the extent of common interest held by the owner of each individual parcel in the tract held in common with others.

j) *Access to shoreline:*

(1) In all subdivisions having shore frontage on the island of Casco Bay, existing legal rights of public access to the shoreline shall be preserved. The proposed street layout and circulation plan shall be suitably integrated with such existing public access in a manner that reasonably promotes the public use of such access. The proposed street layout and circulation plan shall also be designed to preserve any legal rights to any significant water views and scenic vistas from such rights-of-way.

(2) In all subdivisions having any lots within the shoreland zone, legal rights of private access to waters shall, to the extent reasonably feasible, be established for the benefit of all lots within the subdivision not otherwise having such access.

(Code 1968, 603.9; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79; Ord. No. 41-84, § 1, 6-18-84; Ord. No. 98-85, § 1, 7-15-85; Ord. No. 127-87, §§ 7, 8, 2-18-87; Ord. No. 104-87, 10-19-87; Ord. No. 66-88, 7-18-88; Ord. No. 201-89, § 1, 12-18-89)

Editor's note—Ord. No. 66-88, adopted July 18, 1988, amended § 14-498 by adding subsections (c)(3) and (f)(6). The ordinance further provided as follows:

Be it further ordained and determined by the city council that the above amendments are necessary in order to prevent further work being done which is not in accordance with City technical standards. Therefore, this enactment shall take effect immediately as an emergency pursuant to Article II, Section 8 of the Charter and shall further apply to all pending proceedings, applications, petitions and to all projects which have work that remains to be completed at the date of enactment of these amendments.

plantings, not less than three (3) feet in width and six (6) feet in height at the time of initial occupancy of such development, and shall be set back on corner lots so as to comply with section 14-434. Individual shrubs or trees, as approved by the city arborist, shall be planted so as to establish a dense visual screen year round. At least fifty (50) percent of the plantings shall consist of evergreens. Such screen shall thereafter be permanently maintained in a condition meeting the specifications and intent of this subsection. In cases where such screen areas are to be separately owned, the deed of conveyance shall contain a requirement that the grantee shall likewise maintain the screen area. Such requirement shall be in a form acceptable to the corporation counsel. Any area intended to be owned and used in common shall thereafter be maintained by a permanent organization as set forth in section 14-498(i)(3). Existing vegetation may substitute for new plantings if it forms an acceptable dense visual screen consistent with the intent of this subsection.

(2) All manufactured housing units and any accessory structure within such development shall be located at least fifty (50) feet from any external property boundary of the development where the proposed park density is two (2) or more times greater than the density of residential development on adjacent parcels or the maximum permitted density of adjacent vacant parcels.

(3) All units within such development shall be set back from any existing collector or arterial street, as defined in section 14-493, in accordance with the setback provisions for the underlying zone.

(4) All fuel oil supply systems shall be constructed and installed within the foundation wall or underground in accordance with all applicable codes and regulations.

(5) All trash containers, bottled gas tanks, storage sheds, utility meters, or other similar items or accessory structures except parking garages, shall be located and suitably screened by plantings or fencing so as not to be clearly visible from the street or abutting properties.

(6) All manufactured housing units shall be placed either on a foundation which forms a complete enclosure under exterior walls, or on suitable blocks on a foundation pad, in which case the unit shall be boxed or skirted with suitable material designed for such use.

(7) All manufactured housing units shall be properly installed, blocked and levelled or affixed to a foundation wall, so as to rest on the wheels used to transport the unit. Any hitch or tow bar shall be removed from the unit after it is placed on its foundation.

(8) Notwithstanding the provisions of sections 14-498 and 14-499, private roads within a manufactured housing park shall be a minimum of twenty-three (23) feet wide, with a minimum pavement width of twenty (20) feet.

(Ord. No. 611-82, § 1, 7-7-82; Ord. No. 358-84, § 1, 12-17-84; Ord. No. 201-89, § 2, 12-18-89)

Sec. 14-500. Additional requirements for nonresidential subdivisions.

All nonresidential subdivisions must meet the requirements for residential subdivisions established by this article, the site plan in article V of this chapter and the zoning ordinance

ance equal to the estimated cost of the improvements. In no case shall the performance guarantee be reduced to a value which is less than the estimated cost of completing all prescribed improvements remaining uncompleted as determined by the public works authority.

(e) Upon the satisfactory completion of the subdivision's prescribed improvements, excepting tree planting and other landscaping if in the opinion of the city arborist the installation of such plantings is not feasible due to weather conditions, the subdivider shall file a defect guarantee prior to the city's acceptance of any and all streets within the subdivision. The defect guarantee shall ensure the workmanship and the durability of all materials used in the construction of the roadways, curbing, esplanades, sidewalks, sanitary sewerage systems (including manholes and house drain laterals), storm drainage systems (including manholes, catch basins and catch basin drains), street lighting, tree planting, other appropriate landscaping and all other public improvements which may become defective within one (1) year period, all as determined by the public works authority. The defect guarantee shall also ensure the proper installation of any required tree plantings or landscaping which were not installed prior to the filing of the defect guarantee during the next appropriate planting season, as determined by the city arborist.

(f) The defect guarantee shall be a surety bond, letter of credit or escrow account with a responsible financial institution, equal in value to ten (10) percent of the estimated cost of public improvements. It shall be in the name of the city and shall be approved by the finance director as to financial sufficiency and the corporation counsel as to proper form and legal sufficiency. A guarantee which contains appropriate terms and conditions to cover both the performance and defect guarantee provisions as specified in subsections (a)—(e) above is an acceptable form of guarantee.

(g) A performance bond shall also be required to ensure the completion of all improvements as required by section 14-499.5, as well as all improvements for the circulation, recreation, landscaping, light, air, drainage and service needs of a planned unit development which are not subject to section 14-501(b). For purposes of this subsection, sections 14-501(c) and (d) shall also apply. The planning authority may waive all or any portion of this requirement if it determines that the developer has a proven record of satisfactory performance and sufficient financial capability.

(h) The subdivider shall pay a subdivision inspection fee, which fee shall consist of the actual costs, including administrative costs, of inspection by the public works authority of all improvements required by sections 14-499, 14-499.5, 14-500 and this section. Prior to the release of the approved recording plat and at the same time that the subdivider posts a performance guarantee as provided in this section, the subdivider shall pay to the public works authority a deposit toward this subdivision inspection fee, which deposit shall be equal to 1.7 percent of the estimated cost of the improvements. Upon issuance of a release in writing from the public works authority and the planning authority as provided in this section and as a

of deeds which has not been approved as required by this article. Approval for the purpose of recording shall appear in writing on the recording plat. No public utility, water district, sanitary district or any utility company of any kind shall install services to any lot in a subdivision which has not received planning board approval.

(c) Any person who sells, leases, develops or builds upon or conveys for consideration any land in a subdivision which has not been approved as required by this article shall be punished by a fine of not more than five hundred dollars ($500.00) for each such occurrence. The city may institute proceedings to enjoin any violation of this section.
(Code 1968, § 603.15; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-505. Appeals.

An appeal from any final decision of the planning board regarding subdivision approval may be taken by the applicant or his authorized agent to superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure.
(Code 1968, § 603.16; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-506. Modifications.

(a) Except for the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and sidewalks, the planning board if it finds that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations may vary the regulations so that substantial justice may be done and the public interest secured; provided that such variation will not have the effect of nullifying the intent and purpose of the land development plan and the regulations of this article.

(b) Where the planning board finds that extraordinary conditions exist or that undue hardship may result from strict compliance with the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and sidewalks, it may vary the regulations so that substantial justice may be done and the public interest secured; provided that such variation will not have the effect of creating potentially hazardous vehicle and pedestrian conflict or nullifying the intent and purpose of the land development plan and the regulations of this article. For purposes of this subsection, the planning board may, but need not, consider such circumstances as where a street is a dead-end street, or where an alternative walking route is reasonably available, or where a street is scheduled for major reconstruction, or where the development of abutting land is substantially restricted.

(c) The standards and requirements of this article may be modified by the planning board in the case of a plan and program for a planned unit development which in the judgment of the planning board provides adequate public spaces and improvements for the circulation, recreation, light, air and service needs of the tract when fully developed and populated, and which also provides such covenants or other legal provisions as will assure conformity to and achievement of the land development plan.

(d) If at any time before or during the construction of the required improvements the subdivider demonstrates to the satisfaction of the project engineer and the public works au-

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Chair Carroll and Members of the Portland Planning Board

FROM: Richard Knowland, Senior Planner

DATE: January 27, 1998

RE: North Street and Walnut Street 70-Unit Multi-Family Development

Introduction

A second workshop has been scheduled for the Munjoy Hill Apartment Project on the corner of Walnut Street and North Street. The 70-unit development is proposed by Andrew Carman of Concord Square Development Company. Please review the attached staff memo (dated 12-9-97) from the previous workshop. Revised site plans, building elevations and background information are shown on Attachments A, B and C.

At the last workshop, the Board discussed a number of site plan-related issues/concerns. These included water pressure/ fire protection, and the safety of the North Street and Walnut Street intersection. These issues, as well as updated information on the plan, are outlined below.

Traffic

Safety concerns were expressed about the intersection of North Street and Walnut Street, and what measures could be taken to improve it. Comments from Larry Ash, City Traffic Engineer, are shown on Attachment D.

Mr. Ash indicates that the intersection does not satisfy criteria for a four-way or multi-way stop, nor does it meet the MDOT criteria for a high-accident location. He believes that intersection modifications should focus on greater visibility of approaching vehicles for both pedestrians and vehicles.

Mr. Ash recommends the following:

1. parking be restricted on both sides of Walnut Street for 75 feet west of North Street;
2. parking be restricted on both sides of Walnut Street for 60 feet east of North Street;
3. per city code, parking be restricted for 30 feet in advance of the stop signs on North Street at its intersection with Walnut Street; and
4. warning signs be placed in advance of the stop signs on North Street advising of a stop ahead.

The traffic report proposal by William Eaton has been updated accordingly. See Attachment E.

Fire

Lt. McDougall of the Fire Department has provided comments on the project, after conferring with the Portland Water District. (See Attachment F.) He indicates that there is not enough water volume in the existing six-inch main in North Street to supply a sprinkler system within the development. A twelve-inch water main could be extended to provide adequate volume.

The memo in the previous Board packet from the Portland Water District addressed general water flow requirements. All other site plan fire-related concerns appear to be addressed.

Drainage

The original drainage concept has been revised. Previously the plan showed most of the site drainage flowing into an exiting separate storm drain in North Street. It appears that the storm drain does not have the capacity to receive the majority of that flow. To compensate for this, more stormwater will be directed to a swale that straddles the City/Promenade East property line.

Staff has emphasized that the drainage swale near the school property line needs to be placed on the applicant's property to prevent water from flowing on the school playfield. Public Works has identified a ponding problem near the Eastern Promenade roadway where this drainage flows to. (See Attachment G.) Staff recommends that the applicant do the following to correct the problem:

* Replace the two field inlets located in the esplanade adjacent to the Eastern Promenade sidewalk with new ones. The inlets will need to be lowered from their present elevation.

* Create a drainage ditch 310 feet long x 2 feet deep x 14 feet wide to collect and transport runoff into these field inlets.

Comments from the Development Review Coordinator will be available for Tuesday's meeting.

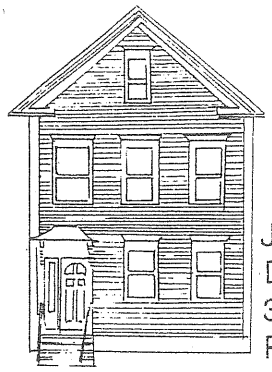
Architectural Design

Since the last workshop, the applicant has provided more detailed building elevations including the height of each facade. Missing from the previous submission was an elevation of the northerly (Jack School) side. This has now been submitted and is similar in design as the other elevations. Concrete block is proposed along the lower (parking garage) level. A glass atrium is shown on the facade and is carried through to the main entrance of the building along the southerly facade.

The North Street (west) elevation has been further refined from the previous workshop. The building retains a triple decker inspired design element on both ends of the facade. Porches have been added next to these elements. Concrete blocks are shown along the lower segment of the building reflecting a grade change. While the context and theme of the design is clear, the facade elements do not seem to be fully integrated.

A more detailed version of the single triple decker buildings has been submitted. The applicant has agreed that there should be some variation among the six buildings trim and other design features so that there aren't six identical buildings in a row. These elevations are in the process of being developed.

AH 11 A



LUKE SEWALL MACFADYEN

19 HOWARD STREET PORTLAND MAINE 04101
(207) 871 1075

October 6, 2000

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

Dear Mr. Gray,

I am writing to express my support for the proposed multi unit family development on North and Walnut Streets. If it is in conformance with The Planning Board's standards, I believe it should be approved.

I feel that the shortage of family sized apartments on the hill has begun to affect the population here. In general, smaller units available now in owner occupied buildings favor individuals or couples, but not families with children. I believe that without more children in the neighborhood, we will be forced to consider closing one or more of our schools, which in turn would lead to more families leaving the hill. The fact that a portion of these apartments would be made "affordable" adds to the diverse population already here. Unfortunately, it sometimes seems that the larger a person's or family's income gets, the less involved they become in the neighborhood. Having that piece of land turned into a few high priced condo's with a pool and tennis courts isn't going to add anything to our community here!

I feel that the lot in question is perfect for an in-fill project, and that a relatively large, low structure will help scale down the design disaster of the existing high rise building abutting the site. The developer and his associates have shown every effort to work with neighbors and the community over design issues.I followed the city's "mediation" attempts between the concerned neighbors and Silver Street Corp., and it seemed only one side was ever willing to negotiate. That side was the developer!

I do agree that there will be impact to the abutters, and to the neighborhood. I believe the City, with the Developer and The Neighborhood Organization should begin immediately to resolve some of the already existing traffic problems, as well as the water and gas pressure and Jack School issues, before they get worse. Perhaps the traffic issue along the Eastern Prom should be looked at as well. But, I do believe that considering the large number (compared to other project of this size in Portland) of off-street parking spaces the developer is proposing, as well as the proximity to Washington Avenue Extension and Metro service to the site that the neighborhood can easily absorb these new members of our community.

I can understand the concerns of the abutters, but in general I think they are being selfish and shortsighted. We are all welcome here, and I think it should stay that way.

Sincerely,

Luke S. MacFadyen, Resident and citizen of Portland, Maine

financially, as they well might, they would leave the neighborhood at the mercy of whoever the new buyers may be, even out-of-staters.

4. **Potential Bankruptcy and its Consequences**: If Silver Street goes into bankruptcy, the consequences for the neighborhood could be disastrous. Portland already has the example of Back Bay Tower – bought by a California outfit with no interest or concern about the City of Portland when Pamela Gleichman walked off and declared bankruptcy. Having lived there until a month ago, I can attest to the fact that the building has gone downhill since being bought out by Seaforth Housing in California. Staff was let go: There is now one cleaning woman for the entire 16 floors—the building is increasingly dirty and tacky; there is only one maintenance man who now not only takes care of normal maintenance but also paints and prepares apartments for new occupants; the elevators and garage doors are frequently out of commission; the security company was cut back to only a few nights each week; the assistant manager was terminated. In short, it is now owned by a disinterested long-distance management company who cares only for the bottom line, not for the welfare of the tenants or the quality of the neighborhood.

   That area of the city is not nearly as neighbor-oriented as is North Street. If a similar misfortune should befall Mr. Gendron and partners, no one knows where the "rescue buyer" might come from and what could happen to this quiet, friendly, safe family neighborhood. If buildings are not maintained, there is a chain reaction as people move out, lower rents result with a poorer class of tenant, the property deteriorates, and the entire neighborhood suffers.

5. **Current Proposed Ownership and Management**: It is stated that the developers will be the owners "initially" and that management will be by hired management company "initially." These statements could mean anything. Silver Street, of course, has the right to run its own business once their proposal is approved. Even if they don't have to declare bankruptcy, perhaps they already have in mind to sell the property – and it is not out of the question that a new buyer could be out of state with no interest in maintaining the qualities of this neighborhood. One might even question whether the Silver Street group themselves have the best interests of the neighborhood in mind – but just their own best interests.

It is not morally right to put a neighborhood such as this at risk by venture capitalists – especially those with "political pull" who can make promises they may or may not have any intention of keeping once their proposal is approved.

Thank you for your courtesy in reading this letter.

Sincerely,

Concetta Leonardi

Concetta Leonardi

cc: Thomas Cary, Director, Maine State Housing Authority
William Gorham, Munjoy Hill Neighborhood Association

11.3

From: "Alan E. Johnson" <AJOHNS63@MAINE.EDU>
To: Portland.CityHall(KCOTE)
Date: Tue, May 16, 2000 10:34 PM
Subject: Silver Street Development

Hello,
I would like to express my concern over the proposed 72 dwelling unit at North and Walnut Sts. Traffic is going to be a problem for one thing. Fox, Walnut, and Washington Ave. are bad enough as it is. Baseball games bring a lot of traffic and pack the Promenade. When school is in session, the faculty of Jack fill up the other side. Children walking back and forth to school are going to have to watch themselves very carefully. Most of all, the rents proposed, (the more expensive ones) are outrageous. I plan on renting my house on Lafayette St. next year, but would never dream of charging $1,300 for it, heat and hot water included! Who is going to want to live in these places when they could buy a house for that much money? Munjoy Hill rents give people a lot more for their money right now than that monstrosity will.
Why doesn't the city subsidize people that want to buy and rehab buildings into apartments so we can maintain the character of the Hill? The design tries but is incongruous with architecture that is already up here.
thank you,
Nancy Goodspeed

Cheryl A. Leeman
Mayor

City of Portland
Office of the Mayor and Council
Portland, Maine

June 19, 2000

Don McElhinney, Chair Portland Water District Operations Committee
Peter Larsen
Eileen Wyatt
Gary Libby
Joseph DiPietro
James Willey

Please consider the following as you review the Island View Apartments project on the issues affecting the Portland Water District (easement request for a gazebo/playscape and development associated storm water control).

As you know, Portland is in need of new housing of all types serving a wide variety of income levels. Currently the rental vacancy rate is estimated to be below 2%. The Housing Committee has held hearings and forums on this issue and many people have spoken about the need for more affordable housing, and more units in general, throughout the city. As a result, the City Council is committed to producing more housing over the next several years; in fact its recently completed 5 Year Consolidated Housing and Community Development Plan sets an ambitious goal of 235 new units by 2005. Unfortunately this is but a fraction of our community's actual housing need.

Providing more housing will result in changes to our neighborhoods. But well designed, compatible infill housing will be a change for the better that will strengthen our peninsula neighborhoods and enhance our quality of life. To be sure change is difficult, and we need to be thoughtful as we move forward.

The Island View Apartments project is the type of housing that needs to be created in the city. It is mixed income with some units designated as market rate apartments and some targeted towards lower income working families (e.g. a family of 3 with income of $26,460). It is in an established multi-family neighborhood close to the Eastern Prom and Jack School and will be an asset to the neighborhood. This is also a well designed project that will complement existing housing in the area. For these reasons the City's Housing Committee recommended providing federal housing and community development funds for the project on January 27, 2000 and on February 7, 2000 the City Council unanimously approved that funding.

Because concerns have been raised about the process followed by the City with regard to this project I would like to briefly summarize the process to date.

opportunity to modify the project. In reality it only gives residents false hope. Reality is something else.

The planning board is constrained in what they can change in site plan review based upon current so called "standards". I've only seen minor tinkering to plans in site plan review (Example- requiring Shaw's Northgate to replace their leaking garbage compactor in back of their store ,whose odor,. neighboring residents have had to put up with for years,and requiring Shaw's to build a fence to prevent plastic garbage bags and other debris from littering the neighborhood and river/ brook behind Shaw's.This in fact had been required at an earlier date but never was done, lack of oversight). May I add there is limited , if any oversight to be sure that changes to the plans are actually implemented. To believe site plan review is the resident's' salvation is erroneous. Once a plan gets to site plan review it's essentially over for the residents!!! I know you all are very busy and people don't want to step on other's toes but I strongly suggest you make time to get to some Planning Board meetings to see what goes on there . It's a fallacy. I can almost guarantee that no major changes will be made to the Silver Street project at site plan review. Their parking study will be accepted and they will not be required to add parking spaces. The size of the project will not be reduced at site plan review , it meets the standards. The traffic issue will not be addressed because the nearest intersection is at level B not E (failing), even though this project will increase traffic by 30-40% and although Washington and Walnut LOS(level of service) is at E. I've been to enough site plan reviews to be able to predict. It's over for Munjoy Hill residents, if they decide to count on the existing process. They will not.If we have no prior notice of the Warren Ave Project, it will be over for us , too

Another issue ...affordable housing. No one disputes the need . Affordable housing can be created without destroying the integrity of existing neighborhoods. Munjoy Hill neighbors suggested many alternative acceptable low impact solutions to the problem. Let's look at what happened with Back Bay Tower?(The one at Cumberland and near Forest Ave) high cost luxury rents with some affordable units (same as Island View) . They went bankrupt. Why?Luxury rents were too high for the Portland market, they remained vacant. They even tried selling/auctioning the units with limited success. $800- 1300 rents at Island View are likely to remain vacant. Who in their right mind is going to rent a one bedroom in Portland for $800?!?, particularly when they can buy for little more than that? Do these particular rents dovetail with Portland's rental needs? I agree there is a housing shortage or is it a money shortage for the price of available rents? Alternatively... another scenario. These high rents will increase rents on the Hill and eliminate the **existing** affordable rents on the Hill, resulting in a net loss of affordable units instead of a net plus.

Affordable housing is different than subsidized housing. You know more about the specifics of this project, but I don't believe these are subsidized units. Subsidized units are units where resident's pay 25-35% of their income in rent , the federal government pays the balance of the market rate. Subsidized units reach our most vulnerable residents, low income , welfare and working poor... those that PROP and Preble Street Resources talked about. These Island View affordable units are $550 - 800, they will meet the needs of some but not the needs of our most vulnerable residents. The $800 units are likely to be students/ roommate situations. In order to

afford an $800 rent, a person's income would need to be around $3,200 a month, $38,000 a year. Or in another way earn $20.00 an hour. This person could afford to buy a house. I'm not sure these units will meet Portland's housing gap needs. I'm not clear where the gaps are, but my guess is it's not this person earning $38,000. If these are subsidized units. How many are subsidized? Will those units be segregated or mixed in?

Some of my personal background. I've been a social worker in Portland and area for 25 + years. I worked for PROP for 10-12 years. And worked for the agency that received Portland 's only Housing money thru HCD, preceding Preble Street Resources(1977-1982). I did a thesis, on the History of Portland's approach to low income housing from Urban Renewal to the early mid 1980's. I could , but won't , write pages about Portland's (as well as the USA's) previous errors in their approach to low income/ affordable housing. I suffer from the problem of having a long memory and too much information in my head. First in Urban Renewal (removal), we destroyed all the affordable housing in Bayside (and other neighborhoods) because they were "blighted" and now we seek to rebuild it. Millions/ Billions spent destroying that neighborhood and now Millions spent to rebuild it. Go figure! During the early 60's my mother actually took me on a field trip of our City as they destroyed her former home and neighborhood and as they replaced it with Kennedy Park, She took me to my father's and aunt's former businesses , as they destroyed them. She wanted me to be able to see their neighborhoods and businesses before they were all gone. And she wanted me to remember the destruction. I still remember my mother's, her sisters' and her friends' sadness and rage as they saw neighborhood after neighborhood (and all those memories) in their fair City destroyed. Not all change is good, as we have learned in hindsight. Not all change is inevitable nor should it be.

Just a few more words on the history of homelessness and the creation of a housing crisis .Before 1980's there was little homelessness in Portland/US. I worked in a "housing agency" before and after 1980 and I saw the change first hand. It was a shift in economic policies that created the change. HUD was decimated,as were many of the other programs that lifted people out of poverty. The rules for social security disability and supplemental security income changed eliminating benefits to the most vulnerable, Viet Nam vets,alcoholics, those with serious mental health issues. Around the same time there was a move to de- institutionalize AMHI and replace it with community mental health services Community mental health services, which were in their infancy and were beginning to work well were also eliminated. and in many communities never had a chance to be created. Result homelessness and severe undocumented poverty, those who don't get benefits aren't counted.Anyhow... I reviewed the statistics that I had from back in the 1970-1980's regarding the number of subsidized units(section 8 +others) in Portland and compared them to today' s statistics, 20 years later they are virtually unchanged. The only difference is there are a few more family (vs elderly) units. The waiting list back in the late 70's was 10 years and is probably unchanged today.

Economic policy changes created the problem and economic policy changes will have to solve the problem. We are only nickel and doming the problem. We have no more of a housing crisis today than we did 20 years ago, the problem is not new. What we have is a decades old housing crisis. We can't solve it creating 20- 30

affordable housing units. But do we do nothing? Of course not. There are many ways to whittle away at the problem, without harming the integrity of existing neighborhoods. Much of what we are already doing works. Portland's home ownership programs work.PROP and PUNK rehab rental programs work. Habitat for Humanity works. Do we approve housing projects that will have a significant negative impact on neighborhoods to create affordable housing? Do we have to use that approach?

#11.11

44 Walnut Street
Portland, Maine 04101
October 9, 2000

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

Dear Mr. Gray:

I am writing to you in response to a postcard sent to me by the Chief Planner regarding the plan by the Silver Street Developers.
I have a few concerns and questions I hope the Planning Board will address.

1. Please clarify the number of acres under easement. My understanding is 1.35 acres are under easement, not 2.34 acres as printed on the postcard. This lower acreage would affect the number of available parking spaces.

2. Street parking is already at a premium. This project will add to this problem. I realize of course that you are not responsible for street parking. However, I wonder if the planning board would consider requesting for a contingency plan from the City of Portland to address Walnut and North Streets parking before approval of this large unit project. For example, parking by permit and parking on one side of Walnut because it is too narrow. These permits would be available to the citizens and tenants who currently live on Walnut and North Streets across from the project. This type of contingency would certainly ease some of the fears and objections to this project.

3. I am very worried about the added noise to this area, traffic and people noise. I know that you will have no control over the number of cars that pass by my house. However, you do have the authority to request barriers to dampen the noise. The project layout is such that most of the noise will filter back to Walnut Street (see diagram next page). I hope that you will ask the developer to address this issue.

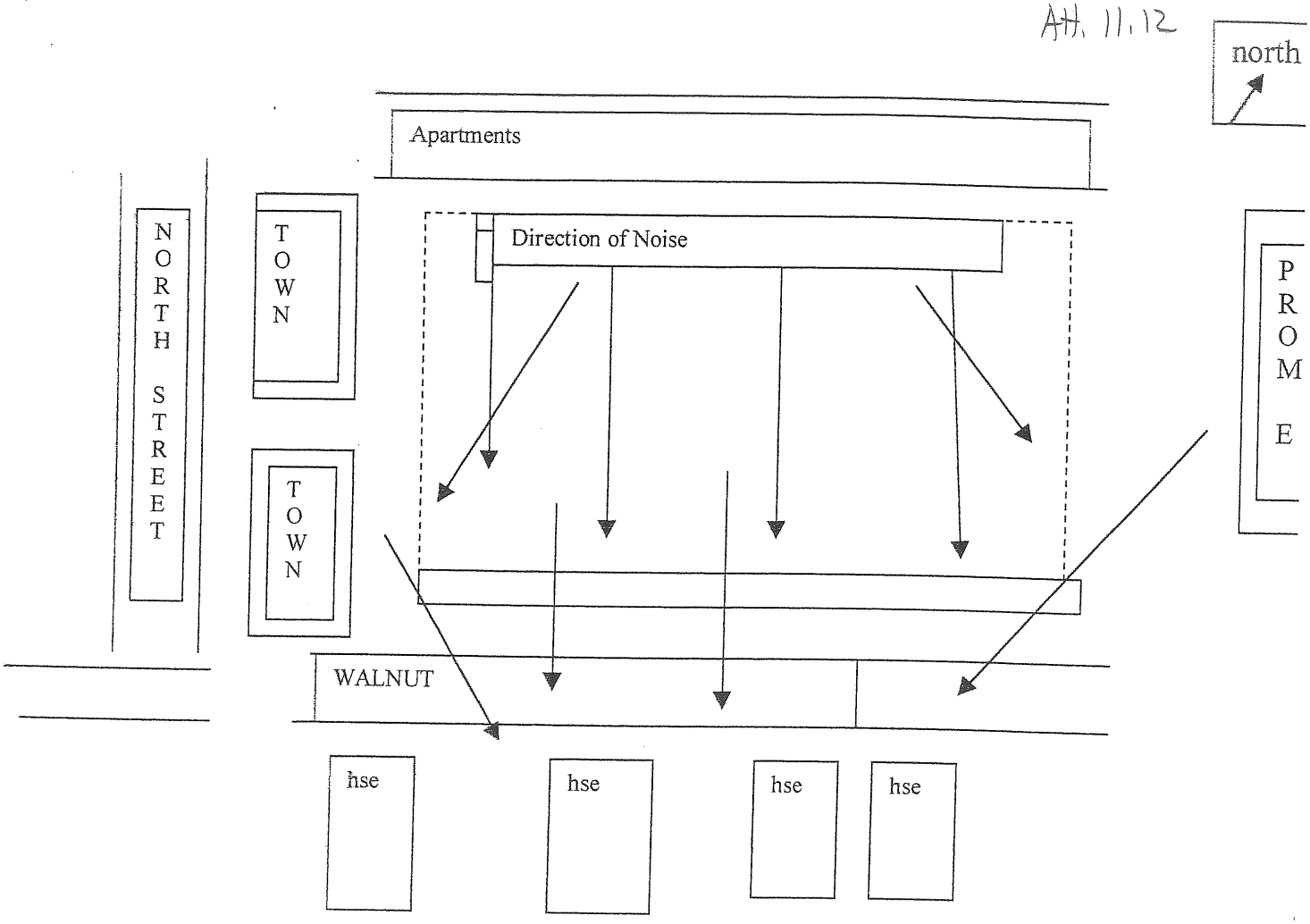
4. The subject of increase traffic is overwhelming. Traffic studies by the City will show that this area can manage the increase flow. This information is good and should not be used as the only consideration of traffic flow. A sampling of traffic does not take in all parameters. For example, safety of young school children, increase traffic on Washington Avenue and the intersection at Fox and North Street. I would be kicked out of my research class if I based my thesis on a sample study. Therefore, I urge to use this limited study as one of many guidelines to understand traffic patterns in this area.

Thank you for your consideration,

C. Susan Link

C. Susan Link

AH. 11.12



C. Susan Link
10/9/00

Att. 11.13

32 Turner St
Portland, Me
04101
Oct 6, 2005

Ms Gray,

I just received a notice about the development on the corner of North & Walnut Sts. I can't believe that we are going through this again! I learned about it first from the newspaper, it was already in place with $400,000 given to the developer! Munjoy Hill is extensively developed now. My water pressure decreased when Promenade East was built! The last thing we need is this huge development on that spot. Mixed use was tried with Back Bay Towers which ended up filing bankruptcy.

Last month I received a notice about a man who wanted a lot size reduction on Murray St which would not concern me at all!

But I am certainly concerned

Att 11.14

happened to my garage, I would not be allowed to replace it. I don't know how all these units, on that space could be allowed!!

Yours truly
Barbara Bell

AH 11.15

Joseph E. Gray

Director of Housing and Urban Development
City of Portland

October 10, 2000

Dear Sir:

At the Planning Board Workshop concerning the housing project at North and Walnut Streets, please present this question to the Board

Having building owners live in the their building or in the neighborhood near their building is essential to maintaining the character of the Munjoy Hill neighborhood. How will this housing project increase the number of owner occupied properties?

Thank you,

Jim Estes
105 North St.
Portland, Me. 04101

AH. 11.16

Joseph E. Gray

Director of Housing and Urban Development
City of Portland

October 10, 2000

Dear Sir:

At the Planning Board Workshop concerning the housing project at North and Walnut Streets, please present this question to the Board

The appearance of the Munjoy Hill area and appeal of living in this neighborhood has been enhanced recently by home owners removing unattractive vinyl siding and restoring the original siding. The large building near this proposed development are all brick buildings. Will this project continue the trend away from unattractive vinyl siding and maintain the character of the nearby building by using brick siding?

Thank you,

Jim Estes
105 North St.
Portland, Me. 04101

AH. 11.17

Joseph E. Gray

Director of Housing and Urban Development
City of Portland

October 10, 2000

Dear Sir:

At the Planning Board Workshop concerning the housing project at North and Walnut Streets, please present this question to the Board

There is considerable traffic on North and Walnut Streets at the time of morning and evening rush hours and when Jack School is opening and closing, however in the evening this is a very quiet, safe neighborhood. It is a neighborhood with a stable population where most people know and look after each other. How will this housing project make our neighborhood population more stable? How will it enhance the peaceful and friendly character of our neighborhood?

Thank you,

Jim Estes
105 North St.
Portland, Me. 04101

AH 11.18

Joseph E. Gray

Director of Housing and Urban Development
City of Portland

October 10, 2000

Dear Sir:

At the Planning Board Workshop concerning the housing project at North and Walnut Streets, please present this question to the Board

Traffic congestion at the intersection of North and Walnut Street, at Walnut St. and Washington Ave., at Eastern Prom and Washington Ave. and at Washington Ave and Fox St. is a source of frustration and potential danger. How will this housing project reduce the traffic at these congested and dangerous intersections?

Thank you,

Jim Estes
105 North St.
Portland, Me. 04101

AH 11.19

Joseph E. Gray

Director of Housing and Urban Development
City of Portland

October 10, 2000

Dear Sir:

At the Planning Board Workshop concerning the housing project at North and Walnut Streets, please present this question to the Board

The safety of pedestrian traffic, particularly the many students walking to and from Jack Elimentory School is an overwhelming concern for every person in our neighborhood and should be the concern of every person in Portland. How will this housing project improve the safety of the small children running to school in the morning and then running home again in the evening?

Thank you,

Jim Estes
105 North St.
Portland, Me. 04101

AH 11.19

Joseph E. Gray

Director of Housing and Urban Development
City of Portland

October 10, 2000

Dear Sir:

At the Planning Board Workshop concerning the housing project at North and Walnut Streets, please present this question to the Board

The lack of on street parking and the restriction to traffic caused by on street parking is a major issue on Munjoy Hill. In fact this is a problem throughout most of the Portland peninsula. Particularly in the winter when snow banks fill the sides of the streets, traffic lanes are two narrow for two cars to pass each other or for emergency vehicles to move quickly. How will this housing project reduce the problem of on street parking?

Thank you,

Jim Estes
105 North St.
Portland, Me. 04101

32 North Street
Portland
3 October 2000

Att 11.20

Jos. E. Gray, Jr.
Dir. Planning & Urban Development
City Hall
Portland, Maine

RE: Silver Street Development, North & Walnut

Dear Mr. Gray:

These comments are for the Portland Planning Board.

- Traffic

North Street is already a heavily-travelled street as we're sure you know: It's an access to 295 no less. We expect the adults can deal with the increase this 70-odd unit building will cause. But it's going to make an already touchy safety situation for the Jack School children much, much more touchy, to say the least. Why the city doesn't commission an independent traffic impact study is beyond us.

- Jack School

Locating another large residential complex* cheek-by-jowl with an elementary school – the safety, not to mention the encroachment, implications of that – one can only wonder, what this city will not allow in the way of a development.

- Childrens' safety

Not just the Jack School's students, but all the children that live and play around there are going to be threatened by the increase in

* which will make 3: Promenade East + the Senior Citizens' complex.

AH 11.21

automobile traffic, especially in the wintertime when the snow makes Walnut Street a safety hazard and the North & Walnut intersection accidents waiting to happen.

Members of the Planning Board, if your "standards of the site plan," your "subdivision ordinances," your "Site Location of Development Storm Water Permit," are so loose that they do not allow you to reject this disastrous location for this huge residential complex, we can only hope you will have the will to change your rules, or fight to change them.

Very truly yours,

Ann & Douglas Cowie

Ann & Douglas Cowie

cc Councilor Peter O'Donnell
Councilor Tom Kane

Att 12-1

KeyBank National Association
One Canal Plaza
Portland, ME 04101-4036

Tel: 800 452-8762

March 31, 2000

Mr. Joe Gray
Director of Planning
Portland Planning Department
389 Congress St.
Portland, Maine

Re: Silver Street Development / Island View Project

Dear Mr. Gray,

Roger Gendron, President of Silver Street Development, has asked me to write a letter indicating their financial capacity to develop the Island View Project in Portland. We are pleased to inform you that they indeed have both the financial capacity and the developmental expertise to build this exciting project and KeyBank is looking forward to playing an active roll in the financing of it. If you have any further questions please do not hesitate to call me at 874-7026.

W. Scott Fox
Vice President Senior Lender
Key Community Development

CC: Roger J. Gendron

12.2

Central Maine Power
162 Canco Road, Portland, Maine 04103
1-800-750-40(

February 25, 2000

Mr. Robert Metcalf
Mitchell & Associates
Landscape Architects The Staples School
70 Center Street
Portland, ME 04101

Dear Mr. Metcalf:

As a follow-up to your telephone conversation of this date with our Brian Wissley, please be advised that Central Maine Power Company has sufficient electrical load to serve your new project.

If you should have further questions, please do not hesitate to contact me at 828-2881.

Sincerely,

David A. Foss
Operations Supervisor

DAF/lb

C: B.Wissley

12.3

Department of Public Works

William J. Bray
Director

CITY OF PORTLAND

21 January 2000

Mr. Robert B. Metcalf,
Mitchell and Associates,
Landscape Architects,
The Staples School,
70 Center Street,
Portland, Maine 04101

RE: The Capacity to Handle an Anticipated Increase in Wastewater Flows, from the Proposed "Munjoy Hill Apartments," at 129-155 North Street, through the City Sewer System, and The Portland Water District Sewage Treatment Facilities.

Dear Mr. Metcalf:

The existing ten inch, as well as the existing twelve inch diameter, vitrified clay sanitary sewer pipe, in North Street, and The Portland Water District sewage treatment facilities, have adequate capacity to transport and treat the anticipated wastewater flows of 15,750 GPD, from your proposed apartment complex, to be located at 129-155 North Street, City of Portland.

Anticipated Wastewater Flows from the Proposed Apartment Complex

Proposed 31 three-bedroom apartments @ 270 GPD/Unit	= 8,370 GPD
Proposed 39 two-bedroom apartments @ 180 GPD/Unit	= 7,020 GPD
Proposed 2 one-bedroom apartments @ 180 GPD/Unit	= 0,360 GPD
Total Proposed Increase in Wastewater Flows for this Project	**=15,750 GPD**

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

Sincerely,
CITY OF PORTLAND

Frank Brancely

Frank J. Brancely, BA, MA
Senior Engineering Technician

FJB

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

O:\Engshare\CSO\129North.Doc

12.4

Northern Utilities, Inc.

June 26, 2000

Mr. Roger Gendron
Silver Street Development Corp.
via fax: 207-774-1885

RE: Updated Ability to Serve Island View Apts.,
North Street, Portland, ME

Dear Roger:

Northern Utilities Natural Gas has adequate capacity to serve the gas load requirements for this project. After much study we have found a way to upgrade our low pressure system in the area that will allow us to add your project to our system.

We are allowed to spend three years of projected revenues to connect new customers. The projected revenues from your project will be spent to increase the capacity of our system in the surrounding area, which will in turn be of great benefit to the neighboring property owners.

We will install a service to the 56 unit building and up to eight services to the 16 townhouses and set meters all at no cost to the owner/developer.

Thank you for your patience while we have worked to find a cost-effective way to add this new load. I will send our Contract for Gas Service to your attention under a separate cover letter.

If you have any questions in the meantime please feel free to call me directly at 797-8002 or 1-800-924-8002.

Sincerely,

NORTHERN UTILITIES
Bill Howard

Bill Howard
Sales Representative

Post-it® Fax Note 7671	Date 6/26	# of pages ▶ 1
To Bill Needleman	From Bob Metcalf	
Co./Dept.	Co. M&A	
Phone #	Phone #	
Fax # 756-8258	Fax #	

cc: Robert Metcalf, Mitchell & Associates

Nov 1.1

Att 12.5

Portland
Water District

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

(207) 774-5961
FAX (207) 761-8329
www.pwd.org

January 20, 2000

Mr. Robert Metcalf
Mitchell & Associates
70 Center Street
Portland, Maine 04101

Re: Munjoy Hill Apartments, Portland

Dear Bob:

The Portland Water District has a 12" & 6" water main in North Street, Portland, near the proposed site. A test on a nearby hydrant produced the following results: static pressure 52 psi; residual pressure 43 psi; with a flow of 2625 gpm. With these results in mind, the District feels we have sufficient capacity available to serve this proposed project and meet all normal fire protection and domestic water service demands. **Please notify your plumber of these results so that they can design your system to best fit the available pressure. Booster pumps may be required at the facility to provide adequate pressure for domestic and fire service.**

Service will be taken from the 12" main in North Street to reduce any impact on the surrounding area.

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

Sincerely,

PORTLAND WATER DISTRICT

David W. Coffin, PLS
Engineering Supervisor

AA 9.2
12.6

BENNETT ENGINEERING

CONSULTING ENGINEERS

31JAN00

Mitchell & Associates
The Staples School
70 Center Street
Portland ME 04101

Attn: Bob Metcalf

Re: Munjoy Hill Apartments

Based on preliminary information, we believe there will be sufficient pressure at the main to satisfy the domestic water system requirements without the need for a booster pump.

William S. Bennett, P.E.
BENNETT ENGINEERING, INC.

WSB/mmm
cc: Ben Walter - CWS

7 BENNETT ROAD • P.O. BOX 297 • FREEPORT, MAINE 04032
(207) 865-9475 • FAX (207) 865-1800 • e-mail: bnteng@ime.net

AH 9.5
12.7

From: Gaylen McDougall
To: William Needleman
Date: Thu, Feb 10, 2000 7:46 AM
Subject: Re: North and Walnut Street: 72 unit Apartments

Based on the numbers supplied by the water district we have enough pressure for fighting any fires. The water district have installed automatic pumps to build up the pressure in the event the fire department needs more. As to the pressure of domestic water that is something the engneers will have to work on.
Mac

>>> William Needleman 02/09 3:42 PM >>>
Mac,

This project went for workshop to the Planning Board and there was some discussion on the need for boosting the water pressure. I sent some information to you last week (Water capacity letter and a brief note from an engineer) regarding water supply for this development for both domestic and sprinkler supply. Could you provide a memo or an email indicating Fire Prevention's opinion on the adequacy of the water supply and the need for a booster. If you need more information, please indicate what you need and in what form. Thanks.

Bill

AH 9.3
12.8

BENNETT ENGINEERING

CONSULTING ENGINEERS

24FEB00

Mitchell & Associates
The Staples School
70 Center Street,
Portland, Maine 04101

Attn, Bob Metcaff

Re, Water pressure at Munjoy Hill Apartments

This facility is a 3-story apartment complex constructed of combustible material. The highest building is 43 ft. from ground level to the peak of the roof. Water closets on the 3rd floor of the apartments will have tanks or flush valves at an elevation of 23 ft. above the ground. Shower heads on the 3rd floor will be no more than 27 ft. above the ground. Fixtures with flush valves are the most critical as opposed to tank type or pressure assist type fixtures with respect to pressure. Tank type fixtures will work with almost any pressure.

According to a Portland Water District letter dated 20Jan00, there is a 12" water main near the site. A **residual** pressure of 43 psi, with an adjacent hydrant flowing 2625 gpm, was observed at a nearby hydrant. A 52 psi. **static** pressure was recorded at the time of the flow test.

Supply water pressure requirements for the project are as follows:

Fire Protection

According to NFPA, this facility is classified as a "Light Hazard Occupancy" and requires a flow rate capability of 500 to 700 gpm at the base of the system. The information supplied by the Portland Water District indicates that a flow rate of over 2600 gpm is available. This must be available for 60 minutes, or 30 minutes if the system has a flow alarm which sends a signal to the fire department. NFPA states that for this light hazard occupancy classification the highest sprinkler head must have a "**residual pressure**" of at least 15 psi.

Calculating:

Residual pressure of 43 psi. available at ground level minus 0.434 psi. loss/ft. multiplied by the highest sprinkler head elevation of 42 ft. (0.434 x 42= 18).
Therefore, 43 psi. - 18 psi. = 25 psi. **residual** pressure is available at the highest sprinkler head. (15 psi. required)

7 BENNETT ROAD • P.O. BOX 297 • FREEPORT, MAINE 04032
(207) 865-9475 • FAX (207) 865-1800 • e-mail: bnteng@ime.net

AH 9.4
12.9

Domestic Water Supply

The domestic water supply static pressure at ground level is 52 psi. Pressure requirements for water closet flush valves may be as low as 15 psi. for some manufacturers. We generally use 25 psi. as a minimum pressure requirement for our system design.

Calculating:

Static pressure of 52 psi. at ground level minus 0.434 psi. loss/ft. multiplied by 23 ft. to the third floor flush valves (0.434 psi x23 = 10). Therefore, 52 - 10 = 42 psi. is available at the highest flush valve.

For the shower heads on the third floor, 4 ft. more elevation is required and therefore there is a total pressure loss of 0.434 x 27 which equals 12 psi.

52 - 12 = 40psi available at the highest shower head.

From these preliminary calculations, we have concluded that neither a fire pump or a domestic water pressure booster pump will be required for this project. For this project or any other, the **"authority having jurisdiction"** may conclude otherwise. The building inspector and fire chief should review the preliminary bid documents as early as possible.

William S. Bennett, P.E.
BENNETT ENGINEERING, INC.
WSB/emm

cc: Ben Walter, CWS Architects

12.6
12.10

Portland Water District

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

(207) 774-5961
FAX (207) 761-8329
www.pwd.org

May 5, 2000

Mr. Jaimey Caron, Chairman
Portland Planning Board
389 Congress Street
Portland, Maine 04101

Re: Munjoy Hill Apartments

Dear Mr. Caron:

The Portland Water District has a 12" water main in North Street that reduces down to 6" in front of the proposed project. We have told the developer that they must take their service from the 12" water main to reduce the chance of any reduction in water pressure. We feel that by requiring the service to come off the 12" we will not be noticeably reducing the water pressure in the area. Although a 12" pipe sounds twice as large as a 6" pipe, its capacity is 5.65 times greater. For this reason, we feel that taking a new 6" fire service and a 2-inch domestic service from the 12" pipe should not result in a noticeable reduction in water pressure on North Street.

If I can be of any further assistance, do not hesitate to call me at 774-5961 ext. 3041.

Sincerely yours

David Coffin

David W. Coffin, PLS
Engineering Supervisor

GTON I & II

AH S.T
13.1

entrances, parks, apartments, condo- institutions, hospitals flare applications.

RUCTION FEATURES

Housing — One piece spun housing. Lens is clear flat tem- glass mounted in aluminum door silicone and retaining clips. A contin- EPDM gasket seals the door assembly to the housing. Lens door is hinged and secured with two captive screws.

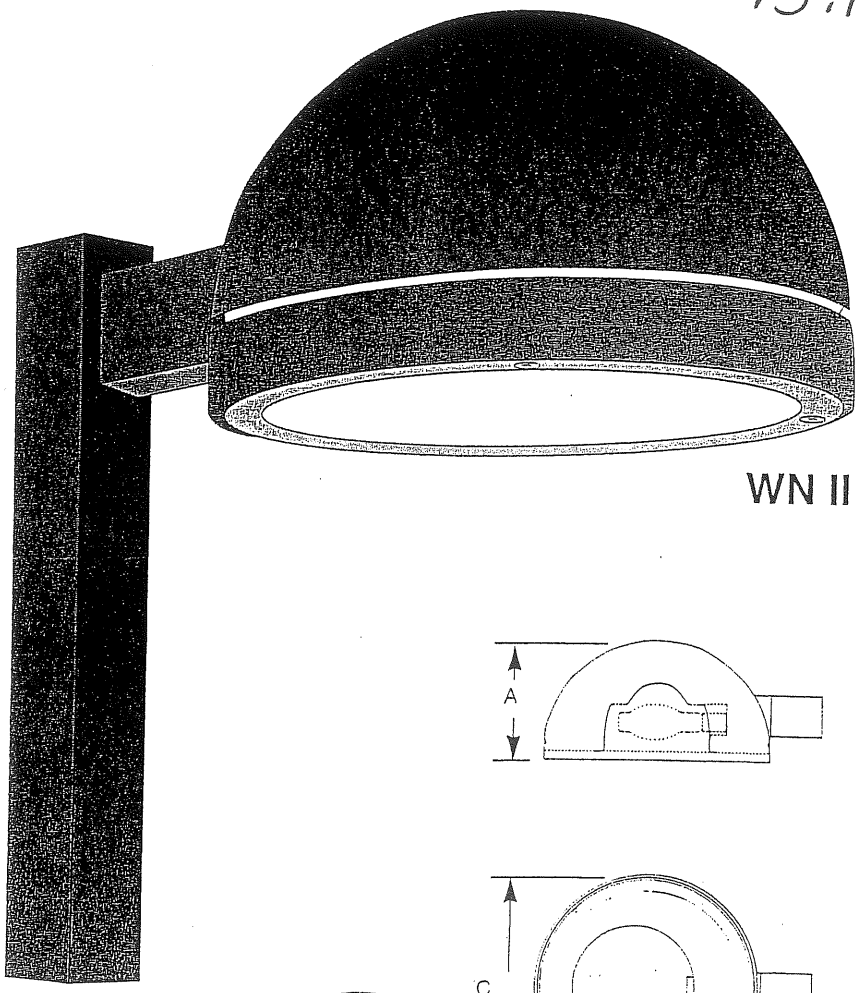
Optical Assemblies — Specular anodized aluminum reflectors with horizontal lamps provide a square symmetrical (type V), forward throw (type IV), narrow asymmetrical (types I and III) or vertical lamp symmetrical lighting patterns. Reflector panel is mounted with hinges and locking screw into housing for easy access to ballast components.

Ballast Assembly — Starting rated to -20°F. Ballasts for Metal Halide lamps are constant wattage autotransformer type. Ballasts for High Pressure Sodium are constant wattage autotransformer type using an electronic starter. All ballasts are High Power Factor. All ballast components are mounted on a removable tray.

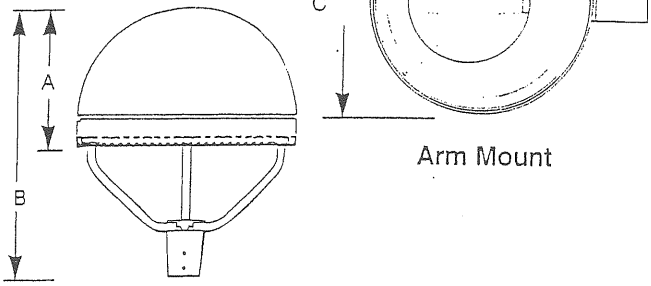
Lampholder — Mogul base glazed porcelain socket with spring loaded, nickel plated center contact and reinforced lamp grip screw shell. Sockets are pulse rated.

Mounting — Side mounting arms are extruded and adapters are cast aluminum designed for clean appearance, rigid assembly and easy field installation. Post top mounting arms of aluminum tubing hold luminaire door to cast aluminum slipfitter (for 2-inch pipe tenon).

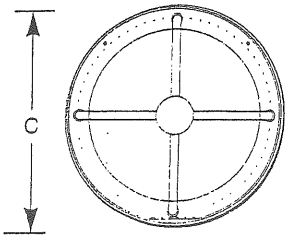
Finish — Durable baked-on polyester paint finish is available in 10 standard colors. For other finishes, consult factory.



WN II



Arm Mount



Accent Stripe Optional

Post Top Mount

Fixture	* A	B	C *	EPA
Washington I	11.50	23.50	18.00	1.0
Washington II	14.00	27.25	22.50	1.3

*

SPAULDING
LIGHTING, INC.

...NG INFORMATION

LAMP WATTAGE	ORDERING NUMBER	DESCRIPTION	NET WT/LBS
METAL HALIDE			
100W	WNI-M100	Luminaire with pole side arm	21
175W	WNI-M175	Luminaire with pole side arm	23
HIGH PRESSURE SODIUM			
* 70W	WNI-S70	Luminaire with pole side arm	21
100W	WNI-S100	Luminaire with pole side arm	23
150W	WNI-S150	Luminaire with pole side arm	24

U.L. & CSA Listed

A#13.2

*NOTE: •Specify ballast voltage — 120, 208, 240, 277, 347 or 480 volts.
•Specify color.
•Specify distribution type.

OPTIONS

DESCRIPTION	ORDER SUFFIX
*Photoelectric Cell (120v to 277v)	PC
Wall Mounting Bracket	WM
Post Top Mount	PT
Single Fuse	SF
Double Fuse	DF
White Accent Stripe	WAS
Black Accent Stripe	BAS
Mounting Adapter for Round Pole	
for 4.0" OD pole	4RPA
for 5.0" OD pole	5RPA

DESCRIPTION	ORDER SUFFIX
* OPTICAL ASSEMBLY – Horizontal Lamp	
Square V	S5
Round V	R5
Asymmetric I	1
* Asymmetric III	3
* Forward Throw (IV)	FT
OPTICAL ASSEMBLY – Vertical Lamp	
Round V (M175 or S150 max.)	VR5

WASHINGTON II

ORDERING INFORMATION

LAMP WATTAGE	ORDERING NUMBER	DESCRIPTION	NET WT/LBS
METAL HALIDE			
175W	WNII-M175	Luminaire with pole side arm	36
250W	WNII-M250	Luminaire with pole side arm	38
400W	WNII-M400	Luminaire with pole side arm	41
HIGH PRESSURE SODIUM			
150W	WNII-S150	Luminaire with pole side arm	35
250W	WNII-S250	Luminaire with pole side arm	40
400W	WNII-S400	Luminaire with pole side arm	46

U.L. & CSA Listed

*NOTE: •Specify ballast voltage — 120, 208, 240, 277, 347 or 480 volts.
•Specify color.
•Specify distribution type.

OPTIONS

DESCRIPTION	ORDER SUFFIX
*Photoelectric Cell (120v to 277v)	PC
Wall Mounting Bracket	WM
Post Top Mount	PT
Single Fuse	SF
Double Fuse	DF
White Accent Stripe	WAS
Black Accent Stripe	BAS
Mounting Adapter for Round Pole	
for 4.0" OD pole	4 RPA
for 5.0" OD pole	5 RPA

*For PC on post top mount consult factory.

DESCRIPTION	ORDER SUFFIX
OPTICAL ASSEMBLY – Horizontal Lamp	
Square V	S5
Round V	R5
Asymmetric I	1
Asymmetric III	3
Forward Throw	FT
OPTICAL ASSEMBLY – Vertical Lamp	
Round V (M250 or S150 max.)	VR5

POLE ORDERING GUIDE

Refer to Poles/Brackets Section for ordering information.

Example: WNI - PM - M400 - VS - 277 - 5RPA - RDI

Model	Mounting	Lamp Type Watts		Reflector	Voltage	Options	Color	Optional Stripe Color (for EDB)
WNI WNII U.L. & CSA Listed	PM: arm mount WB: wall bracket SF: slipfitter mount	WNI S70 S100 S150 M100 M175 M250 M400	WNII S150 S250 S400 M175 M250 M400	Horz. Lamp III: asymmetric IV: forward throw VS: symmetric square Vertical Lamp VRV: symmetric round (max S150, M175 for WNI, S150, M250 for WNII	120 208 240 277 347 480 MT: multi-tap	PC: photoelectric cell (120-277v) SF: single fuse DF: double fuse QZ: quartz standby CS: cutoff sheild 4RPA: round pole adaptor for 4" OD pole 5RPA: round pole adaptor for 5" OD pole	DBZ: dark bronze BGE: beige RRN: rocket red SGB: black SWT: white FGP: forest green TBP: teal blue RBP: royal blue CMB: burgundy LTG: lite gray	WCS: white BCS: black OCS: other

Refer to Poles/Brackets Section for ordering information.
Model WNI - EPA 1.0, Model WNII - EPA 1.3

Optical Assembly

- Horizontal lamp position with formed anodized aluminum reflectors and flat tempered glass lens for type III asymmetric, type IV forward throw. or type VS square symmetric distribution
- Vertical lamp position with formed anodized aluminum reflector and flat tempered glass lens for type VRV round symmetric distribution

Lampholder

- Enclosed medium porcelain socket for M100 horizontal. and M100, M175 & S150 vertical lamps
- Enclosed mogul porcelain socket for all other lamps
- HPS sockets are pulse rated

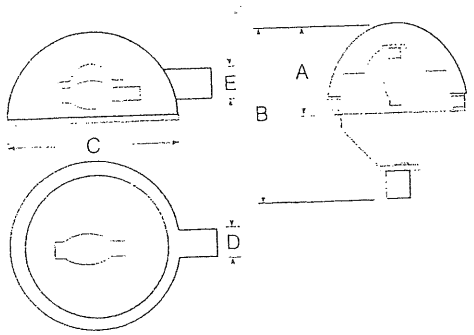
Ballast

- High power factor, starting rated to -20°F
- Metal Halide: constant wattage autotransformer
- High Pressure Sodium: 250W & 400W - constant wattage autotransformer with electronic starter, 70W to 150W - high reactance with electronic starter

Finish

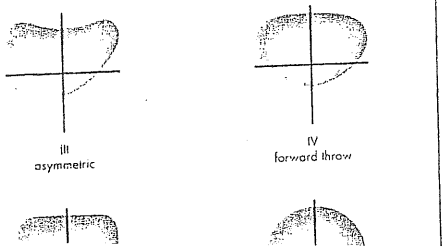
- Baked on polyester paint available in 10

DIMENSIONS



	A	B	C	D	E
WNI	11.5"	23.5"	18"	3.18"	4.68"
WNII	14"	27.25"	22.5"	3.18"	4.68"

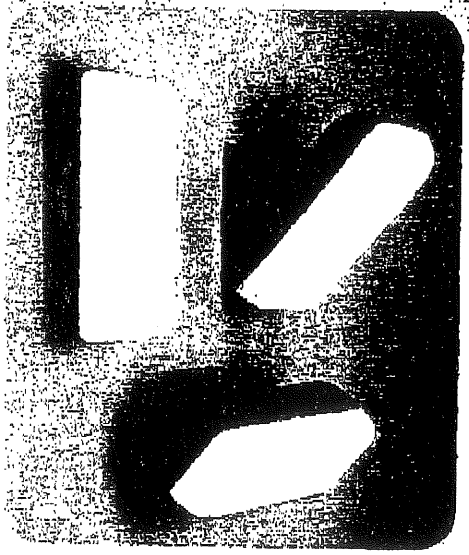
DISTRIBUTION PATTERNS



AH 13.3

FOR SPECIAL OPTIONS SEE PAGE 67

POLY WALLITE™



HOUSING
- Injection molded polycarbonate
- Light weight
- Corrosion free
- Water tight gasket in lens track
- Bright white aluminum reflector plate
- Ballast(s) are located in rear housing cavity for maximum unobstructed illumination.
  Mounts to electrical box by keyhole knockouts.

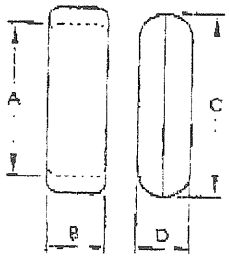
FINISH
- Specular black

LENS
- White • Impact resistant
- Injection molded polycarbonate
- UV stabilized • Non yellowing
  Secured by heavy duty snap-in retention.

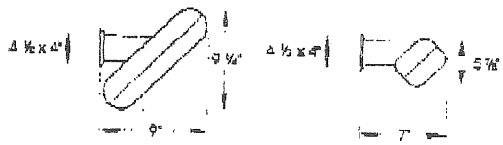
LAMP WATTAGES
- 9 / 13 / 18 / 22 / 26 / 28

ELECTRICAL
- Standard for indoor/outdoor use
- UL listed • Wet location
- Class "P" ballast(s) • Thermally protected
- Normal power factor • 120V - 60Hz AC

CATALOG NUMBER	LAMP(S)	A MOUNTING BACK HEIGHT	B MAX. BASE WIDTH	C MAX. BASELESS HEIGHT	D DEPTH
PW/9	PL9/27K	8 1/4"	4"	10 7/8"	3 3/4"
PW/13	PL13/27K	8 1/4"	4"	10 7/8"	3 3/4"
PW/18	(2) PL9/27K	8 1/4"	4"	10 7/8"	3 3/4"
PW/G22	QUAD 22/27K	8 1/4"	4"	10 7/8"	3 3/4"
PW/26	(2) PL13/27K	8 1/4"	4"	10 7/8"	3 3/4"
PW/G28	QUAD 28/27K	8 1/4"	4"	10 7/8"	3 3/4"



OPTIONAL ANGLE BRACKET SHOWN



POLY ROUNDLITE™

HOUSING
- Injection molded polycarbonate
- Heavy duty • Unbreakable
- Corrosion free
- Conduit entry knockout
- Water tight gasket in lens track
- Bright white aluminum reflector plate
- Ballast(s) are located in rear housing cavity for maximum unobstructed illumination.
  Mounts to electrical box by knockout screw slots.

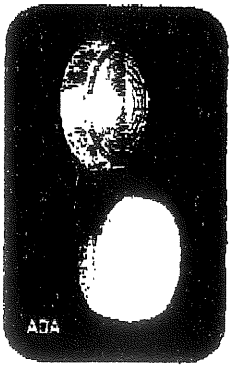
FINISH
- White

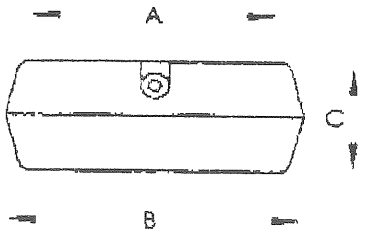
LENS
- Clear multi patterned prismatic
- Injection molded polycarbonate
- Impact resistant
- UV stabilized • Non yellowing
  Secured by two rust resistant screws.

LAMP WATTAGES
- 9 / 13 / 18 / 26 / (28)

ELECTRICAL
- Standard for indoor/outdoor use
- UL listed • Wet location
- Class "P" ballast(s) • Thermally protected
- Normal power factor • 120V - 60Hz AC

CATALOG NUMBER	LAMP(S)	A MOUNTING BACK DIAMETER	B MAXIMUM BACK DIAMETER	C DEPTH
PRL/9	PL9/27K	9 1/4"	9 7/8"	4"
PRL/13	PL13/27K	9 1/4"	9 7/8"	4"
PRL/18	(2) PL9/27K	9 1/4"	9 7/8"	4"
PRL/26	(2) PL13/27K	9 1/4"	9 7/8"	4"
PRL/G28L	QUAD 28 LINEAR /28K	9 1/4"	9 7/8"	4"





To: Bill Needleman
From: Bob Metcalf
AH 13.4

FOR SPECIAL OPTIONS SEE PAGE 67

PRE

EGGLITE™

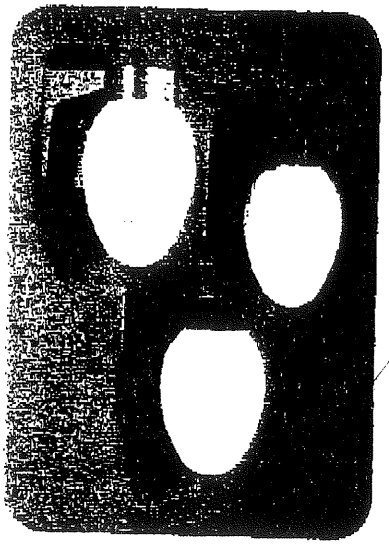
HOUSING
- Durable cast aluminum
- Corrosion free
- Ballast(s) located in rear housing cavity, for centered, even light distribution
  Mounts to electrical box with center nipple and knurled chrome finial.

FINISH
- Brushed satin aluminum

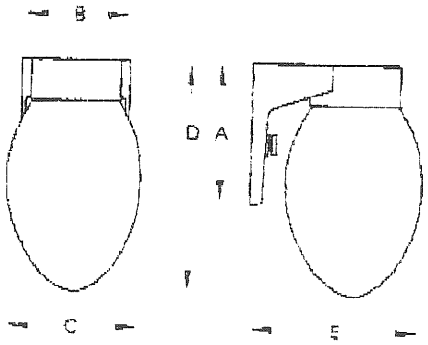
LENS
- Smooth white - Seamless
- Polycarbonate - Impact resistant
- UV stabilized - Non yellowing
  Threaded neck screws into housing for secure water tight fit and easy relamping.

LAMP WATTAGES
- 9 / 13 / 18 / 22 / 26 (28)

ELECTRICAL
- Standard for outdoor use
  (For indoor use, thermal protection option is required)
- UL listed - Wet location
- Nominal power factor - 120V - 60Hz AC



CATALOG NUMBER	LAMP(S)	A BASE HEIGHT	B BASE WIDTH	C EGG DIAMETER	D OVERALL HEIGHT	E EXTENS. DEPTH
FE/9	PL9/27K	6"	4 1/2"	5 1/2"	9 1/8"	7 1/4"
FE/13	PL13/27K	6"	4 1/2"	5 1/2"	9 5/8"	7 1/4"
FE/18	(2) PL9/27K	6"	4 1/2"	5 1/2"	9 5/8"	7 1/4"
FE/Q22	QUAD 22/27K	6"	4 1/2"	6 1/2"	9 5/8"	7 1/4"
FE/26	(2) PL13/27K	6"	4 1/2"	5 1/2"	9 5/8"	7 1/4"
FE/Q28	QUAD 28/27K	6"	4 1/2"	5 1/2"	9 5/8"	7 1/4"



* Wall mount

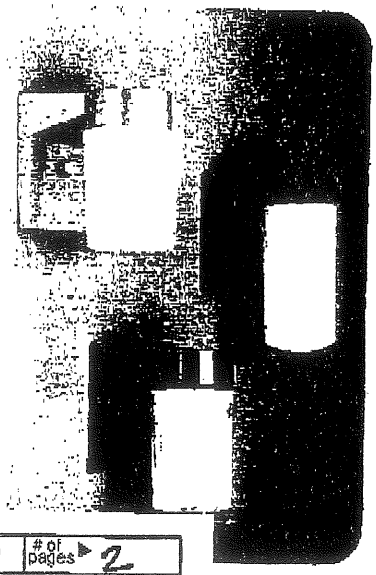
JARLITE™

HOUSING
- Durable cast aluminum
- Corrosion free
- Ballast(s) located in rear housing cavity, for centered, even light distribution
  Mounts to electrical box with center nipple and knurled chrome finial.

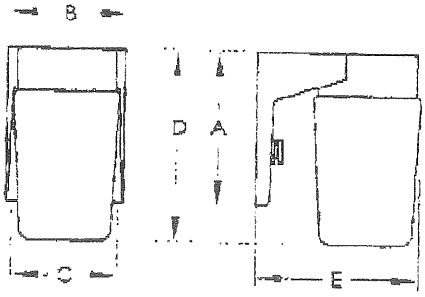
FINISH
- Brushed satin aluminum

LENS
- Smooth white - Seamless
- Polycarbonate - Impact resistant
- UV stabilized - Non yellowing
  Threaded neck screws into housing for secure water tight fit and easy relamping.

LAMP WATTAGES
- 7 / 9 / 13 / 18 / 22 / 26 / 28
  (For HPS version see



CATALOG NUMBER	LAMP(S)	A BASE HEIGHT	B BASE WIDTH	C JAR DIAMETER	D OVERALL HEIGHT	E EXTENS. DEPTH
FJ/7	PL7/27K	6"	4 1/2"	3 1/2"	6 7/8"	6 1/8"
FJ/Q9	QUAD 9/27K	6"	4 1/2"	3 1/2"	6 7/8"	6 1/8"
FJ/Q13	QUAD 13/27K	6"	4 1/2"	3 1/2"	6 7/8"	6 1/8"
FJ/9	PL9/27K	6"	4 1/2"	3 1/2"	8"	6 1/8"
FJ/18	(2) PL9/27K	6"	4 1/2"	3 1/2"	8"	6 1/8"
FJ/Q22	QUAD 22/27K	6"	4 1/2"	3 1/2"	8"	6 1/8"
FJ/13	PL13/27K	6"	4 1/2"	3 1/2"	9 1/4"	6 1/8"
FJ/26	(2) PL13/27K	6"	4 1/2"	3 1/2"	9 1/4"	6 1/8"
FJ/Q28	QUAD 28/27K	6"	4 1/2"	3 1/2"	9 1/4"	6 1/8"



Post-it® Fax Note 7671	Date 10/17	# of pages ▶ 2
To Bill Needleman	From Bob Metcalf	
Co./Dept. RANNING	Co. M&A	
Phone #	Phone # 774-4427	
Fax # 756-9258	Fax #	

AH 7.1

The SIGNAL GROUP

One City Center
Portland, Maine 04101
207•780•0201
Fax 207•780•8060
www.signalgroup.com
www.mahra.com

August 29, 2000

Revised Parking Need Analysis for Island View Apartments

Mr. Roger Gendron
Silver Street Development
100 Silver Street
Portland, Maine 04101

Dear Roger,

Enclosed please find our analysis of the projected most likely parking need for the proposed Island View Apartments to be located on North Street in Portland, Maine.

The proposed 70-unit mixed income complex has 119 on site parking spaces – a parking ratio of 1.7 spaces per unit. A staff report addressed to the Planning Board from the Planning Office dated January 11, 2000 stated the following: "... previous applicants for apartment projects on this site have requested fewer spaces than the (zoning) formula suggests, based on proximity to public transportation and other criteria. If a parking analysis should show a reduced need for parking, Planning staff supports lowering the required spaces ...".

The Signal Group (TSG) has completed a review of nine existing apartment complexes located on the peninsula (for the purpose of this analysis, the peninsula is defined to extend to Baxter Boulevard). Please note of the nine properties only two had a parking ratio of *greater* than one space per unit; three had a ratio of *equal* to one space per unit; and four had a ratio of *less* than one space per unit.

Of the two properties with a parking ratio of greater than one space per unit, one is located the furthest from downtown Portland (Back Cove Estates) and both are 100% higher end market rate apartment complexes with 2 bedroom units comprising 84% of the total number of available apartments (Back Cove Estates and Baxter Place).

Of the three properties with a parking ratio equal to one space per unit, all are located directly on a bus route (Back Bay Tower, Holt Hall, Emerson School), all are within walking distance to the city's downtown commercial district, and two are either mixed income (Back Bay Tower) or 100% low to moderate income properties (Emerson School) with the lower income tenants utilizing very few parking spaces.

Of the four properties with a parking ratio of less than one space per unit, all are located within walking distance to a bus route as well as to the city's downtown commercial district

(Bayview Court, Forest Park, Lafayette Square, and Shailer School), and two are either mixed income properties (Lafayette Square) or 100% low to moderate income properties (Shailer) with the lower income tenants utilizing very few parking spaces.

In TSG's judgment, the Island View Apartments parking demand will most likely resemble the mixed income properties of Back Bay Tower and Lafayette Square. The two and three bedroom units will likely demand 2 spaces per unit whereas the low-income tenants will demand as few as .06 (Back Bay Tower) to a maximum of .43 spaces per unit (seven times the Back Bay Tower ratio and two times the Lafayette ratio). If one applies the zoning standard of one extra space per every six units for visitors, then the projected most likely parking demand for Island View Apartments would be as follows:

41 Market Units	*82 parking spaces*	*(2 spaces per unit)*
29 Low Income Units	*15 parking spaces*	*(.43 spaces per unit)*
Visitor Spaces	*12*	*(1 space per every six units)*
Total Demand	***109***	
Total Ratio	*1.51 spaces per unit*	

It is TSG's understanding that the actual number of proposed parking spaces by Silver Street Development for Island View Apartments is 119 spaces – which is ten spaces more than the Most Likely Scenario.

Should you have any questions about this analysis, please do not hesitate to give me a call.

Sincerely,

Jim ODonnell
Vice President
The Signal Group

PARKING SURVEY: CITY OF PORTLAND APARTMENT COMPLEXES

29-Aug-00

Property	Total Units	Subsidized	# of Bedrooms Market	0	1	2	3	Cost of Parking Per Unit	Total Parking Spaces	Parking Usage	Parking Ratio Space per Unit
1 Back Bay Tower	116	35	81	0	4	63	14	$75 per month covered	116	100%	1.00
Back Bay Tower				0	2	27	6	$75 per month covered	8		
Back Bay Tower Commercial Space	6,000 SF										
2 Back Cove Estates	66	0	66	0	0	66	0	included in rent	100	90%	1.52
3 Baxter Place	62	0	62	0	20	42	0	$45 per month surface	85	100%	1.37
4 Bayview Court	70	0	70	32	36	2		included in rent	56	100%	0.80
5 Emerson School	22	all-mod income	0					included in rent	22	75%	1.00
6 Forest Park	220	0	220	0	71	147	2	$15-25 per month surface	200	100%	0.91
7 Holt Hall	36	0	36	3	18	15	0	included in rent	36	100%	1.00
8 Lafayette Square Apartments	96	74	22					$50 per month surface	85	60%	0.89
Lafayette Square Apartments											
9 Shailer School	20	all-mod income	0					included in rent	15	70%	0.75

Mixed Income Properties Name	Number of Low Income Untis	Number of Spaces Actually Rented by Low Income Units	Parking Ratio Rented Spaces Per Unit
1 Back Bay Tower	35	2	0.06
2 Lafayette Square Apartments	74	15	0.20

Island View Apartments *MOST LIKELY PRKING DEMAND*	Number of Units Market	Low Income	TOTAL	Number of Spaces Projected to Be Actually Rented By Tenants Market	Low Income	TOTAL	Parking Ratio Rented Spaces Per Unit
Market	*41*		*41*	*82*		*82*	*2.00*
Low Income		*29*	*29*		*15*	*15*	*0.52*
Visitors						*12*	*N/A*
TOTAL			*70*			*109*	*1.51*

AH 8A.1

From: Anthony Lombardo
To: William Needleman
Date: Tue, Oct 10, 2000 9:38 AM
Subject: North St. and Walnut St. Apts.

I spoke with Bob Metcalf today and Public Works is ok with their proposed sanitary sewer configuration.

AH 8A.2

From: "stephen bushey" <bbushey@maine.rr.com>
To: Portland.CityHall(WBN)
Date: Wed, Oct 18, 2000 2:54 PM
Subject: island view apart.

Bill,

I have quickly reviewed the October 5 letter and plans dated 9-29-00 for Island view. In general, they still appear to need review and sign off from the Public Works Dept for a number of items.

My only technical comment pertains to the proposed sewer services from the Townhouses; These may need to be graphically revised so that each service leader connects to the trunk line properly, i.e. each connection must be made in the direction of flow. Currently it appears they connect against the pipe flow. Tony L. sould comment on this.

Steve Bushey

AH 8A.3

From: Anthony Lombardo
To: William Needleman
Date: Thu, Oct 19, 2000 9:47 AM
Subject: Re: Fwd: island view apart.

I have met with Bob Metcalf and received his plans to review. Public Works comments and issues have been addressed.

>>> William Needleman 10/19 9:39 AM >>>
Tony,

Could you get me some feed back on Island View apts as soon as possible. Thanks.

Att 8.1

MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTS

October 5, 2000

Planning Board Members
City of Portland
389 Congress Street
Portland, Maine 04101
Attention: Mr. Bill Needleman

Re: Island View Apartments

Dear Planning Board Members:

This correspondence is in regards to engineering review comments received by our office that were prepared by Mr. Steve Bushey for the planning staff as part of the Site Plan review process. We have prepared the following responses for your review and consideration:

1. The applicant should provide additional supporting data on the detention basin construction including impacts to the nearby carport retaining wall, the anticipated basin bottom treatment, i.e. grass or gravel, and additional data on the soils and retaining wall construction. How far back is the anticipated excavation for the geogrid reinforcement? I realize they have already included the requirement to dig a test pit prior to construction; this data should be provided to the planning staff and DRC.

   The treatment of the basin will consist of a six inch clay lens bottom, four inches of loam, and seeded to grass. We are presently having the additional test pit excavation performed in order to prepare the supporting design information requested for the geogrid placement and to study the relationship of the basin to the existing carport retaining wall. This information will be submitted to the planning staff for review prior to the public hearing.

2. Additional grading information including spot grades should be provided in front of the 3 story garden apartments, at the two driveways and around the buildings.

   We prepared the additional grading information requested by Mr. Bushey. This information will occur on the next submission for the public hearing.

THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

Telephone (207) 774-4427
Fax (207) 874-2460
E-Mail mitchell@nlis.net

8.2

3. The Vortech structures must be fully designed per manufacturer's recommendations, which may include the use of a bypass structure at each unit. Separate plans could be provided to staff and the DRC prior to construction for this item.

   The applicant has no problem with this item being a condition of approval. Normally, we have the manufacturer provide a detailed shop drawing based upon the project requirements.

4. The Public Works Dept. should sign off on the reconstruction of the sidewalk along North Street as well as the activities within the street.

   Mitchell & Associates will be coordinating with Public Works to discuss the required improvements and to provide the proper detailing necessary to complete the work. We will address these issues prior to the next submission.

5. Sewer cleanouts should be provided at each entry point to the buildings. The Public Works Department may also want new manholes at each of the new mainline sewer connections in the street given that each proposed sewer main will be serving multiple units.

   The plans have been revised to address these items and we plan to meet with Public Works to review the changes prior to a plan resubmission.

6. The Public Works Dept. should comment on the street restoration requirements, which will be necessary for the proposed service trenches into North Street. As many as 6 trench's appear necessary. Will the Applicant be responsible to provide full length and width pavement overlay along that portion of North Street?

   Mitchell & Associates intends to meet with Public Works to review the full extent of the impact to North Street in order to determine the scope of work to be completed.

7. The Public Works Dept. should comment on the adequacy of the North Street drainage system to handle the increased stormwater flows which will be discharged to the system as a result of this project.

   We are presently waiting for written comments from Public Works. As we understand at this time from Mr. Needleman, Public Works is satisfied with the proposed drainage plan and the flows to North Street.

8. The stormwater report contains a paragraph which states that MH#1 will have a rim elevation of 135.5. I believe this should be 133.50.

   The report does have a typographical error, a revised page will be submitted to correct the error.

8.3

9. The applicant should provide evidence that the PWD reservoir structural capacity is adequate to handle the additional 1-2 feet of fill to be placed over the south corner.

   We shall obtain written documentation concerning the amount of fill that is permitted to occur over the reservoir.

10. The applicant's engineer should review the location of the 18" inlet to the basin and relocate it to the east side of the basin, thus eliminating the short circuiting effect of having the inlet and outlet so close together.

    The proposed detention basin has not been designed to address stormwater treatment. Treatment is to occur via the Vortech structure. Given the site constraints of directing stormwater to the basin, relocation of the 18" inlet is not feasible.

11. The applicant's engineer should review the location of the outlet control structure; outlet pipe and transformer pad since the pad appears to be directly on top of the pipe. They should consider relocating one or the other to avoid conflicts wit the UGE and storm drainpipe.

    The plan has been revised, relocating the transformer pad toward the front of the site.

12. The applicant should provide some detail as to the anticipated construction sequence, staging areas, construction entrances, etc.

    A detailed construction schedule will be provided at the next submission. A plan will also be annotated to address the question concerning construction access and staging areas.

We intend to address as many of these items as possible prior to the Planning Board workshop session. Should you have any questions concerning our responses, please do not hesitate to contact our office.

Sincerely:
Mitchell & Associates

John D. Mitchell

cc Roger Gendron
Walter Webber

From: "Steve Bushey" <srbushey@maine.rr.com>
To: "william needleman" <wbn@ci.portland.me.us>
Date: Thu, Sep 21, 2000 2:34 PM
Subject: Island View Apartments

Bill,

I have reviewed the revised submission materials dated August 30, 2000 prepared by Mitchell and Associates on behalf of Silver Street Development corp. on the above project. The plans remain generally complete and acceptable for approval. I have reviewed the stormwater management report and find the proposed stormwater management system to be acceptable. I offer the following comments:

1. The applicant should provide additional supporting data on the detention basin construction including impacts to the nearby carport retaining wall, the anticipated basin bottom treatment i.e. grass or gravel, and addtional data on the soils and retaining wall construction. How far back is the anticipated excavation for the geogrid reinforcement? I realize they have already included the requirement to dig a test pit prior to construction; this data should also be provided to the planning staff and DRC.
2. Addtional grading information including spot grades should be provided in front of the 3 story garden apartments, at the two driveways and around the buildings.
3. The Vortech structures must be fully designed per manufacturer recommendations, which may include the use of a bypass structure at each unit. Separate plans could be provided to staff and the DRC prior to construction for this item.
4. The Public Works Dept. should sign off on the reconstruction of the sidewalk along North Street as well as all utilities activities within the street.
5. Sewer cleanouts should be provided at each entry point of the sewers into the buildings. The Public Works Dept. may also want new manholes at each of the new mainline sewer connections in the street, given that each proposed sewer main will be serving multiple units.
6. The Public Works Dept. should comment on the street restoration requirements which will be necessary for the proposed service trenchs into North Street. As many as 6 trench appear necessary. Will the Applicant be responsible to provide full length and width pavement overly along that portion of north Street?
7. The Public Works Dept. should comment on the adequacy of the North Street drainage system to handle the increased stormwater flows which will be discharged to the system as a result of this project.
8. The Stormwater report contains a paragraph which states that MH#1 will have a rim elevation of 135.5. I believe this should be 133.50
9. The applicant should provide evidence that the PWD reservior structural capacity is adequate to handle the additional 1-2 feet of fill to placed over the south corner.
10. The applicant's engineer should review the location of the 18' inlet into the basin and relocate it to the east side of the basin, thus eliminating the short circuiting effect of having the inlet and outlet so close together.
11. The applicant's engineer should review the location of the outlet control structure, outlet pipe and transformer pad since the pad appears to be directly on top of the pipe. they should consider relocating one or the other to avoid conflicts with the UGE and storm drain pipe.
12. The applicant should provide some detail as to the anticipated construction sequence, staging areas, construction entrances, etc.

If you have any questions regarding these comments please call.

Steve

Att. 9.1

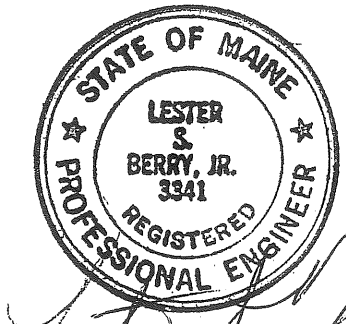
AMENDED

STORMWATER MANAGEMENT REPORT
FOR
ISLAND VIEW APARTMENTS
WALNUT AND NORTH STREETS
PORTLAND, ME

BY

SILVER STREET DEVELOPMENT CORPORATION
PORTLAND, ME

AUGUST 2000



9-29-00

Prepared By:
Berry Huff McDonald Milligan, Inc.
28 State Street
Gorham, ME 04038
(207) 839-2771 PHONE
(207) 839-8250 FAX
BH2M@aol.com EMAIL

TABLE OF CONTENTS

AMENDED

STORMWATER MANAGEMENT REPORT

For: Island View Apartments
Walnut and North Streets
Portland, ME

INTRODUCTION

In March 2000, a "Stormwater Management Report" was prepared by BH2M Engineers for the proposed Island View Apartment project in Portland, Maine. Since this submission, the project has been in the review process with both the City and the Portland Water District. Issues related to deeds and contracts have resulted in the redesign of certain features which include the Stormwater Management Plan. Mitchell Associates has prepared a new Site Plan which is hereby referenced.

The impact to drainage results in the removal of underground structures within the land under the control of the Portland Water District. This will require the relocation of the detention pond and removal of the outlet and inlet pipes that cross the PWD land.

The existing Stormwater Report has been reviewed and found to be still valid through the "Predevelopment Analysis" (Section E.2.). The "Post-development descriptions" (Section D.4.) and "Analysis (Section E.3.) have been updated. The remainder of the report which includes "detention basin" details and "Stormwater Quality" have also been updated.

D. Postdevelopment Drainage Plan - New Plan Attached.

4. Subwatershed Boundaries

As a result of eliminating the outlet of the detention pond connected to the Walnut Street drainage system, other options needed to be investigated. The Eastern Promenade system was further investigated as it discharged over the hill and into the sewage treatment plant system. Due to the size of the drainage basin as it enters the treatment plant site and the extensive need to upgrade off-site pipes, this route was not considered feasible.

The North Street drainage system appeared to have the best potential for accepting the project flows. This was based upon the observation that the drainage basin was relatively small, the tc routes were very short and detaining flows to after the basin peak seemed a possibility. Therefore, the calculations have been updated still using the three models.

- The Walnut Street model is predominately composed of off-site runoff. In the postdevelopment condition there will be no changes in the infrastructure except adjusting the grades of some catchbasin rim. Reaches 1 through 8 are identical to the predevelopment calculations. The subareas SA-1 through 5 will change slightly with the new grading plan and SA 6-8 will be the same.

- The Eastern Promenade model has been reduced somewhat since the building has been adjusted. The small drainage pipes have been replaced along the sidewalk, as requested by the City. The model consists of the following subareas: SA27, SA-28, SA-29, SA-900 and SA-1000.

- The North Street model has been changed dramatically. The predevelopment runoff occurs very quickly so the detention pond primarily discharges after the existing peak. To make this work, a higher percent of on-site runoff was diverted or graded to the pond. On-site subarea SA-21, SA-22, SA-24, SA-26 and SA-30 drain to the pond. Only SA-23, SA-31 and SA-1100 drain directly to the North Street system.

E. Runoff Analysis

1. Qualifications - same

2. Predevelopment Analysis - same

3. Postdevelopment Analysis - updated

Walnut Street System - See Appendix D

The peak flow rates are reduced slightly due to on-site drainage to the system being reduced and the detention pond being routed to North Street.

FLOW (cfs)

Reach	2 yr.	10 yr.	25 yr.	Pipe Size	Capacity (cfs)
Reach 1	0.46	0.76	0.89	12"	6.75
Reach 2	0.73	1.19	1.40	12"	6.59
Reach 3	0.74	1.21	1.43	12"	6.26
Reach 4	1.02	1.67	1.98	12"	13.98
Reach 5	1.26	2.07	2.47	15"	12.31
Reach 6	1.57	4.64	6.30	15"	19.95
Reach 7	2.72	6.64	8.72	15"	16.15
Reach 8	3.10	7.59	9.97	18"	10.72

Analysis Point # 1 is Reach 5 or at the property line.

	Post	Pre
2 Year Storm	1.26 cfs	1.81 cfs
10 Year Storm	2.07 cfs	3.04 cfs
25 Year Storm	2.47 cfs	3.61 cfs

Peak flow rates for each storm will be reduced and are less than the existing pipe capacity.

Analysis Point # 2 is Reach 8 which is the "weakest link" in the system.

	Post	Pre
2 Year Storm	3.10 cfs	3.18 cfs
10 Year Storm	7.59 cfs	7.85 cfs
25 Year Storm	9.97 cfs	10.31 cfs

Peak flow rates for each storm will be reduced and are less than the existing pipe capacity.

Analysis Point # 6 (Reach 11 w/7.33 cfs capacity)

2 Year Storm =	3.03 cfs (vs 1.92 cfs)
10 Year Storm =	5.10 cfs (vs 4.38 cfs)
25 Year Storm =	6.11 cfs (vs 4.48 cfs)

The proposed peak flow rates will be higher than predevelopment rates but less than the capacity of the storm drain system. The above flows are actually lower than the proposed flow rates in the previous study. This was possible by directing more pavement to the detention pond and limiting the initial discharges to a 4" orifice only.

4. 100 Year Storm - See Appendix I
See G.4 Emergency Spillway

G. Detention Basin

1. Basin Sizing - See Appendix F, Post-development
(North Street), Pond 1 for 2, 10, 25 and 100 year storms.

2. Inlet Calculations - See previous report.

3. Outlet Calculations - N/A

4. Emergency Spillway Calculation - The pond does not have a rip-rap emergency spillway which would be typically included. This is due to site conditions, or more specifically, there is no viable overflow point without potentially adversely impacting the downhill abutters. The calculations (Appendix J) show that a 100 year storm will be completely contained within the basin and does not need an overflow. However, if the outlet became blocked, the pond would backup and spill over via CB # 1 and CB # 8. CB # 3 and MH #1. MH # 1will have it's rim set at elevation 135.5 which will become the first overflow point. Runoff will then flow to the Eastern Promenade system without damaging property. MH # 1 will have a CB grate.

5. Subsurface Investigation Report - None - A test pit is recommended to evaluate the soils. If well drained sand and gravels are found, measures will be recommended to prevent rapid percolation.

6. Embankment Specifications - See detail sheet.

7. Embankment Seepage Control - See # 5.

Eastern Promenade System

This system is almost the same as the previous report. The small drain pipes along the sidewalk have been replaced.

Analysis Point # 3 (Reach 9)

2 Year Storm -	0.93 cfs (vs. 1.59 cfs)
10 Year Storm -	2.01 cfs (vs. 4.69 cfs)
25 Year Storm -	2.80 cfs (vs. 6.37 cfs)

The peak flow rates at Reach 9 will be reduced significantly due to the reduction in size of SA-9 from predevelopment to postdevelopment. The peak flow rates have also been reduced slightly from the previous report.

Analysis Point # 4 (Reach 10)

2 Year Storm =	0.93 cfs (vs. 0.52 cfs)
10 Year Storm=	2.01 cfs (vs. 0.52 cfs)
25 Year Storm=	2.79 cfs (vs. 0.55 cfs)

The peak flow rates will be increased because the 6" pipe will be replaced and runoff should be flowing in the pipe and not over the sidewalk.

North Street System

The majority of on-site runoff will be routed to the detention pond before being discharged to the existing North Street storm sewer. Analysis Point # 5 was selected at the downstream end of North Street which has a maximum capacity of 10.67 cfs in a 15" pipe. Analysis Point # 6 has also been identified because it is the 12" pipe directly downstream of the project with a maximum capacity of 7.33 cfs.

Analysis Point # 5 (Reach 13 w/10.67 cfs capacity)

2 Year Storm =	3.89 cfs (vs 2.33 cfs)
10 Year Storm =	6.44 cfs (vs 3.65 cfs)
25 Year Storm =	7.74 cfs (vs 5.45 cfs)

8. Outlet Seepage Control - See Antiseep Collar detail.

9. Detail Sheet - See Plans.

10. Basin Cross-Section - See Plans.

11. Basin Plan Sheet - See Plans.

12. Maintenance Plan - See Appendix G.

H. INFILTRATION SYSTEMS - None

I. EASEMENTS - Easement recommended to construct outlet piping and increase total flow to Promenade East Condominium system.

J. VARIANCE - North Street system only; for increase in peak flow rates.

STORMWATER QUALITY CONTROL

A. NARRATIVE

See "Quantity" narrative.
In accordance with City of Portland standards for water quality for parking - more than 25 parking spaces the following is proposed.

Walnut Street System

Pavement will actually be reduced in this drainage basin.

Eastern Promenade System

No proposed pavement will drain to this system so no treatment is proposed.

North Street System

Almost all of the proposed pavement will drain to the proposed detention pond. Since almost half of these areas will drain by sheet flow, it is not possible to install a structure in front of the detention pond. Therefore, Vortech Structure # 1 is proposed near North Street.

B. POST-PROJECT PLAN - See "Quantity" section.

C. BASIC STABILIZATION - An Erosion and Sedimentation Plan is included in the project plans.

D. 80% TSS REMOVAL - N/A.

E. SLIDING SCALE TSS REMOVAL - The city standards are not specific, so the sliding scale system has been used.

Walnut Street System

None required

Eastern Promenade System

None required

North Street System

Flow to Vortech Structure # 1
On-site Area (SA's 21, 22, 30, 26, 23, 24) = 2.23 acres
On-site Pavement = 1.53 acres
%Pavement = 69%

Sliding Scale Treatment = 71%

Treatment from Vortech Structure # 1 = 80%

Sizing Vortech Structure # 1
Peak Flow (25 Year Storm - Reach 28) = 1.91 cfs ← use for design
Vortech Structure Selected = Model 2000

F. PHOSPHORUS REMOVAL - N/A

AH 10

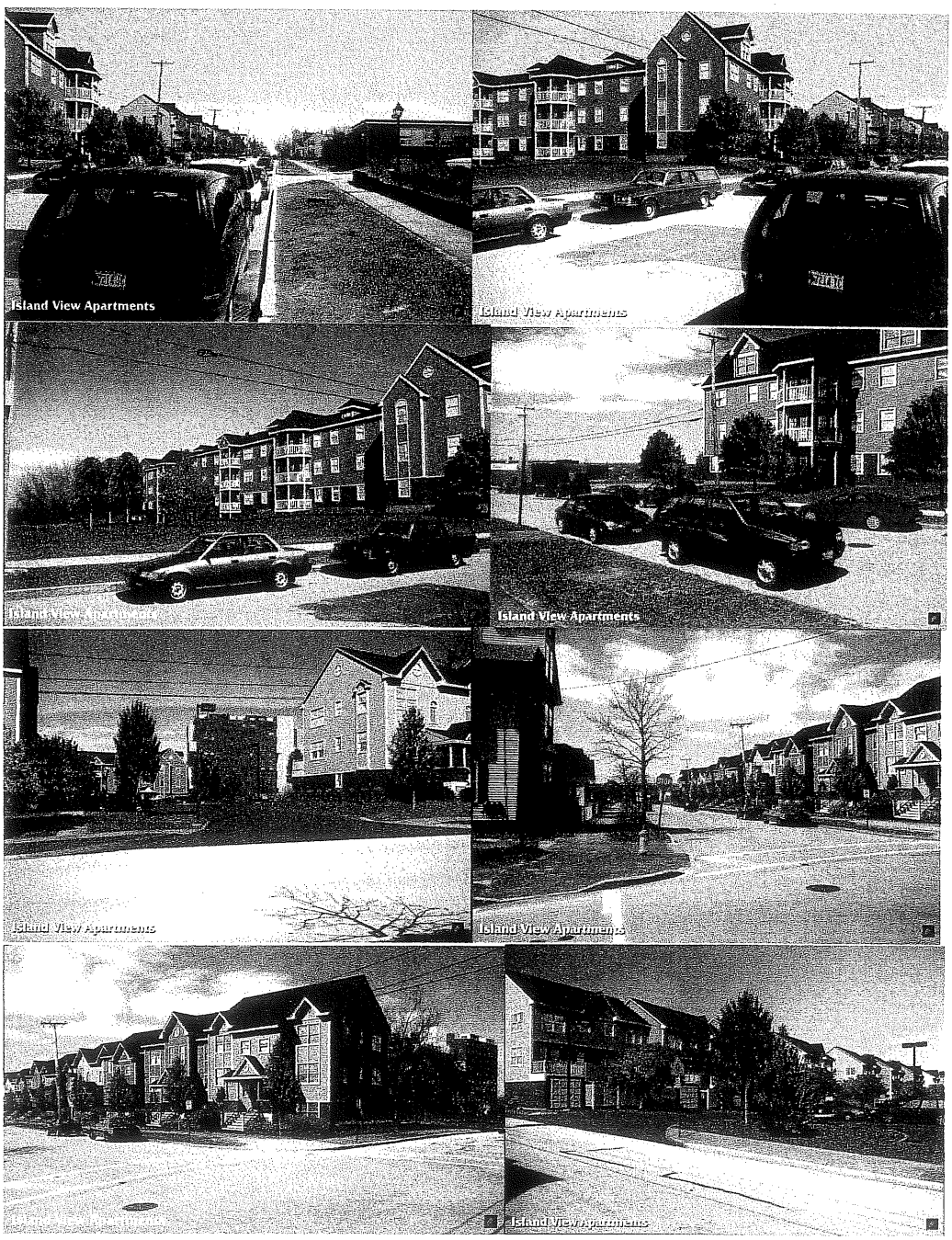
CURTIS WALTER STEWART
Architects

434 Cumberland Avenue
Portland ME 04101-2325

Benedict B. Walter, Vice President
Phone: 207.774.4441
Fax: 207.774.4016
E-mail: BWalter@CWSarch.com

Island View Apartments
North and Walnut Streets
Portland, Maine

Perspective Photo Composites of Proposed Development



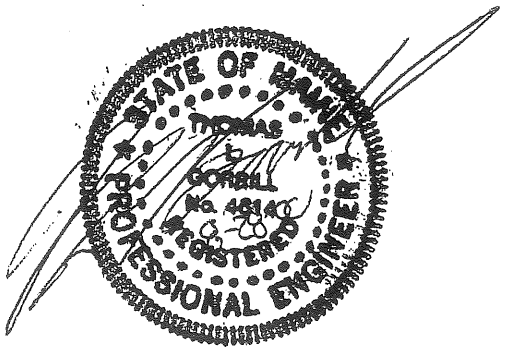
Att 6

Traffic Impact and Parking Study

For Proposed
Island View Apartments
on
Munjoy Hill in Portland

Prepared for:

Silver Street Development



Revised
August 2000

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 and Parking Study
Island View Apartments
Portland, Maine

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. has been retained by Silver Street Development Corp to complete a traffic impact study for construction of a proposed 70 unit apartment development to be known as Island View Apartments to be located on the northerly corner of North Street and Walnut Street in Portland. The location of the site is shown in Figure 1 of Appendix A. The site is located at the top of Munjoy Hill and will have one driveway on North Street and an emergency only drive onto Walnut Street.

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

1. Gorrill-Palmer Consulting Engineers, Inc. estimates the proposed project will generate the following trip ends:[1]

Weekday	594
AM peak hour	39
PM peak hour	51

2. The intersection capacity analyses shows that the proposed development can be accommodated by the existing street system.

3. The sight lines exiting the proposed driveway as well as the emergency access driveway are adequate.

4. The accident history provided by the Maine Department of Transportation (MDOT) shows that there is one intersection in the study area which is a High Accident Locations (HALs).

5. It is Gorrill-Palmer Consulting Engineers, Inc. opinion that a parking ratio of 1.71 spaces per unit or 120 spaces will be sufficient for this development.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the traffic generated by the construction of the 70 unit Island View Apartments will not have a significant impact on the surrounding street system.

[1] A trip end is either a trip in or out of the site. Thus a round trip would equal two trip ends.

I. Existing and Proposed Uses

Silver Street Development Corporation proposes to construct a 70 unit development known as Island View Apartments to be located on the northerly corner of North Street and Walnut Street in Portland. The 2.4 acre site is located at the top of Munjoy Hill with access from one driveway on North Street and an emergency only drive onto Walnut Street. It is bounded on the north by Jack Elementary School, on the east by the Promenade East condominium development, on the south by Walnut Street and on the west by North Street. The property is horseshoe shaped and essentially surrounds a 2.3 acre site (Map 15, Lots 2 & 3) owned by the Portland Water District (PWD). The PWD property, consisting of an underground water storage tank, will be leased by the applicant for access, parking and open space. The proposed apartment development consists of 70 apartments in two buildings – one consisting of townhouse type apartments and the other of garden type apartments. The unit mix consists of 16 three-bedroom townhouse apartments; and 54 mixed sized garden apartments.

II. Background Traffic Conditions

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

- Computerized accident information for the period 1996 – 1998 supplied by the MDOT.
- Layout plan (Sheet 3) prepared by Mitchell Associates dated May 2, 2000.
- AM and PM Peak hour traffic counts at the intersection of Walnut Street and North Street by Eaton Traffic Engineering. The AM peak hour occurred from 7:45 – 8:45. The actual PM peak hour occurred from 4:45 – 5:45 PM but the 3:00 – 4:00 peak hour was also counted at this location due to its proximity to the school and was only 3 vehicles less but had significant pedestrian volumes. Therefore the 3:00 – 4:00 PM volumes were utilized for this intersection.
- AM and PM peak hour turning movement counts collected by Gorrill-Palmer Consulting Engineers, Inc. at the intersection of Walnut Street/Congress Street/Fox Street on Friday January 21, 2000 from 7:00AM to 9:00AM and again from 4:00 PM to 6:00 PM. This data shows the peak hour for the intersection to be from approximately 7:30 AM to 8:30 AM and again from 4:45 PM to 5:45 PM. The results of the turning movements for the AM and PM peak hour are shown in Figure 2 of Appendix A.

Seasonal Adjustment

The traffic counts collected at the intersections would normally be adjusted from January volumes to approximately the 30th highest hour of the year, which generally occurs in the summertime. However, because this area is primarily residential and influenced by the Jack School, the volumes were adjusted to those expected in June using MDOT adjustment factors derived from their statewide traffic count program.

Background Growth

The project is anticipated to be completed by 2001. Typically traffic volumes grow by 2 – 3% per year, although lower rates can be expected in residential areas. Accordingly, Gorrill-Palmer Consulting Engineers, Inc. has adjusted the traffic counts collected by a rate of 2% per year to 2001. The predevelopment AM and PM peak hour volumes were determined by adjusting the traffic volumes shown in Figure 2 by the seasonal adjustment and background growth. The resulting 2001 predevelopment AM and PM peak hour volumes are shown in Figure 3 of Appendix A.

III. Trip Generation

Gorrill-Palmer Consulting Engineers, Inc. has compiled the potential trip generation estimate for the 70 unit apartment complex utilizing The Institute of Transportation Engineers (ITE) publication Trip Generation, 6th Edition. The trip estimates were derived based upon our review of 3 similar land use codes as summarized in the Table below:

Land Use Code	AM Peak Hour Trip Ends	PM Peak Hour Trip Ends
220-Apartment	38	57
221-Low Rise Apartment	41	49
230-Residential Condos/Townhouses	39	46

Since each of these land use codes are similar in nature, Gorrill-Palmer Consulting Engineers, Inc. has used an average to estimate the number of trip ends, resulting in the following trip estimates:

AM Peak Hour	39 trip ends
PM Peak Hour	51 trip ends

IV. Trip Distribution

Gorrill-Palmer Consulting Engineers, Inc. estimated the distribution of trips in and out of the site based on information published by The Institute of Transportation Engineers (ITE) which resulted in the following estimates:

Trip Distribution Estimate			
Time Period	Trips Entering	Trips Exiting	Total Trip Ends
AM Peak Hour	6	33	39
PM Peak Hour	34	17	51

V. Trip Composition

Gorrill-Palmer Consulting Engineers, Inc. has based the trip composition on 100% of the trips being primary trips made for the sole purpose of going to and from the site.

VI. Trip Assignment

Gorrill-Palmer Consulting Engineers, Inc. has based the trip assignment on the traffic patterns observed during the traffic counts. The resulting trip assignment forecast for the project is shown in Figure 4.

VII. 2001 Post-Development Traffic

The anticipated year 2001 pre-development volumes shown in Figure 3 have been combined with the traffic forecast for the development in Figure 4 to yield the 2001 post-development traffic forecast shown in Figure 5 of Appendix A.

VIII. Study Area

The Maine Department of Transportation (MDOT) requires a traffic study for 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.

The project is anticipated to generate 39 and 51 trip ends during the AM and PM peak hours respectively, well below the threshold level requiring a traffic permit.

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the operation and safety of the following two intersections as part of this study:

- North Street/Walnut Street
- Washington Street/Walnut Street

IX. Capacity Analyses

Gorrill-Palmer Consulting Engineers, Inc. performed capacity analyses for the two intersections listed above. These intersections are unsignalized and were evaluated using the Highway Capacity Software.

The capacity analysis assesses the quality of traffic flow at intersections and provide a ranking based upon its delay and Level of Service (LOS). Level of service rankings are

similar to the academic ranking system where an "A" indicates very little delay and an "F" indicates very poor or extreme conditions. At an unsignalized intersection, if the level of service falls below a "D", the intersection should be examined further to determine if it meets one or more of the warrants set forth in the Manual on Uniform Traffic Control Devices. The following table summarized the relationship between delay and level of service at unsignalized intersections:

Level of Service Criteria for Unsignalized Intersections	
Level of Service	**Total Delay per Vehicle (sec)**
A	Up to 5.0
B	5.1 to 10.0
C	10.0 to 20.0
D	20.1 to 30.0
E	30.1 to 45.0
F	Greater than 45.0

Gorrill-Palmer Consulting Engineers, Inc. based our analyses on Figures 3 and 5, the pre and post-development AM and PM peak hour volumes respectively. The results of these analyses are summarized below for each intersection. The analyses were based on the existing geometrics:

Walnut Street/North Street AM Peak Hour				
Approach/Movement	**Pre-development**		**Post-development**	
	Delay (sec)	**LOS**	**Delay (sec)**	**LOS**
North Bound North	4.6	A	4.9	A
South Bound North	3.7	A	3.4	A
East Bound Walnut	2.3	A	2.3	A
West Bound Walnut	2.2	A	2.2	A

Walnut Street/North Street PM Peak Hour				
Approach/Movement	**Pre-development**		**Post-development**	
	Delay (sec)	**LOS**	**Delay (sec)**	**LOS**
North Bound North	4.4	A	4.8	A
South Bound North	3.6	A	3.7	A
East Bound Walnut	2.2	A	2.3	A
West Bound Walnut	2.3	A	2.2	A

Walnut Street/Washington Avenue/Fox Street AM Peak Hour				
Approach/Movement	Pre-development		Post-development	
	Delay (sec)	LOS	Delay (sec)	LOS
East Bound Fox	34.7	E	38.0	E
West Bound Walnut	38.8	E	47.5	F
North Bound Washington	7.3	B	7.3	B
South Bound Washington	2.8	A	2.8	A

Walnut Street/Washington Avenue/Fox Street PM Peak Hour				
Approach/Movement	Pre-development		Post-development	
	Delay (sec)	LOS	Delay (sec)	LOS
East Bound Fox	29.2	D	38.6	E
West Bound Walnut	17.8	C	21.2	D
North Bound Washington	3.1	A	3.1	A
South Bound Washington	4.5	A	4.6	A

As shown in the tables, the analysis demonstrates that the current levels of service at the intersection of Walnut and North Streets are unaffected by the traffic generated by the proposed development.

The level of service at the intersection of Washington, Walnut and Fox did decrease slightly. It is not uncommon to have level of service of F at intersections of arterials and local roads in urban areas. This intersection currently does not appear to meet any of the warrants for a traffic signal.

It is Gorrill-Palmer Consulting Engineers, Inc. understanding from Larry Ash, the City's traffic engineer, that there has been a suggestion in the past to consider a four-way stop. Gorrill-Palmer Consulting Engineers, Inc. does not recommend installation of a four-way stop due to the approach grade on Walnut Street which has the right-of-way at the intersection. Requiring traffic on Walnut Street approaching North Street from Washington Avenue would cause operational problems during the winter months.

Larry Ash also recommended the following improvements at the intersection of Walnut Street and North Street during his review of a prior development proposal on this site.

1. Parking be restricted on both sides of Walnut Street for 75 feet west of North Street;
2. Parking be restricted on both sides of Walnut Street for 60 feet east of North Street;
3. Per City code, parking be restricted for 30 feet in advance of the stop sign on North Street at its intersection with Walnut Street; and

4. Warning signs be placed in advance of the stop signs on North Street advising of a stop ahead.

Gorrill-Palmer Consulting Engineers, Inc. concurs with these recommendations.

X. Accident Analysis

Gorrill-Palmer Consulting Engineers, Inc. has based accident analysis of this study area on data obtained from the Maine Department of Transportation for the period 1996-1998.

In order to evaluate whether a location has an accident problem, MDOT uses two criteria to define High Accident Locations (HAL). Both criteria must be met in order to be classified as an HAL. These criteria are:

(1) 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 eight accidents over a three-year period.

Accident data was provided by the MDOT for the study area and is summarized below:

Accident Summary for Study Area – 1996-1998			
Location	Accident History	Critical Rate Factor	HAL?
Intersection of Walnut Street and North Street	1	0.56	No
Intersection of Walnut Street and Washington Avenue	14	1.96	Yes
Intersection of Fox Street and Washington Avenue	0	0	No
Washington Avenue between Walnut Street and Fox Street	0	0	No
Walnut Street between Washington Street and Sheridan	3	0.45	No
Walnut Street between Sheridan and Poplac Street	1	5.45	No
Walnut Street between Poplac Street and North Street	0	0	No

Based on this information, the intersection of Walnut Street and Washington Avenue is an HAL. A collision diagram was drawn and is contained in Appendix C. Based on our examination of the collision diagram, there does not appear to be a correctable pattern to the accidents. They appear to be equally divided between traffic associated with Walnut

Street, Fox Street and the convenience store. Therefore, no corrective measures are recommended.

XI. Sight Lines

The Maine Department of Transportation publication "Access Management, Improving the Efficiency of Maine Arterials" provides recommended sight distances based on driveway classifications. The classifications are as follows:

Low Volume Driveways: Driveways with a traffic volume of less than 500 vehicle-trips per day or 50 or less vehicle-trips per peak hour.

Medium Volume Driveways: Driveways with a traffic volume of 500 to less than 1,500 vehicle-trips per day, or 50 to less than 150 trips per peak hour.

High Volume Driveways: Driveways with a traffic volume of 1,500 or more vehicle-trips per day or 150 or more vehicle-trips per peak hour.

The traffic volume forecast during the PM peak hour for the site driveways upon completion of the proposed project is summarized below:

Location	Trip Ends
Driveway on North Street	41
Emergency Driveway on Walnut Street	0

Thus, both driveways would be categorized as low-volume driveways. The guidelines set forth by the MDOT for sight distance for medium-volume driveways are as follows:

MDOT Standards for Sight Distance for Low and Medium-Volume Driveways	
Speed (mph)	Desirable Sight Distance (ft)
20	200
25	250
30	300
35	350
40	400
45	450
50	500
55	550

Gorrill-Palmer Consulting Engineers, Inc. has evaluated the available sight lines at the existing and 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 ½ feet above ground
Height of approaching vehicle	4 ¼ feet above road surface

The 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 speed limit on both Walnut Street and North Street is 25 mph. For analysis purposes the 85th percentile speed was estimated at 30 mph. The results of the sight line analyses exiting the site drives are summarized in the table below:

Driveway	Sight Lines Looking:			
	Available Left (ft)	Desirable (ft)	Available Right (ft)	Desirable (ft)
Exiting onto Walnut Street	Over 300	300	200	250
Exiting onto North Street	Over 300	300	Over 300	300

This table shows that the available sight lines at the driveways exceed the desirable sight lines except at the Walnut Street driveway looking to the right. Visibility to the right exiting the Walnut Street driveway is restricted due to the steep grade of Walnut Street between Walnut Street and Commercial. However, based on our site visits vehicles traveling up Walnut Street toward North appear to be traveling at or below the 25 mph speed limit. Based on this lower speed and the fact that the majority of the traffic is expected to turn right, it is Gorrill-Palmer Consulting Engineers, Inc. opinion that the sight lines are adequate and the driveway will operate safely. We do recommend that all plantings and signage be placed a minimum of 15 feet off the edge of the shoulder in the vicinity of the driveways so as not to interfere with sight lines.

XII. Forecast of Parking Demand

The parking demand for the proposed project has been estimated based on the following sources of information:

- Institute of Transportation Engineers (ITE) publication Parking Generation, 2nd Edition.
- Other similar projects in Portland
- Count of actual parking demand at Back Cove Estates off Ocean Street in Portland and at Tamarlane off Canco Road in Portland.

The proposed 70 unit project on Munjoy Hill is planned to include 29 units of affordable housing and is within walking distance of a Metro bus stop. Projections of the parking demand have been made using each of the sources of information as summarized below:

- Estimated Parking Demand based on ITE publication Parking Generation

This publication contains parking generation rates for two land uses; 221 Low/Mid-Rise Apartments and 230-Residential Condominiums. These rates were determined based on other studies in the United States. According to the ITE publication, the surveys from which the forecasts were derived were generally conducted between 10:00 PM and 12 midnight or between 5:00 AM and 6:00 AM, time periods when the greatest number of occupants would be at home. The data indicated that the parking rate is always less than 2 spaces per dwelling unit with the average rate being less than 1.2 spaces per dwelling unit. The parking rates determined from this data are summarized below:

Land Use	Average Rate	Range of Rates	No. of Studies	Avg. No. of Units
Low/Mid Rise Apartment				
Weekday	1.04	0.24-1.90	60	222
Saturday	1.21	0.68-1.76	11	547
Residential Condominiums				
Weekday	1.11	0.20-1.61	32	166
Saturday	0.95	0.47-1.36	6	285

If the highest rate observed of 1.90 spaces/unit is utilized to determine the parking demand of the 70 unit proposal for Munjoy Hill, the demand would be 133 spaces (70 units x 1.90 spaces/unit).

- Estimated parking demand based on other similar projects in Portland.

A summary of the parking ratios which exists at other developments in Portland similar in nature to that proposed for Munjoy are summarized below based on information furnished by the City of Portland:

Location	No. of Units	No. of Parking Spaces	Parking Ratio (spaces/unit)
Back Cove Estates	66	130	1.97
Lafayette Square	103	103	1.00
Back Bay Tower	116	124	1.07
Munjoy South	140	165	1.18
Tamarlane*	115	230	2.00

* All units are market rate rentals

This data shows that the three projects within the peninsula have a maximum ratio of 1.18 while the other projects have a ratio of between 1.97– 2.00. Applying the 1.18 rate is applied to the proposed 70 units project results in a demand of 83 spaces (70 units x 1.18 spaces/unit).

- Estimated parking demand based on observations at other similar projects in Portland.

Gorrill-Palmer Consulting Engineers, Inc. counted the number of spaces occupied at 10:00 PM Thursday January 27th at Back Cove Estates and Tamarlane in Portland. These developments were chosen for two reasons. First, they are the projects with the highest existing spaces/unit ratio of the five projects listed above and therefore the demand determined should be higher that the proposed project (i.e. a conservative rate), Secondly, the parking spaces are all confined on site with no potential for on street parking. The results of our counts are summarized below:

Location	No. of Occupied Units	No. of Occupied Spaces	Occupied Parking Ratio
Back Cove Estates	66	69	1.05
Tamarlane	114	133	1.17

These rates are well below the number of spaces actual provided. Applying a ratio of 1.17 spaces per unit to the proposed 70 unit development would result in 82 spaces being required.

- Recommended Parking Ratio

In Gorrill-Palmer Consulting Engineers, Inc. opinion it is important to be somewhat conservative (estimate high) when choosing the parking ratio to be applied to the proposed project. However, being too conservation will result in spaces which are not used and increase pavement area and runoff from the site.

Division 20 of the City of Portland's Land Use Ordinance requires "two (2) parking spaces for each dwelling unit, plus one (1) additional parking space for every six (6) units or fraction there of". Applying this rate would result in 152 spaces for the proposed project (70 x 2 + 70/6). It is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that this number of spaces will not be necessary for the site given its proximity to the downtown and to Metro service which passes the site and it's mix of affordable and market rate apartments. It is our opinion that a rate of 1.71 will be sufficient for this project resulting in 120 spaces. This rate is much higher than the rate of 1.18 for the existing apartment complexes on the peninsulas.

XIII. Summary of Findings and Conclusions

Gorrill-Palmer Consulting Engineers, Inc. makes the following conclusions and recommendations based upon this study:

1. Gorrill-Palmer Consulting Engineers, Inc. estimates the proposed project will generate the following trip ends:[2]

Weekday	594
AM peak hour	39
PM peak hour	51

2. The intersection capacity analyses show that the proposed development can be accommodated by the existing street system.

3. The sight lines exiting the proposed driveway as well as the emergency access drivway are adequate.

4. The accident history provided by the Maine Department of Transportation (MDOT) shows that there is one intersection in the study area which is a High Accident Locations (HALs).

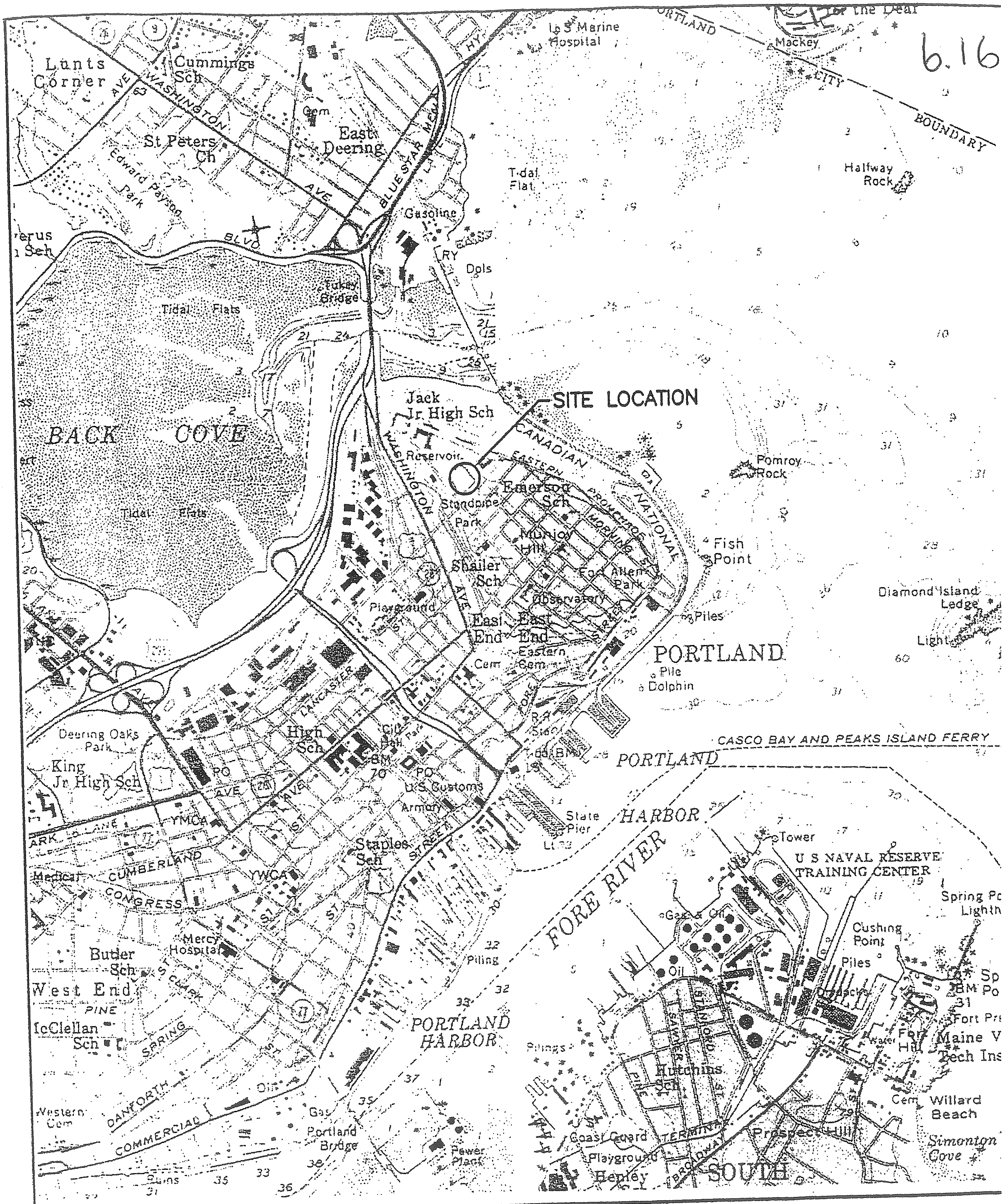
5. It is Gorrill-Palmer Consulting Engineers, Inc. opinion that a parking ratio of 1.71 spaces per unit or 120 spaces will be sufficient for this development.

Based on these findings, it is the opinion of Gorrill-Palmer Consulting Engineers, Inc. that the traffic generated by the construction of the 70 unit Island View Apartments will not have a significant impact on the surrounding street system.

[2] A trip end is either a trip in or out of the site. Thus a round trip would equal two trip ends.

APPENDIX A

6.16



U.S.G.S. Location Map

Island View Apartments - Portland, Maine

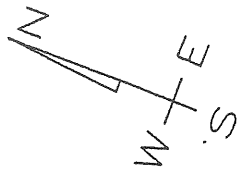
U.S.G.S. Portland East & Portland West Quadrangles, Maine-7.5 Minute Series

Design	TLG	Date	FEB. 2000
Drawn	LAN	Scale	N.T.S.
Check	TLG	Job No.	148

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237
31 Main Street
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: gpcei@maine.rr.com

Figu

1



WALNUT STREET

NOVEMBER 1997
7:45 – 8:45 AM
3:00 – 4:00 PM

P=2 (6)
3 (3)
41 (20)
1 (3)

P=89 (3)
7 (7)
26 (18)
68 (46)

NORTH STREET

1 (4)
12 (17)
5 (13)
P=8 (89)

20 (9)
10 (27)
25 (47)
P=48 (12)

JANUARY 2000
7:30 – 8:30 AM
4:00 – 5:00 PM

P=1 (0)
37 (21)
56 (27)
10 (10)

P=4 (2)
15 (18)
169 (472)
69 (47)

WASHINGTON AVENUE

16 (41)
711 (215)
21 (21)
P=21 (2)

FOX STREET

14 (28)
18 (72)
25 (61)
P=15 (0)

XX – AM PEAK HOUR
(XX) – PM PEAK HOUR
P – PEDESTRIANS

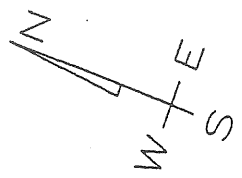
Design: TLG	Date: FEB. 2000		
Draft: LAN	Job No.: 148		
Checked: TLG	Scale: NTS		

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237, 31 Main Street
Gray, ME 04039
207-657-6910

Drawing Name: Existing Traffic Volumes

Project: ISLAND VIEW APARTMENTS
NORTH AND WALNUT STREET, PORTLAND

Figure No. 2



WALNUT STREET

P=2 (7)
4 (4)
48 (24)
1 (4)

P=105 (4)
8 (8)
31 (21)
80 (54)

NORTH STREET

1 (5)
14 (20)
6 (15)
P=9 (105)

24 (10)
12 (32)
30 (55)
P=57 (14)

ADJUSTMENT FACTORS
TIME OF YEAR
NOVEMBER TO JUNE 1.09
JANUARY TO JUNE 1.21
BACKGROUND GROWTH 2%/YEAR

P=1 (0)
47 (26)
71 (33)
13 (12)

P=5 (2)
19 (22)
213 (582)
87 (58)

WASHINGTON AVENUE

20 (51)
896 (265)
26 (26)
P=26 (2)

FOX STREET

18 (35)
23 (89)
32 (75)
P=19 (0)

XX – AM PEAK HOUR
(XX) – PM PEAK HOUR
P – PEDESTRIANS

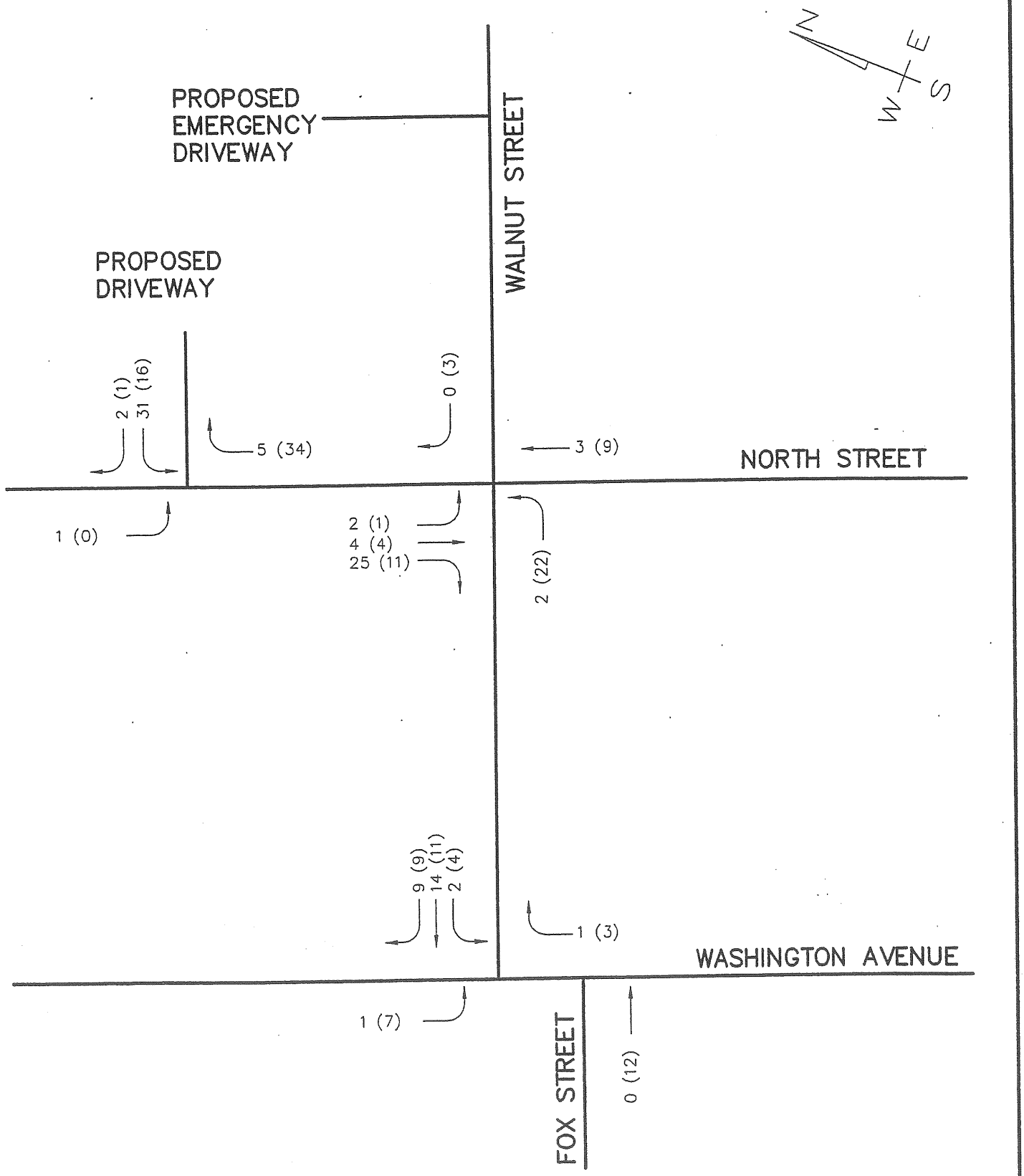
Design: TLG	Date: FEB. 2000
Draft: LAN	Job No.: 148
Checked: TLG	Scale: NTS

Gorrill-Palmer Consulting Engineers, Inc.
Traffic and Civil Engineering Services
PO Box 1237, 31 Main Street
Gray, ME 04039
207-657-6910

Drawing Name: **2001 PreDevelopment Peak Hour Traffic Volumes**

Project: **ISLAND VIEW APARTMENTS NORTH AND WALNUT STREET, PORTLAND**

Figure No. 3



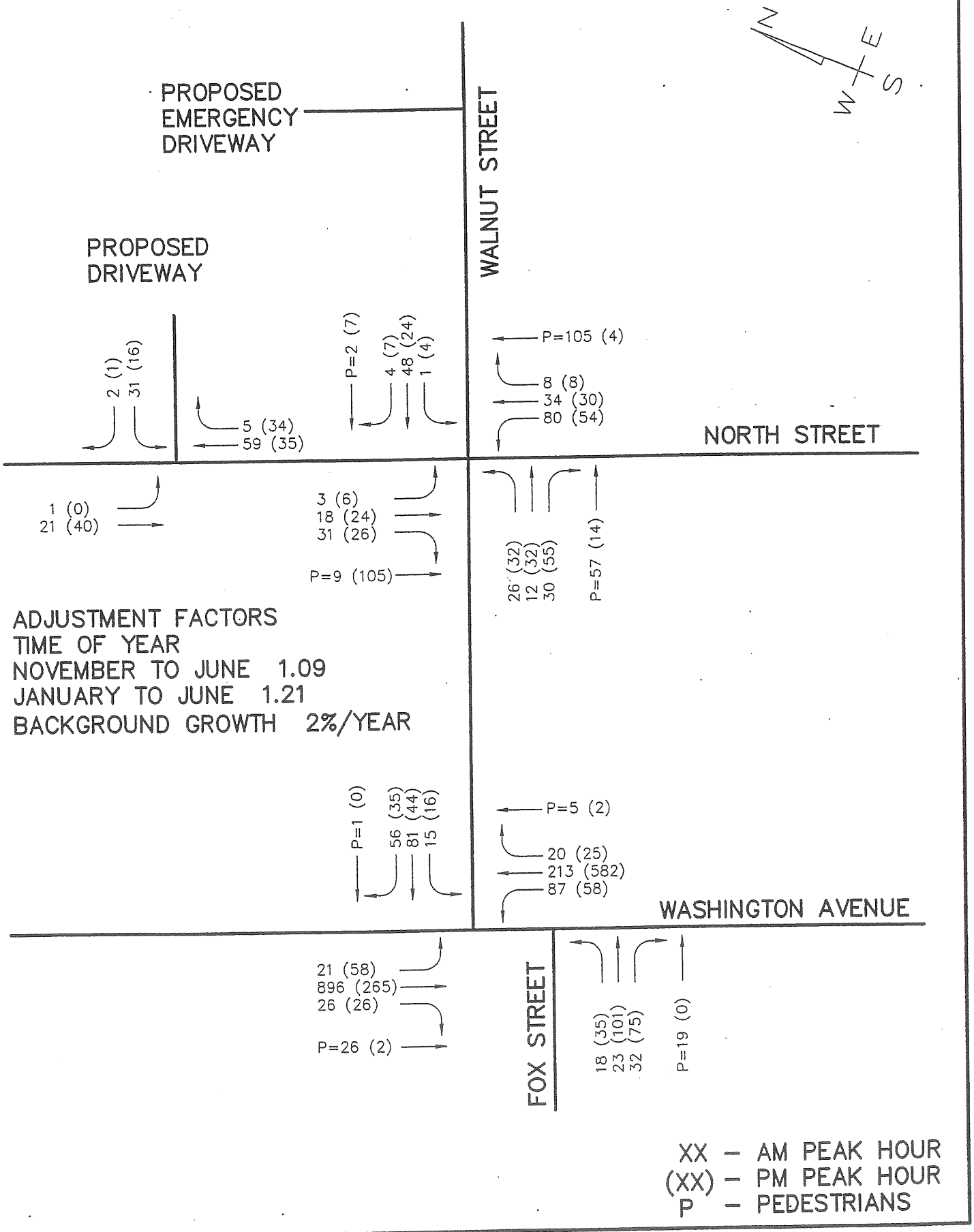
Design: RCN	Date: AUG. 2000	
Draft: LAN	Job No.: 148	
Checked: TLG	Scale: NTS	
File Name: 148-traf2.dwg		

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

Drawing Name: Estimated Development Traffic

Project: ISLAND VIEW APARTMENTS
NORTH AND WALNUT STREET, PORTLAND

Figure No. 4



Design: RCN	Date: AUG. 2000
Draft: LAN	Job No.: 148
Checked: TLG	Scale: NTS
File Name: 148-traf2.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: 2001 PostDevelopment Peak Hour Traffic Volumes

Project: ISLAND VIEW APARTMENTS
NORTH AND WALNUT STREET, PORTLAND

Figure No. 5

APPENDIX B

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) WASHINGTON (E-W) WALNUT
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 1/31/0
Other Information.....AM PRE
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	87	213	19	20	896	26	18	23	32	13	71	47
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.00	1.00	1.00	1.00	1.00	1.00

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	234	956
Potential Capacity: (pcph)	1054	454
Movement Capacity: (pcph)	1054	454
Prob. of Queue-Free State:	0.95	0.93
Step 2: LT from Major Street	**SB**	**NB**
Conflicting Flows: (vph)	244	970
Potential Capacity: (pcph)	1312	591
Movement Capacity: (pcph)	1312	591
Prob. of Queue-Free State:	0.98	0.83
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-Free State:	0.96	0.80
Step 3: TH from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1317	1314
Potential Capacity: (pcph)	222	223
Capacity Adjustment Factor due to Impeding Movements	0.77	0.77
Movement Capacity: (pcph)	170	171
Prob. of Queue-Free State:	0.56	0.86
Step 4: LT from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1332	1366
Potential Capacity: (pcph)	179	171
Major LT, Minor TH Impedance Factor:	0.66	0.43
Adjusted Impedance Factor:	0.74	0.55
Capacity Adjustment Factor due to Impeding Movements	0.68	0.52
Movement Capacity: (pcph)	122	89

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) North (E-W) Walnunt
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 1/31/0
Other Information.....PM PRE
Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	10	32	55	4	24	4	54	21	8	5	20	15
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)	63	27
Potential Capacity: (pcph)	1286	1342
Movement Capacity: (pcph)	1286	1342
Prob. of Queue-Free State:	0.99	0.99
Step 2: LT from Major Street	**WB**	**EB**
Conflicting Flows: (vph)	92	29
Potential Capacity: (pcph)	1550	1661
Movement Capacity: (pcph)	1550	1661
Prob. of Queue-Free State:	1.00	0.99
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-Free State:	1.00	0.99
Step 3: TH from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	107	134
Potential Capacity: (pcph)	959	928
Capacity Adjustment Factor due to Impeding Movements	0.99	0.99
Movement Capacity: (pcph)	949	918
Prob. of Queue-Free State:	0.97	0.97
Step 4: LT from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	124	120
Potential Capacity: (pcph)	897	902
Major LT, Minor TH Impedance Factor:	0.96	0.96
Adjusted Impedance Factor:	0.97	0.97
Capacity Adjustment Factor due to Impeding Movements	0.96	0.97
Movement Capacity: (pcph)	861	872

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
NB L	63	861 >					
NB T	24	949 >	910	4.4	0.3	A	4.4
NB R	9	1286 >					
SB L	6	872 >					
SB T	23	918 >	1036	3.6	0.0	A	3.6
SB R	18	1342 >					
EB L	12	1661		2.2	0.0	A	0.2
WB L	4	1550		2.3	0.0	A	0.3

Intersection Delay = 2.2 sec/veh

HCS: Unsignalized Intersections Release 2.1g 148PMPRF.HC0 Page 1

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) WASHINGTON (E-W) WALNUT
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 1/31/0
Other Information.....
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	58	582	22	51	265	26	35	89	75	12	33	26
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.00	1.00	1.00	1.00	1.00	1.00

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	624	292
Potential Capacity: (pcph)	669	985
Movement Capacity: (pcph)	669	985
Prob. of Queue-Free State:	0.96	0.92
Step 2: LT from Major Street	**SB**	**NB**
Conflicting Flows: (vph)	636	306
Potential Capacity: (pcph)	853	1225
Movement Capacity: (pcph)	853	1225
Prob. of Queue-Free State:	0.93	0.95
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-Free State:	0.92	0.91
Step 3: TH from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1046	1044
Potential Capacity: (pcph)	308	309
Capacity Adjustment Factor due to Impeding Movements	0.84	0.84
Movement Capacity: (pcph)	257	258
Prob. of Queue-Free State:	0.86	0.64
Step 4: LT from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1118	1063
Potential Capacity: (pcph)	238	257
Major LT, Minor TH Impedance Factor:	0.53	0.72
Adjusted Impedance Factor:	0.63	0.79
Capacity Adjustment Factor due to Impeding Movements	0.58	0.75
Movement Capacity: (pcph)	138	194

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB L	37	194 >					
EB T	94	258 >	331	29.2	5.0	D	29.2
EB R	79	985 >					
WB L	13	138 >					
WB T	35	257 >	277	17.8	1.2	C	17.8
WB R	27	669 >					
NB L	67	1225		3.1	0.0	A	0.3
SB L	59	853		4.5	0.1	A	0.7

Intersection Delay = 5.9 sec/veh

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) North (E-W) Walnut
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 8/28/0
Other Information.....PM POST
Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	4	24	7	32	32	55	54	30	8	6	24	26
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)	28	63
Potential Capacity: (pcph)	1340	1286
Movement Capacity: (pcph)	1340	1286
Prob. of Queue-Free State:	0.99	0.98

Step 2: LT from Major Street	WB	EB
Conflicting Flows: (vph)	32	92
Potential Capacity: (pcph)	1655	1550
Movement Capacity: (pcph)	1655	1550
Prob. of Queue-Free State:	0.98	1.00
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-Free State:	0.98	1.00

Step 3: TH from Minor Street	NB	SB
Conflicting Flows: (vph)	158	133
Potential Capacity: (pcph)	901	929
Capacity Adjustment Factor due to Impeding Movements	0.97	0.97
Movement Capacity: (pcph)	877	905
Prob. of Queue-Free State:	0.96	0.97

Step 4: LT from Minor Street	NB	SB
Conflicting Flows: (vph)	156	150
Potential Capacity: (pcph)	860	867
Major LT, Minor TH Impedance Factor:	0.94	0.93
Adjusted Impedance Factor:	0.96	0.95
Capacity Adjustment Factor due to Impeding Movements	0.93	0.94
Movement Capacity: (pcph)	804	818

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
NB	L	63	804	>					
NB	T	35	877	>	856	4.8	0.4	A	4.8
NB	R	9	1340	>					
SB	L	7	818	>					
SB	T	28	905	>	1035	3.7	0.1	A	3.7
SB	R	30	1286	>					
EB	L	4	1550			2.3	0.0	A	0.3
WB	L	37	1655			2.2	0.0	A	0.6

Intersection Delay = 2.4 sec/veh

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) WASHINGTON (E-W) WALNUT
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 8/28/0
Other Information.....PM POST
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	58	582	25	58	265	26	35	101	75	16	44	35
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.00	1.00	1.00	1.00	1.00	1.00

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	626	292
Potential Capacity: (pcph)	667	985
Movement Capacity: (pcph)	667	985
Prob. of Queue-Free State:	0.94	0.92
Step 2: LT from Major Street	**SB**	**NB**
Conflicting Flows: (vph)	639	306
Potential Capacity: (pcph)	850	1225
Movement Capacity: (pcph)	850	1225
Prob. of Queue-Free State:	0.92	0.95
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-Free State:	0.90	0.91
Step 3: TH from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1054	1054
Potential Capacity: (pcph)	305	305
Capacity Adjustment Factor due to Impeding Movements	0.82	0.82
Movement Capacity: (pcph)	252	252
Prob. of Queue-Free State:	0.82	0.58
Step 4: LT from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1133	1082
Potential Capacity: (pcph)	234	250
Major LT, Minor TH Impedance Factor:	0.48	0.67
Adjusted Impedance Factor:	0.59	0.75
Capacity Adjustment Factor due to Impeding Movements	0.54	0.71
Movement Capacity: (pcph)	127	176

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB L	37	176 >					
EB T	106	252 >	312	38.6	6.5	E	38.6
EB R	79	985 >					
WB L	17	127 >					
WB T	46	252 >	269	21.2	1.9	D	21.2
WB R	37	667 >					
NB L	67	1225		3.1	0.0	A	0.3
SB L	67	850		4.6	0.2	A	0.8

Intersection Delay = 8.0 sec/veh

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) WASHINGTON (E-W) WALNUT
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 8/28/0
Other Information.....AM POST
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	87	213	20	21	896	26	18	23	32	15	81	56
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.00	1.00	1.00	1.00	1.00	1.00

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	234	956
Potential Capacity: (pcph)	1054	454
Movement Capacity: (pcph)	1054	454
Prob. of Queue-Free State:	0.94	0.93
Step 2: LT from Major Street	**SB**	**NB**
Conflicting Flows: (vph)	245	970
Potential Capacity: (pcph)	1310	591
Movement Capacity: (pcph)	1310	591
Prob. of Queue-Free State:	0.98	0.83
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-Free State:	0.96	0.80
Step 3: TH from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1318	1316
Potential Capacity: (pcph)	222	222
Capacity Adjustment Factor due to Impeding Movements	0.77	0.77
Movement Capacity: (pcph)	170	170
Prob. of Queue-Free State:	0.50	0.86
Step 4: LT from Minor Street	**WB**	**EB**
Conflicting Flows: (vph)	1334	1377
Potential Capacity: (pcph)	179	169
Major LT, Minor TH Impedance Factor:	0.66	0.38
Adjusted Impedance Factor:	0.73	0.51
Capacity Adjustment Factor due to Impeding Movements	0.68	0.48
Movement Capacity: (pcph)	122	81

Center For Microcomputers In Transportation
University of Florida
512 Weil Hall
Gainesville, FL 32611-6585
Ph: (352) 392-0378

Streets: (N-S) North (E-W) Walnut
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst.....
Date of Analysis..... 1/31/0
Other Information.....AM Post
Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0	0	> 1	< 0
Stop/Yield			N			N						
Volumes	26	12	30	4	48	1	80	34	8	3	18	31
PHF	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Grade		0			0			0			0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's	1.10			1.10			1.10	1.10	1.10	1.10	1.10	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

from Minor Street	NB	SB
g Flows: (vph)	29	52
Capacity: (pcph)	1339	1303
apacity: (pcph)	1339	1303
ueue-Free State:	0.99	0.97

from Major Street	WB	EB
g Flows: (vph)	45	52
Capacity: (pcph)	1632	1619
apacity: (pcph)	1632	1619
ueue-Free State:	1.00	0.98
ion Flow Rate: (pcphpl)	1700	1700
ion Flow Rate: (pcphpl)	1700	1700
hared Lane Prob. Free State:	1.00	0.98

from Minor Street	NB	SB
g Flows: (vph)	112	128
Capacity: (pcph)	953	935
djustment Factor mpeding Movements	0.98	0.98
Capacity: (pcph)	932	915
Queue-Free State:	0.96	0.98

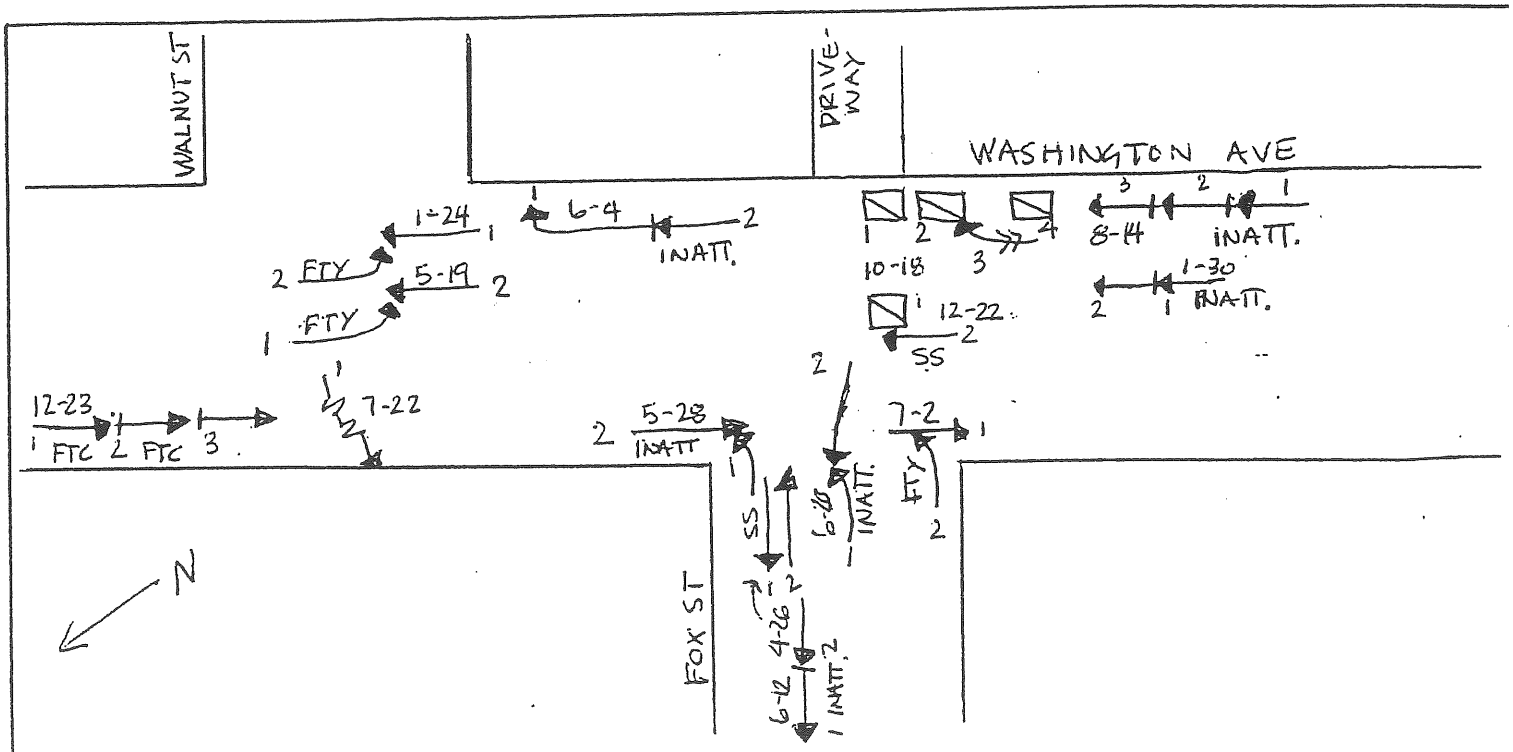
from Minor Street	NB	SB
ıg Flows: (vph)	138	134
Capacity: (pcph)	881	886
Minor TH e Factor:	0.96	0.94
Impedance Factor:	0.97	0.95
Adjustment Factor mpeding Movements	0.94	0.95
Capacity: (pcph)	828	837

COLLISION DIAGRAM

LOCATION Washington / Walnut / Fox

TOWN _____ NODE NO(S) _____

YEAR(S) REVIEWED _____ DATE PREPARED _____



CRITICAL RATE FACTOR _____ EQUIV. PROP. DAMAGE ACC/YEAR _____ ACC/MEV _____

LIGHT
1. DAWN (MORNING) 2. DAYLIGHT 3. DUSK (EVENING)
4. DARK (ST. LIGHTS ON) 5. DARK (NO ST. LIGHTS) 6. DARK (ST. LIGHTS OFF)
7. OTHER

ROAD SURFACE
1. DRY 2. WET 3. SNOW/SLUSH-SANDED
4. ICE/PACKED SNOW-SANDED 5. MUDDY 6. DEBRIS
7. OILY 8. SNOW/SLUSH-NOT SANDED 9. ICE/PKD. SNOW-NOT SANDED
10. OTHER

APPARENT CONTRIBUTING FACTORS - HUMAN
1. NO IMPROPER ACTION 2. FAIL TO YLD. RIGHT OF WAY 3. ILLEGAL UNSAFE SPEED
4. FOLLOW TOO CLOSE 5. DISREGARD TRAFFIC CONTROL DEVICE
6. DRIVING LEFT OF CENTER - NO PASSING 7. IMPROPER PASS-OVERTAKING
8. IMP. UNSAFE LANE CHANGE 9. IMP. PARKING START/STOP 10. IMPROPER TURN
11. UNSAFE BACKING 12. NO SIGNAL OR IMP. SIGNAL 13. IMPEDING TRAFFIC
14. DRIVER INATTENTION - DISTRACTION 15. DRIVER INEXPERIENCE
16. PEDEST. VIOLATION ERROR 17. PHYSICAL IMPAIRMENT 18. VISION OBSCURED - WINDSHIELD GLASS
19. VISION OBSCURED - SUN/HEADLIGHTS
20. OTHER VISION OBSCUREMENT 30. OTHER HUMAN VIOLATION FACTOR
31. HIT AND RUN 32. UNKNOWN

- VEHICULAR
41. DEFECTIVE BRAKES 42. DEFECTIVE TIRE/FAILURE 43. DEFECTIVE LIGHTS
44. DEFECTIVE SUSPENSION OR FACTOR 45. DEFECTIVE STEERING 50. OTHER VEHICLE DEFECT
51. UNKNOWN

SYMBOLS

ANGLE	PEDESTRIAN	P	FATAL ACCIDENT
BACKING	REAR END		
FIXED OBJECT	SIDE SWIPE		VEHICLE (MOVING)
HEAD ON	TURNING MOVE		BICYCLE
OVERTURN	CHANGE LANE		ANIMAL
PARKED VEHICLE	OUT OF CONTROL		SLED

WEATHER
C = CLEAR F = FOG R = RAIN
SL = SLEET S = SNOW CL = CLOUDY
XW = CROSS WINDS

INJURIES
K = FATAL B = NON-INCAPACITATING
A = INCAPACITATING C = POSSIBLE INJURY

REPORT NO.	DATE	TIME	INJURIES K	A	B	C	LIGHT	ROAD SURFACE	ACF	OTHER
96.04134	1-24-96	14:32					2	2	5	
96.15601	4-26-96	15:39					2	1	10/14	
96.19437	6-4-96	13:20				1	2	1	14	SIDE SWIP
96.22752	7-2-96	15:10					2	1	2	
96.27957	8-14-96	17:08				2	2	1	4/14	
97.17781	5-19-97	15:40					2	1	2/14	
97.21494	6-20-97	14:08					2	1	14	

COLLISION DIAGRAM

SHEET ____ OF ____

LOCATION _____

TOWN _____ NODE NO(S) _____

YEAR(S) REVIEWED _____ DATE PREPARED _____

REPORT NO.	DATE	TIME	INJURIES K	A	B	C	LIGHT	ROAD SURFACE	ACF	OTHER
97.36544	10-18-97	03:05					4	1		HIT & RUN
97.47980	12-22-97	17:00	—	—	—	—	4	1		SIDE SWIPE
97.48532	12-23-97	17:20	—	—	—	—	4	9	4	
98.05414	1-30-98	09:07	—	—	—	—	2	1	30	FOOT OFF BRAKE
98.19007	5-28-98	08:46	—	—	—	—	2	1	14	
98.20901	6-12-98	17:15	—	—	—	—	2	1	14	
98.25964	7-22-98	20:45					4	1		HIT & RUN

AH 6.A.1

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

PO Box 1237
31 Main St.
Gray, ME 04039

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

October 13, 2000

Mr. John Mitchell
Mitchell Associates
70 Center Street
Portland, ME 04101

RE: Proposed Island View Apartments
Portland, Maine

Dear John:

Gorrill-Palmer Consulting Engineers, Inc. is pleased to respond to the review comments made by Tom Errico of Wilbur Smith Associates in the letter to David Lourie, dated September 7th in regards to the proposed Island View Apartments project.

Sight Distance:

Comment – The study indicated an evaluation of sight distance from the proposed driveways on North Street and Walnut Street. Specifically, the study notes that when exiting onto Walnut Street, sight distance towards the right is approximately 200 feet, which is less than what is desirable by the Maine Department of Transportation (MDOT) for a road with speeds of 30 mph. The study further notes that based upon their site visits traffic appeared to be traveling at or below 25 mph and therefore adequate sight lines will be provided. The City of Portland conducted speed surveys on Walnut Street at various locations and that data is summarized in the following table (the 85th% speed is widely used by engineers to post regulatory speed limits and used as an input in designing roadways).

LOCATION	85TH PERCENTILE SPEED
Walnut St. westbound between Willis & North	29 mph
Walnut St. eastbound between Willis & North	28 mph
Walnut St. eastbound between Sheridan & North	28 mph
Walnut St. westbound between Sheridan & North	29 mph

As noted in the above table, actual measured travel speeds are such that sight distance does not meet the required guidelines established by MDOT for safe vehicular access.

Response – The plan has been revised to show only a single driveway, which will be located on North Street, which has adequate sight lines. The driveway on Walnut Street will be a gated emergency access only.

Post-it® Fax Note 7671	Date OCT 17	# of pages ▶ 2
To Bill Needleman	From Bob Hetcalf	
Co./Dept.	Co.	
Phone #	Phone #	
Fax # 756-8258	Fax #	

AA 6A, 2

Collision:

Comment – WSA prepared a collision diagram for the high accident intersection of Washington Avenue and Walnut Street. Review of the data indicated no clear collision pattern.

Response – Gorrill-Palmer Consulting Engineers, Inc. concurs with this finding and therefore no corrective measures are warranted.

Washington Avenue/Walnut Street Intersection:

Comment – The Washington Avenue/Walnut Street intersection has been identified to have both safety and operational deficiencies. Results of the Developers capacity analysis indicates that the Washington Avenue/Walnut Street intersection has movements that currently operate poorly and will be exacerbated following build-out of the proposed development. In fact the study conclusions indicate movements from Walnut Street will decline from level of service 'E' to 'F'. Level of service 'F' is considered to be unacceptable.

Response – As discussed in the traffic impact study, level of service 'F' is not uncommon at unsignalized intersections with arterials. The level of service exiting Walnut Street could be improved with the installation of a traffic light, however at this time the volumes do not appear high enough to meet any of the warrants for installation of a traffic signal. These warrants published by the Federal Highway Administration, must be met before a traffic signal can be installed.

Gorrill-Palmer Consulting Engineers, Inc. appreciates the opportunity to respond to these comments and look forward to your review of our responses. Should you have any questions or require any additional information please feel free to contact me.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Thomas L. Gorrill, P.E., P.T.O.E.
President

TLG/mg/JN148/JMitchell-comment&response10-10-00

Att 6 B

From: Larry Ash
To: Alex Jaegerman , William Needleman
Date: Thu, Oct 19, 2000 9:39 AM
Subject: Island View Apartments

Alex/Bill:

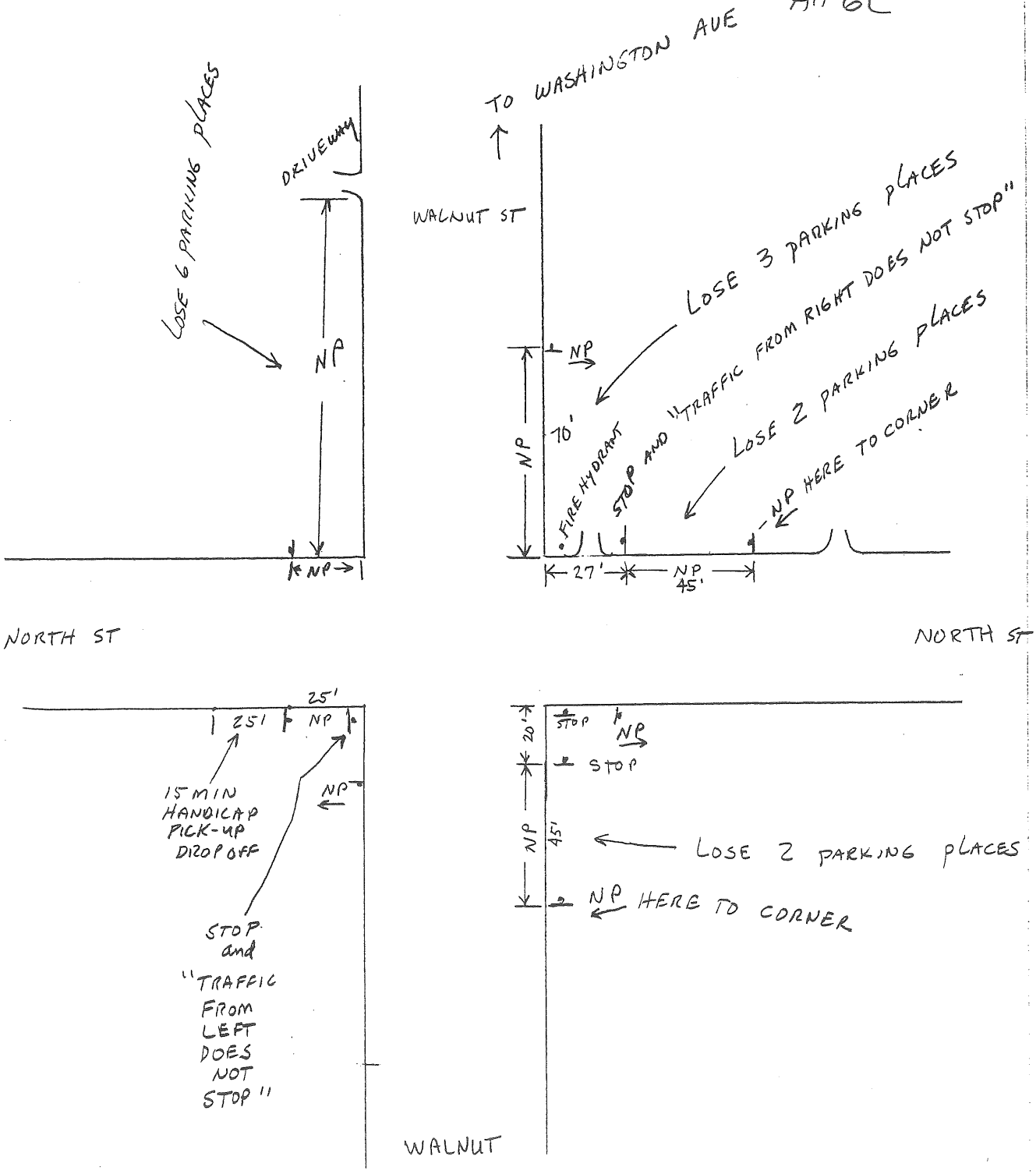
I have again reviewed the parking proposal by Gorrill-Palmer and am in agreement that their proposed ratio of 1.70spaces/unit is adequate for this project. I have traveled to this area 2 times between 5:30 AM and 6:00AM and found very few vehicles parked on Walnut St or on North St east of Walnut St(in the direction of the school).

A traffic signal in not at present warranted at the intersection of Washington/Walnut/Fox. I would , however, recommend that the developer provide some money(?) to be held in escrow so that should a signal be warranted within 3 years after the issuance of a CO, that this money then be contributed to the signalization of this intersection.

CC: wjb

	WALNUT / NORTH	3-WAY STOP

Att 6C



TOTAL LOST PARKING = 13 PARKING SPACES

PUBLIC WORKS
PARKING AND
SIGNAGE CHANGES

Att. 4.1

S.W.COLE ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

00-0782 C

August 28, 2000

DeLuca-Hoffman Associates, Inc.
Consulting Engineers
Attention: Mr. Steve Bushey
778 Main Street, Suite 8
South Portland, ME 04106

Subject: Peer Review
Environmental Effects of Development
Portland Water District Underground Reservoir
Island View Apartments
North and Walnut Streets
Portland, Maine

Dear Steve,

In accordance with your request, we have reviewed the following:

- Letter from Summit Environmental Consultants, Inc. to David A. Lourie, dated May 17, 2000
- Letter from R. W. Gillespie & Associates, Inc. to Mr. Roger Gendron, dated May 19, 2000
- Letter from R. W. Gillespie & Associates, Inc. to Mr. Robert Metcalf of Mitchell & Associates, dated June 07, 2000
- Letter from Summit Environmental Consultants, Inc. to David A. Lourie, dated June 14, 2000
- Letter from R. W. Gillespie & Associates, Inc. to Mr. Robert Metcalf of Mitchell & Associates, dated August 03, 2000
- Letter from R. W. Gillespie & Associates, Inc. to Mr. Robert Metcalf of Mitchell & Associates, dated August 22, 2000
- A plan of "Proposed Apartment Development, North and Walnut Streets, Portland, Maine, Predevelopment Drainage Plan" by Mitchell & Associates, dated March 28, 2000

CORPORATE OFFICE/BANGOR, ME
Six Liberty Drive, Bangor, ME 04401-5784 ▪ Tel (207) 848-5714 ▪ Fax (207) 848-2403 ▪ E-Mail info@swcole.com ▪ www.swcole.com
Other offices in Caribou, Gray and Winslow, Maine & Somersworth, New Hampshire

S.W.COLE ENGINEERING, INC.

00-0782 C
August 28, 2000

- A plan of "Proposed Apartment Development, North and Walnut Streets, Portland, Maine, Post Development Drainage Plan" by Mitchell & Associates, dated March 28, 2000

We understand that the proposed development includes apartments and associated parking. An area in the center of the development overlies an underground tank or reservoir used by the Portland Water District for storage of about 2.2 million gallons of potable water (Munjoy Reservoir). It appears from the information provided that initial plans were for installation of a parking lot and dumpster above the location of the underground water storage tank, however, both parking and the dumpster have been relocated.

SUMMARY OF FINDINGS

The site is located in an urban environment. Existing conditions include nearby gas lines, parking, pavement and two busy streets. It is our opinion that the development as proposed introduces no additional environmental threat to the water stored in the reservoir.

DETAILED REVIEW

- *Letter from Summit Environmental Consultants, Inc. to David A. Lourie, dated May 17, 2000*

This letter dealt with an early design for the site which apparently included parking to be situated directly over the underground water tank. A dumpster would be located on the paved area.

1) The section related to vehicle parking contains several inaccuracies.
   a) Summit suggests that a wellhead protection zone should be established around the water tank. Wellhead protection is generally just that – protection around the wellhead, and not around storage or transmission facilities. We contacted the Maine Department of Human Services and were assured that there is no program of 'wellhead protection' around any storage tanks in the State of Maine.

b) The statement that MtBE poses serious health concerns is inflammatory and inaccurate and does not contribute to this discussion. S. W. COLE ENGINEERING, INC. was hired to testify before the Maine State Legislature and the EPA Blue Ribbon Panel on MtBE in Boston in the spring of 1999. We offer the following:

i) EPA has identified MtBE as *potentially carcinogenic*, but various sources are far from agreement on this issue. For example, in Minnesota, MtBE is "not considered a 'contaminant of concern' or significantly toxic". Oregon, Texas and Alaska consider MtBE an indicator of hydrocarbon contamination (*Groundwater Monitoring and Remediation*, Summer 2000.)

ii) What is known is that MtBE tastes so bad that most people refuse to drink it long before any possibility of carcinogenicity occurs.

iii) The quoted "random well survey" made by the MDEP and DHS was concentrated in southern Maine, was not random and found seven wells statewide that exceeded the Maine Guidance Level of 35 ppb.

iv) Reformulated gasoline contained upwards of 11 percent MtBE. MtBE continues to be a component of gasoline because a satisfactory replacement has not been found for lead.

v) Benzene is a carcinogen. However, the reference to spill of one gallon of gasoline into the 2 million gallon tank assumes that no attenuation occurs in the overlying soils. Although benzene does not attenuate as rapidly as some of the other components of gasoline, attenuation does occur. The taste from MtBE would serve as a warning that contamination has occurred, if it should occur.

2) The section related to the dumpster location is unnecessarily inflammatory

3) The section related to lawn care includes reference to groundskeepers applying fertilizers and weed killers. No reference is made to the existing berm and the existing landscaping practices, if any.

S.W.COLE ENGINEERING, INC.

In summary, the Summit letter does not consider the existing site practices in its projection of potential problems at the site.

- *Letter from R. W. Gillespie & Associates, Inc. to Mr. Roger Gendron, Silver Street Development Corporation, dated May 19, 2000*

The design addressed in this letter included 5 parking spaces directly over the reservoir and a dumpster located in the same general area. RWG&A suggests that a clay cap be placed over the tank and graded to promote drainage away from the tank. The purpose of the clay cap would be to discourage infiltration of precipitation and "contaminated" surface water into the tank. We concur that the clay cap will discourage infiltration but question if it is necessary.

- *Letter from R. W. Gillespie & Associates, Inc. to Mr. Robert Metcalf of Mitchell & Associates dated June 07, 2000*

This letter answers questions raised relative to potential groundwater impact from propane tanks and provides specifications for a clay cover for the tank. It also provides recommendations for organic fertilizer to be used over the tank.

(1) It is our opinion that the clay cover will encourage runoff and will discourage infiltration to the reservoir.

(2) Fertilizer supplies the necessary nutrients for grass growth. Whether the fertilizer is "organic" or not, the same nutrients are made available.

- *Letter from Summit Environmental Consultants to David A. Lourie, dated June 14, 2000*

This letter disagrees with the RWG&A letter by maintaining that propane will be a threat to the water tank. The letter maintains that migration of propane underground is unlike water migration and that the course of the migration cannot be predicted. The letter also

maintains that MtBE moves outward radially from underground storage tanks. It then asserts that the propane poses an explosion hazard.

It is our opinion that this letter contains misinformation. The most prominent points of disagreement are as follows:

1) Both ground water and propane movement can be predicted. The equations used to depict gas movement are essentially identical to those that predict liquid movement. Both water and propane move more rapidly in more permeable materials. The velocity of movement is calculated on the basis of pressure gradients (change in head divided by the distance moved). The movement of both ground water and propane can and are predicted daily on the basis of well-known and well-documented equations. To say otherwise is misleading and inflammatory.

2) MtBE does not move radially away from underground tanks. MtBE moves in the direction of ground water. We are unaware of the role of methane in encouraging migration of contaminants away from landfills as Summit asserts. In any case, migration of contaminants does not extend out radially from landfills. The direction of migration is measurable and predictable, and prediction of this motion is required by regulatory agencies.

3) Gas lines currently are buried along Walnut Street, and we suspect they have been there for some time. We doubt that addition of propane tanks will increase the risk of gas migration to the site.

➢ *Letter from R. W. Gillespie & Associates, Inc. to Mr. Robert Metcalf of Mitchell & Associates, dated August 03, 2000*

RWG&A asserts in this letter that a propane leak will migrate rapidly to the ground surface and will therefore not affect the water tank. He then indicates that the developer is planning to use natural gas, and will not install the propane tanks.

- *Letter from R. W. Gillespie & Associates, Inc. to Mr. Robert Metcalf of Mitchell & Associates, dated August 22, 2000*

This letter indicates that the above-tank parking area has been replaced by a grassy area and gazebo. A clay cap is planned for the area over the tank and natural gas will be supplied to the site. Some concern is expressed that natural gas might migrate into the tank.

EVALUATION AND RECOMMENDATIONS

The development originally was planned to incorporate buried propane tanks, a parking lot and dumpster over an existing water tank. Subsequent plans are for a grassed area with a gazebo and piped-in natural gas.

The existing site consists of tennis courts overlying the tank and parking adjacent to the tennis courts. A grassed berm is adjacent to the tank, and grading plans indicate that surface water drainage is from the grassed berm and the parking area toward the tank. It is our opinion that the presence of a grassed berm which drains directly across the top of the tank is not different from a grassed area located directly above the tank. Likewise, we are unconvinced that parking directly above the tank is more likely to cause contamination than parking adjacent to it. The clay cap will provide additional protection over that which currently exists. However, the tank has apparently operated satisfactorily for 30 years adjacent to the grass and the roads and the parking.

Plans show gas and water lines in the streets, not an uncommon configuration. Both are buried. This is the rule rather than the exception in a city of any size. Leaking of gas into catch basins, water structures and other underground cavities is extremely rare. If the gas leaks from the underground lines or from an underground tank, the gas will move along the most permeable layer, which means that it will move along a sewer trench, or water trench or gas trench. <u>This will occur whether or not the development is allowed to proceed.</u>

S.W.COLE ENGINEERING, INC.

00-0782 C
August 28, 2000

Most of these conditions have existed over the life of the tank. It is our opinion that the construction of additional parking and the provision for natural gas at this site will not change conditions from those that have existed for many years.

It has been a pleasure to assist you in this project. Please feel free to call if you have any questions.

Very truly yours,

S. W. COLE ENGINEERING, INC.

Elizabeth A. Champeon, C.G.
Senior Geologist

EAC:eac/slh

F:\PROJECTS\2000\00-0782 Island View Apts\Report.doc

STATE OF MAINE
ELIZABETH A. CHAMPEON
No. 173
CERTIFIED GEOLOGIST

LETTER OF TRANSMITTAL

4.8

MITCHELL & ASSOCIATES
THE STAPLES SCHOOL
70 CENTER STREET
PORTLAND, MAINE 04101

TEL (207) 774-4427
FAX (207) 874-2460

DATE: AUGUST 22, 2000

TO: Bill Needleman, Senior Planner
Planning Dept.
City of Portland

We are sending you the following items:

___ Prints
___ Plans
___ Copy of Letter
X Other

Re: ISLAND VIEW APARTMENTS

Copies	Date	Description
1	5/17/00	LETTER REVIEW BY SUMMIT ENGINEERING
1	5/19/00	LETTER RESPONSE BY R.W. Gillespie & Assoc. Inc.
1	6/7/00	" " " " " " "
1	6/14/00	LETTER REVIEW BY SUMMIT ENGINEERING
1	8/3/00	LETTER RESPONSE BY R.W. Gillespie & Assoc. Inc.
1	8/22/00	SUMMARY REVIEW / RESPONSE LETTER BY R.W. Gillespie.

These are transmitted as checked below:

___ For approval
___ For your use
___ For review and comment
X As requested by: _____

Remarks:

Bill

IF YOU HAVE ANY QUESTIONS CONCERNING THIS DOCUMENTATION, PLEASE DO NOT HESITATE TO CONTACT ME.

Copy to: _____

Signature: Robert Mitchell

4.9

SUMMIT
ENVIRONMENTAL CONSULTANTS, INC.

May 17, 2000

David A. Lourie, Esquire
189 Spurwink Avenue
Cape Elizabeth, Maine 04107

RE: Island View Apartments, North and Walnut Streets

Dear Mr. Lourie:

Summit Environmental Consultants, Inc. (Summit) has reviewed the development plans for the proposed project referenced above. In particular, Summit focused on proposed activities on top of and adjacent to the existing 2.2 million gallon capacity Portland Water District underground concrete drinking water reservoir.

I have reviewed the Island View Apartments development plan drawings and 16 construction drawings for the Portland Water District Munjoy Reservoir. Based on my review of these plans and drawings, the following environmental concerns have been identified:

1) Vehicle Parking

Seventy-nine (79) vehicle parking spaces are proposed to be located on top of or immediately adjacent to the underground concrete water storage tank. I am unaware of other developments that have included proposals for vehicle parking in such close proximity to a public drinking water supply. In fact, most water districts or water supply utilities implement well-head or source protection policies that discourage or prohibit land uses that could pose a risk of degrading drinking water quality. Parking large numbers of vehicles would be considered an imprudent land use immediately adjacent to a drinking water supply reservoir.

Over time, vehicles have a high likelihood of leaks and spills of petroleum products (e.g., gasoline, oil, transmission fluid, brake fluid, antifreeze, hydraulic fluid). In fact, a visual survey of most parking lots typically shows sheens and or stains related to petroleum leakage from vehicles. In all cases, petroleum spills or leaks result in adverse environmental impact. In this instance, a potential release could contaminate a public drinking water supply causing a health concern for a large number of water district customers.

It has been well documented that Methyl Tertiary Butyl Ether (MTBE) and benzene, both of which are components of gasoline, pose serious health concerns to the general population as a result of spills and subsequent drinking water contamination. In fact, the State of Maine has recently indicated support for reduction and/or removal of MTBE from gasoline in the state because of health concerns and its presence in water supplies. A random well sampling survey in Maine identified MTBE in approximately 15 % of the water supplies tested.

95 MAIN STREET ▲ AUBURN, MAINE 04210 ▲ TEL: (207) 795-6009 ▲ FAX: (207) 795-6128

4.10

The United States Environmental protection agency (EPA) has identified benzene as a Group A Carcinogen, meaning that sufficient scientific evidence exists to list it as a human carcinogen. The EPA has promulgated a benzene standard of 5 parts per billion (ppb) as the Maximum Contaminant Level (MCL) for drinking water supplies. In simple terms, knowing that benzene makes up about 2 % by weight in gasoline, a spill of less than one gallon of gasoline into the 2 million gallon reservoir would result in a benzene concentration in excess of the 5 ppb standard allowed in a public drinking water supply.

The development plans do not contain any assurances that contamination of the public drinking water supply reservoir will be prevented. While the development plans specify asphalt paving, and drainage away from the parking areas, these measures provide only short term protection, at best. Parking lots with even moderate use develop cracks, joints, damaged curbs, settlement areas, etc. In addition, structures that penetrate the surface of the parking lot (e.g., light posts, curb anchors, etc.) also provide potential pathways to the subsurface. Furthermore, snow plowing poses a high potential to damage parking lots and curbs, not to mention the potential road-salt impacts.

Given the fact that the top of the concrete reservoir is less than 5 feet below grade, a spill or release can migrate rapidly to the top of the reservoir. Construction drawings indicate that the reservoir is approximately 30 years old. Cracks, fractures, joints or other penetrations of the concrete top caused by weathering, freeze/thaw cycles, contraction of joint seals, and general deterioration of the concrete reservoir top due to age would be expected. These conduits have the potential to allow infiltration of contaminants into the water supply.

Locating vehicles on top of and adjacent to the reservoir is an imprudent land use at the site that poses a significant threat to water quality. It is also inconsistent with the goal of providing a safe, high quality water supply to Portland Water District customers.

2) Dumpster Location

A proposed dumpster pad is located directly above the reservoir. The dumpster will be the refuse storage location for waste generated by occupants of the apartment complex. Waste products generated from residential use include a variety of hazardous materials including but not limited to: strong cleaners, solvents, pesticides, paints, lubricants, drain cleaners, medicines, etc.

Similar to the potential for vehicle leaks to impact water quality in the reservoir, leakage and runoff from the dumpster poses the same concern.

3) Lawn Care

Plans show a gazebo and grass area over a large portion of the reservoir. Typically, these grass areas are maintained by groundskeepers to provide an

4.11

aesthetically pleasing surrounding. Maintenance of the grounds often includes application of fertilizers and weed killers. While these methods may result in lush grass, the fertilizers and weed killers also pose a threat to water quality. As noted earlier, the proximity to the reservoir is a concern, particularly if application of fertilizers and weed-killers occurs directly over the majority of the reservoir.

Conclusion

In summary, the proposed activities on top of and adjacent to the reservoir pose a high risk to water quality in the reservoir. Since water stored in the reservoir is a source of drinking water for a large number of Portland Water District customers, a significant public health threat may be posed by allowing development to occur on top of or immediately adjacent to the reservoir. As noted earlier, even a relatively small leak or spill can result in a serious impact to water quality.

While some minimal measures have been taken to convey surface water away from the reservoir, these measures do not provide adequate long-term protection. In fact, it is almost certain that conditions will deteriorate over time and increase the risk of impacting water quality in the reservoir.

Sincerely,
SUMMIT ENVIRONMENTAL CONSULTANTS, INC.

Michael A. Deyling, C.G., P.Hg.
President, Principal Hydrogeologist

4.12

R. W. Gillespie & Associates, Inc.
CONSULTING GEOTECHNICAL & ENVIRONMENTAL SPECIALISTS

May 19, 2000

Mr. Roger Gendron
Silver Street Development Corporation
One Hundred Silver Street
Portland, Maine 04101

Subject: Project Review (Water Quality Issues)
Proposed Island View Apartments
Portland, Maine
RWG&A Project No. 235-583.ENV

Dear Mr. Gendron:

At the request of Mr. Bob Metcalf of Mitchell & Associates, Inc., R.W. Gillespie & Associates, Inc. (RWG&A) has reviewed plans, documentation, and correspondence relating to the above referenced project. The purpose of our review was to determine on the basis of information provided, whether the development, as proposed, would pose unacceptable risks to water quality contained within a 2.2 million gallon capacity underground storage structure owned and operated by the Portland Water District (PWD).

The following documents were reviewed by RWG&A:

- Construction drawings for Munjoy Reservoir Construction - Alternate "B" prepared for the Portland Water District by Edward C. Jordan Company, Inc., dated 1970;
- Project plans for the Proposed Island View Apartments - North & Walnut Streets - Portland, Maine, prepared by Mitchell & Associates, Sheets 1-7, dated May 2, 2000;
- Letter from Summit Environmental Consultants, Inc. to David A. Lourie, Esquire, dated May 17, 2000;
- Stormwater Management Report prepared by BH2M, dated March 2000.

Background

Concerns have been raised that contaminants, such as petroleum fuel from vehicles, and on-site use of lawn care products in the vegetated "common area" directly above the tank may cause degradation of water quality within the tank. It is RWG&A's understanding that the project owner has an indenture easement with the PWD which would allow development to occur on top of the structure. At the present time, five parking spaces and a trash dumpster serving the future residences are proposed in the paved area directly above the storage tank. Additional paved parking areas and the proposed apartment and townhouse buildings would be constructed in areas surrounding the storage tank. Stormwater generated from these impervious surfaces will be routed to Vortech treatment units, then to an on-site detention basis for further treatment, then off-site for disposal via the municipal stormwater system.

The storage structure is rectangular in shape, and is designed to contain about 2.2 million gallons of potable water for distribution to PWD customers in the project area. The tank is approximately 18 feet in height, and at the present time is reportedly covered with about 3 ft of soil material. Our review of engineering drawings indicates that the upper surface of the tank is constructed of an eight inch thick, reinforced concrete slab. Construction also provides control joints in slabs and walls, as well as waterstops and sealant for the top and bottom slabs, and vertical walls. Beneath the structure is a 12 inch thick, free-draining gravel layer, and a moisture barrier underlies the base of the tank. It is presumed that the underlying drainage layer enables local groundwater levels to be maintained below the footprint of the structure. The top of the tank is designed for HS-20 loading, which is roughly equivalent to an 18 wheel tractor trailer unit weighing approximately 80,000 pounds.

Review of the drawings indicates that the design properly incorporates the behavior of portland cement concrete with respect to shrinkage cracking. That is, construction joints with water stops are placed at distances commensurate with unit thickness. As concrete cures, it develops tensile forces which are expressed as hairline to slightly larger cracks orthogonal to the sides of the unit. Joint spacing matches the suggested spacing of the Portland Cement Association. Therefore, the water stops at joints act as barrier to both exfiltration (water losses from the tank) and infiltration from outside the reservoir.

Drawings indicate the reservoir is coated on the inside but specifications are not available to determine the material. Given the date of design and construction, *circa* 1970, we suspect it is a two part epoxy. Epoxy is resilient, dries quickly, and does not leach once the drying agent has evaporated. The resilience allows it to be respondent to the concrete during temperature variations without cracking.

RWG&A contacted the PWD regarding routine maintenance and inspection of the storage facility, and inquired about any known problems or leakage associated with the tank. According to Mr. Norman Twaddel of the PWD, a routine inspection of the tank interior was conducted during the fall of 1997. The interior of the tank was inspected and photographed by divers, and no defects,

leaks or other problems were detected by the inspectors at that time. PWD was unaware of any problems associated with the structure.

RWG&A Findings

Based upon reviewed information, the probability of water quality impacts from the proposed development are minimal.

Geohydrologic Considerations

Naturally deposited soils occurring on-site and in the site vicinity are composed of glacial till, a heterogeneous mixture of clay, silt, sand, and gravel sediments with cobble to boulder size rocks. In addition, up to several feet of silty clay fill may be present on the project site from its previous use as an above ground reservoir. These soils typically have moderate to low hydraulic conductivity, and are not usually considered bona fide "aquifers" capable of yielding usable quantities of groundwater.

Based upon our review of site conditions, and RWG&A's previous work in the area, the groundwater table beneath the site is relatively deep. The drainage layer present beneath the tank assures that the groundwater table is locally depressed below the base of the structure. Paved surfaces proposed for the Island View site will enhance depressed groundwater conditions by intercepting much of the precipitation prior to infiltration, and routing it through the stormwater disposal system. This low groundwater scenario provides that the storage tank is "high and dry" most of the year, and any leakage would flow out of the storage tank due to forces of gravity, not into it.

In the event that "contaminated" surface water infiltrates minor cracks in the pavement, it would seep through fill and till soils, following the path of least resistence by gravitational forces, until it reaches the groundwater table and becomes diluted. At that point, the seepage would be below the base level of the storage tank, with no impact to the drinking water supply. Likewise, contaminant concentrations generated from road salt application in the site vicinity would not result in water quality impacts in the reservoir.

Only releases within the unpaved, grassy area of the proposed development have the potential of coming in contact with the top of the tank. We suggest placement of a contoured clay layer between the tank surface and overlying grass as a protective measure. This clay layer would minimize localized subsurface infiltration and would effectively seal the top of the tank, while promoting drainage toward the sides and away from the tank. A simple management plan for use and control of fertilizers and other lawn care products in the grassy "Common Area" would minimize the possibility of local groundwater impacts.

FIRST AMERICAN TITLE INSURANCE COMPANY

IDENTIFICATION OF PARTIES

Purchaser(s): Concord Square Development Company, Inc.

Seller(s): H. Page Burnham
Patricia G. Burnham

Property Address: 129-155 North Street, Portland, Maine

Case Number: CL-1744

Identification of Borrower(s)
or Purchaser(s):

☐ verified by _____
(type of ID)

☐ personally known to closing agent

Identification of Seller(s):

☐ verified by _____
(type of ID)

☐ personally known to closing agent

Dated: _____ ____, 1997

By: _____
Closing Agent

80

Condominiums (the "Plan") dated March 12, 1974 prepared by Architects Design Group, Inc., a copy of which is on file at the Water District's office, 225 Douglass Street, Portland, Maine, and provided further that Union Mutual, its successors and assigns, will in no way interfere with the existing appurtenances located on the Easement Area. The easement granted with respect to the Easement Area by said deed shall be deemed to include, without limitation, the right to install, use, repair, replace and remove all of the Easement Area Improvements and the right to grant to others like rights.

5. Such earth removal and filling as has occurred on the Easement Area heretofore is hereby approved. Union Mutual and its successors and assigns are hereby given permission to remove such earth from the Easement Area and place such fill thereon provided that such removal or filling shall be done in accordance with the Plan, and that Union Mutual, its successors and assigns, shall in no way interfere with the existing appurtenances located on the Easement Area.

6. The conditions, restrictions and other provisions set forth in the paragraph commencing at the bottom of page 2 and continuing onto the top of page 3 of said deed dated October 20, 1972 are hereby waived in all respects and the said real estate and easement conveyed by said deed are and shall remain free thereof and in confirmation thereof, the Water District is concurrently herewith delivering a quit-claim deed of release to Union Mutual.