

499-515 CONGRESS STREET
MAINE SAVINGS BANK BLDG. #1

1974

COMMUNICATIONS. ON 499 CONGRESS ST

NEW HANOVER SPRINGS
CITY OF PORTLAND

AARON GARFINKEL & ASSOC
& CONSOLIDATED - (*)

BOCA. B&I LETTERS -

DEC 7, 72 USE OF BOCA CODE
ADVISED.

* CONSOLIDATED.
DEC 28, 72 MEETING OF 28TH NOTES

FEB 6, 73 TO BOCA 2 PLANS

* CONSOLIDATED.
FEB 14, 73 MEETING. NOTES BY COUNCIL.

FEB 12, 73 MEMO LETTERS PLTN
TO BOCA.

FEB 12 BOCA
DOCA ITEM 5
NOT ENOUGH
DISTANCE TO
EXITWAYS.

JAN 5, 73

1. EXIT LOCATIONS.
MOST BE REMOTE

FEB 14, 73

2. REMOTE EXITS
SEPARATE DIRECTIONS.

TABLE 11. 150' REQ.

P2 ACCESS ETC.

FREE FROM OBSTRUCTION
(SUCH AS TENANT
OFFICES & SPECIAL
DOOR OBSTRUCTIONS)

EXITS TOO CLOSE

P3 MUST BE AT LEAST
20% OF PERIMETER
OR 90' FT.

FEB 16, 73 REVISED SKETCH.
STILL NOT ACCEPTABLE

FEB 28, 73 LETTER TO BOCA.

HANI BOCA.
EXITWAYS MUST
REQUIREMENTS.

MAR 13, 73 GOING AHEAD WITH
WORKING PLANS.
ASKED FOR R.L.B. RESPONSE



MEIN

MAINE TEST BORINGS, INC.

P. O. BOX A BREWER, MAINE 04412

(207) 929-7820

DONALD B. WISWELL
DONALD W. GRAY, Sr.
CLARENCE W. WELTI, PhD
EDWARD J. PRELI

February 27, 1973

Consolidated Constructors & Builders
PO Box 4056 Station A
Portland, Maine 04101

ATT: Mr. Peter Sullivan

Dear Mr. Sullivan:

Listed below are the ground elevations at the boring locations for the proposed Maine Savings Bank Building at Casco, Brown, and Congress Sts. in Portland, Maine.

Boring A	83.06
B	80.65
C	78.22
D	76.85 on floor
E	90.55
F	91.62
G	91.03
H	89.52

These were taken by H.I. & E.C. Jordan Co. and were based on Portland City Datum.

Very truly yours,

MAINE TEST BORINGS, INC.

Donald B. Wiswell

Donald B. Wiswell

DBW/daw

RECEIVED	
J/S	
J/S R	
MAR 5 1973	
PA	RCS
YJ	RY

COMPLETE TEST BORING SERVICE

MAINE TEST BORINGS, INC.

230 SO. MAIN STREET • BREWER, MAINE 04412

(207) 947-4620

Ground Water Observations at Maine Savings Bank in
Portland, Maine.Branch Office:
P.O. BOX 773
PORTLAND, MAINE 04104
(207) 774-4633DONALD B. WISWELL
DONALD W. GRAY, Sr.
CLARENCE W. WELTI, PhD
EDWARD J. PRELI

Bor #	Date	Time	AM-PM	Depth of Water	Depth of Casing
A	2/8/73	2:15	PM	10'4"	23'4"
A	2/8/73	2:45	PM	15'9"	0
B	2/9/73	11:15	AM	6'6" Dry	Pull
B	2/9/73	11:30	AM	Dry	Pull
C Hole dry at all time water wher in while coring no water return					
D	3/20/73	6:00	AM	8"	2'
D	3/21/73	6:30	AM	4" Caved	Out
E	3/21/73	6:00	AM	14"	Out
F	2/6/73	2:00	PM	Dry 6'7"	Out
F	2/6/73	2:15	PM	Caved and Dry	Out
G	2/7/73	11:40	AM	Dry 2'5"	Pull
G	2/7/73	11:50	AM	Dry	Pull
H	2/7/73	5:00	PM	Dry 4'10"	Pull
H	2/7/73	5:15	PM	Dry	Pull

COMPLETE TEST BORING SERVICE

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

MAINE TEST BORINGS, INC. BREWER, MAINE 04412		CLIENT Consolidated Constructors & Builders Inc.		SHEET <u>1</u> OF <u>1</u> HOLE NO. <u>G</u>	
DRILLER Goupee		PROJECT NAME Proposed Addition		LINE & STATION	
M.T.B. JOB NUMBER 914-26A		LOCATION Portland, Maine		OFFSET	
GROUND WATER OBSERVATIONS AT _____ FT. AFTER _____ HOURS AT _____ FT. AFTER _____ HOURS		CASING TYPE BW SIZE I.D. 2 1/2 HAMMER WT. 300 HAMMER FALL 16"		SAMPLER TYPE SS SIZE I.D. 1 3/8 HAMMER WT. 110 HAMMER FALL 30"	
		CORE BARREL TYPE AXC3 SIZE I.D. 1 1/8		DATE START 2/6/73 DATE FIN 2/7/73 SURFACE ELEV _____ GROUND WATER ELEV _____	

ASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6" ON SAMPLER			VANE READING	DEPTH	STRATUM DESCRIPTION
	NO	OD.	PEN	REC.	DEPTH @ BOT	0-6	6-12	12-18			
0											Concrete and Brown Sand and Gravel
23											
78											
	1R	2"	15"	5"	3.7	100%	Red.				Rock
	2R	2"	45"	45"	7.4	100%	Ped.				
											Bottom of boring @ 7.4

PROPORTIONS: AND = 35-50% SOME = 10-35% TRACES = 0-10%	SOIL CLASSIFIED BY: <input checked="" type="checkbox"/> DRILLER-VISUALLY <input type="checkbox"/> SOIL TECHNICIAN-VISUALLY <input type="checkbox"/> LABORATORY TESTS	REMARKS <div style="border: 1px solid black; padding: 5px; float: right; width: fit-content;">HOLE NO. G</div>
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MAINE TEST BORINGS, INC. BREWER, MAINE 04412		CLIENT Consolidated Constructors & Builders Inc.		SHEET <u>1</u> OF <u>1</u> HOLE NO. <u>5</u>	
DRILLER Goupee		PROJECT NAME Proposed Addition		LINE & STATION 	
MTB. JOB NUMBER 914-25A		LOCATION Portland, Maine		OFFSET 	
GROUND WATER OBSERVATIONS AT _____ FT AFTER _____ HOURS AT _____ FT AFTER _____ HOURS		CASING TYPE <u>EW</u> SIZE I.D. <u>2 1/2</u> HAMMER WT. <u>300</u> HAMMER FALL <u>16"</u>		SAMPLER SS <u>1 3/8</u> AXC3 <u>1 1/8</u>	
				DATE START <u>2/7/73</u> DATE FIN <u>2/7/73</u> SURFACE ELEV _____ GROUND WATER ELEV _____	

CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6" ON SAMPLER			VANE READING	DEPTH	STRAT. DESCRIPTION
	NO.	OD.	PEW	REC.	DEPTH @ BOT	0-6	6-12	12-18			
0										0.2	Hot top
4.1											Brown Silty Sand And Gravel (Fill)
28											
8	1D	2"	18"		4.0	23	27	31		4.8	
15											
100											Rock
	1R	2"	60"	50"	9.8	90% Rec.				9.8	
											Bottom of boring @ 9.8

PROPORTIONS: AND : 35-50% SOME : 10-35% TRACE : 0-10%	SOIL CLASSIFIED BY: <input checked="" type="checkbox"/> DRILLER-VISUALLY <input type="checkbox"/> SOIL TECHNICIAN-VISUALLY <input type="checkbox"/> LABORATORY TESTS	REMARKS <div style="border: 1px solid black; height: 40px; margin-top: 10px;"></div>
		HOLE NO. <u>H</u>

SPECIFICATIONS

Cosentini Associates

CONSULTING ENGINEERS

FLITGON & SCHLOSSBERG ASSOCIATES

ELECTRICAL ENGINEERS

Telephone (617) 876-3530

11 Brattle Street Cambridge Mass. 02138

Richard P. Leber
William Lawrence
Howard Haxbaum

M. A. Mass. P. E.
J. Weisbur P. E.
D. Michael P. E.
A. Tinfo. P. E.

January 26, 1973

JUNG/BRANNEN ASSOCIATES, INC.
665 Boylston Street
Boston, Massachusetts 02116

Attention: Mr. Yusing Jung

Re: Portland Office Bldg./
Maine Savings Bank
Our Job No. 8022

Gentlemen:

Enclosed please find the following:

- A. One copy each of Outline Description for Electrical Systems, Heating, Ventilating and Air Conditioning Systems, and Plumbing Systems for Maine Savings Bank Office Tower.
- B. One copy of suggested guide to the building owner for subject job for his use.
- C. Schematic Heating, Ventilating and Air Conditioning Drawings.

Very truly yours,

COSENTINI ASSOCIATES

Richard P. Leber
Richard Leber

RL:res

Enc:

Two Pennsylvania Plaza
New York, N.Y. 10001

640 North La Salle Street
Chicago, Ill. 60610

PROJECT NAME _____

INTRODUCTORY

The attached document is offered to the Building Owner as a guide to be used when making representations to office space Tenants pertaining to electrical services and facilities. Early return comments from the Building Owner with regard to this document will greatly facilitate the tailoring of the electrical design and contract documents to suit his renting program.

Main paragraphs I, II, III, and IV refer to basic items which, once decided upon by the Building Owner, cannot afterwards be made subject to adjustment on the basis of individual Tenant negotiations without impairing the integrity of the entire electrical installation for the building. For this reason these paragraphs should be carefully administered by all parties negotiating agreements with Tenants.

All paragraphs other than those mentioned above may be made subject to adjustment on the basis of individual Tenant negotiations, if so desired. It is felt, however, that the terminology proposed in these paragraphs should be retained as far as possible in the interest of best protection for the Building Owner.

OFFICE

460/265 - 120/208 Klt.

RENT INCLUDED

ELECTRICAL SERVICES

I. DEFINITIONS

As used herein, the following words shall have the meanings listed below:-

Building standard-----Of a design selected by the
equipment and Landlord as standard for the
devices. building.

Tenant's area-----Area of the Tenant's demised
Premises.

Type "A" and "B"-----Electrical equipment conforming
compatible elec- to type and size limitations
trical equipment. suitable for supply from readily
available electrical system
characteristics as listed in
Schedule I, attached hereto.

II. GENERAL

The Tenant will be permitted to introduce into his demised Premises, wire up, and set in operation, any electrical equipment and installations which comply with the rules and regulations of authorities having jurisdiction over all electrical work in the building, and which are consistent with the Tenant's agreement to utilize his demised Premises in the manner defined in the lease.

III. BASIC ELECTRIC FACILITIES PROVIDED FOR THE JOINT USE OF ALL TENANTS

a) Connected electric loads as hereinafter referred to will be computed from a count of electrical devices and equipment taken off tenant's completed plans with wattages ascribed in accordance with Schedule II attached hereto.
Connected electric loads as herein referred to are

not subject to the application of any demand factors, load factors, diversity factors, etc.

b) Contingent upon the tenant's agreement to the terms hereinafter stipulated, the Landlord will provide basic electric power distribution facilities as required to supply any magnitude of Tenant's connected electric loads. The Landlords basic electric power distribution facilities, as hereinafter defined, will be suitable for supplying electricity to such connected electric loads without excessive voltage drop or other detrimental supply system characteristics, it being understood that the Landlord in no way undertakes to guarantee against an infrequent short duration supply voltage attenuation or interruption.

c) The Landlord reserves the right to establish all design criteria pertaining to the basic electric facilities and the manner in which adjustments, if any, are to be made to such facilities in order to fulfill any of his commitments to the Tenant.

d) Electrical equipment which is not listed as compatible equipment will be supplied only through transformation or conversion equipment installed by the Tenant within his demised Premises, at his own expense, as required to make it applicable as Type "A" compatible equipment.

e) On each floor, within the particular Tenant's demised Premises, in a space determined by the Landlord, or outside of but within short reach of such Premises, the Landlord will, at his own expense, install basic electric facilities for the joint use of all Tenants in the building. These basic facilities will provide the particular Tenant with the following:-

- One or more supply connection points suitable for supplying electricity without transformation or conversion to a connected electric load of Type "A" compatible equipment to the extent of three and one half (3.5) watts per square foot of Tenant's area.

- One or more supply connection points suitable for supplying electricity without transformation or conversion to a connected electric load of Type "B" compatible equipment to the extent of two (2) watts per square foot.
- Space at the capacity delivery point for any present or future mounting of the small circuit protective devices required by code authorities to protect the wiring to Tenant's equipment and devices.
- Facilities as required to permit the Telephone Company to install riser cables through the building to accommodate all present and future services which the Tenant may contract for, from the Telephone Company.

f) The Tenant's utilization of the joint use basic electrical facilities will be strictly contingent upon the following conditions:-

1. That he restrict the Telephone Company from installing any equipment or materials (other than cables only in the basic riser facilities provided for same) anywhere outside of his area.
2. That in the event that he introduces excess connected load into his Premises, he reimburse the Landlord single pro-rata amounts for re-inforcing the over-all distribution system up to the connection points on each floor, as follows:-
 - Per watt of connected electric load of Type "A" compatible equipment per square foot of Tenant's area in excess of 3.5 watts - - - - five cents (5¢) for each square foot of Tenant's area.
 - Per watt of connected electric load of Type "B" compatible equipment per square foot of Tenant's area in excess of 2.0 watts - - - - nine cents (9¢) for each square foot of Tenant's area.

3. That he agrees to make reasonable use of the space available for circuit protective devices at the capacity delivery points on each floor, and that at the request of the landlord, he adjust his proposed layouts of electrical work to assure the most efficient use of such space.

IV. PAYMENTS FOR ELECTRICAL ENERGY CONSUMED

The Tenant will be provided with electrical energy without his being called upon to make any specific payments for same.

V. ELECTRICAL FACILITIES PROVIDED FOR THE SOLE USE OF THE INDIVIDUAL TENANT

- a) At no expense to the Tenant, the Landlord will provide him with a full complement of building standard lighting fixtures, convenience outlets, switches for lighting control and unwired outlets for instruments contracted for by the Tenant from the Telephone Company, all completely installed, in proper operating condition within the Tenant's demised Premises and as hereinafter described.
- b) The Landlord will not provide panel boards, circuits, distribution switches, fuses, circuit breakers, or any other electrical distribution elements in the sole interest of the particular Tenant except as required for the operation of the aforementioned complement of building standard items.
- c) The manner in which electric distribution elements are to be provided in connection with building standard items will be established at the discretion of the Landlord.
- d) Schedule III, attached hereto, describes various building standard electrical items of the type to be provided for the sole use of the individual Tenant. The complement of these items to be provided by the Landlord within the Tenant's Premises at no expense to the Tenant will be in accordance with the following:-

LIGHTING FIXTURES-----One (1) for every eighty
(80) square feet of
Tenant's area.

WALL MOUNTED SWITCHES-----One (1) for every four-
FOR LIGHTING CONTROL hundred (400) square feet
of Tenant's area.

WALL MOUNTED CONVENIENCE-----One (1) for every two-
RECEPTACLE OUTLET hundred (200) square
feet of Tenant's area.

FLOOR STANCHION TYPE-----One (1) for every four-
CONVENIENCE RECEPTACLE hundred (400) square feet
OUTLET of Tenant's area.

WALL MOUNTED TELEPHONE-----One (1) for every four-
OUTLET hundred (400) square feet
of Tenant's area.

FLOOR STANCHION TYPE-----One (1) for every four-
TELEPHONE OUTLET hundred (400) square
feet of Tenant's area.

e) It is estimated that the lighting fixtures, provided on the basis established above, will produce a level of illumination of forty-five (45) foot candles on desk height working surfaces. This anticipated level of illumination is contingent upon good fixture layout procedures in large spaces, light wall and ceiling finishes throughout, and proper placement of lighting fixtures with respect to working surfaces in small spaces. Because of the many factors in the Tenant's furniture and partitioning layout which affect lighting, it shall in no way be interpreted that the Landlord guarantees that the fixtures he provides will produce the estimated foot-candles of illumination at the working plane on each and every square foot of the Tenant's Premises.

f) In connection with the telephone outlets offered above, the Tenant shall understand that these outlets are suitable essentially for telephone instruments which are on direct trunk line connections to a Telephone

VIII. SPECIAL INDUCEMENT

All electrical work desired by the Tenant in excess of that offered herein will be performed at the Tenant's expense, except that:-

- 1) As a special inducement, the Landlord offers an allowance of _____ dollars (\$ _____), towards the defrayment of any costs arising from the Tenant's introduction of excess connected load as hereinbefore formulated.
- 2) As a special inducement, the Landlord offers an allowance of _____ dollars (\$ _____), towards the defrayment of Electrical Contractor's billing for work in excess of the building standard items, provided as described hereinbefore, for the sole use of the individual Tenant.

- c) Any motorized equipment (plug-in appliance or other) up to 3 (inclusive) horsepower capacity rated in the range of 200 to 230 volts, three phase.
- d) Any plug-in lamp or appliance of any type or size motorized or other which is provided by its manufacturer with a two-wire (or two-wire and ground) 15 amp, 125 volt standard plug.
- e) Any non-motorized equipment of any size rated in the following ranges:-
 - 110 to 120 volts single phase
 - 200 to 230 volts single phase
 - 200 to 230 volts three phase

Notes:-

The building supplies for Type "B" compatible equipment are the electrical industry standard supplies of:-

- 120 volts single phase
- 200 volts single phase
- 200 volts three phase

Although equipment with voltage ranges as listed above is compatible, equipment with ratings which match the building supplies will provide the optimum results.

SCHEDULE II

Wattages Ascribed to Equipment and Devices Introduced
Into Tenant's Premises

<u>Item</u>	<u>Ascribed Wattage</u>
Any incandescent lamp in a permanently connected fixture.	Rated wattage of lamp as published by Manufacturer.
Any preheat, rapid start, instant start, high-output or power groove fluorescent lamp operating in conjunction with high power factor auxiliary equipment in a permanently connected fixture.	Rated wattage of lamp as published by Manufacturer plus an average ballast loss of 25% thereof.
Any slimline fluorescent lamp operating at 120, 200 or 300 milliamperes in conjunction with high power factor auxiliary equipment in a permanently connected fixture.	Rated wattage of lamp as published by Manufacturer for 120, 200 or 300 milli-ampere operation plus an average ballast loss of 50% thereof.
Any slimline fluorescent lamp operating at 425 milliamperes in conjunction with high power factor auxiliary equipment in a permanently connected fixture.	Rated wattage of lamp as published by Manufacturer for 425 milliampere operation plus an average ballast loss of 25% thereof.
Any mercury vapor lamp operating in conjunction with high power factor auxiliary equipment in a permanently connected fixture.	Rated wattage of lamp as published by Manufacturer plus an average ballast loss of 10% thereof.
Any fluorescent or mercury vapor lamp operating in conjunction with low power factor auxiliary equipment in a permanently connected fixture.	Twice the wattage ascribed to the lamp operating in conjunction with high power factor auxiliary equipment.

<u>Item</u>	<u>Ascribed Wattage</u>
Cold cathode tubing permanently installed	Volt-ampere rating of associated transformer.
Convenience receptacle outlet (single or duplex) for standard (15 amp, 125 volt) attachment plug.	100 watts regardless of whether or not lamps or appliances are plugged in.
Any equipment rated in horsepower other than appliances and office machines supplied through standard (15 amp-125 volt) two-wire attachment plugs.	<p>Machines less than 1/12 HP ---- 200 watts total regardless of actual size.</p> <p>Machines 1/12 HP to 1/3 HP ---- 3000 watts per horsepower.</p> <p>Machines 1/2 HP to 1 HP ---- 2000 watts per horsepower.</p> <p>Machines 1-1/2 HP to 3 HP ---- 1500 watts per horsepower.</p> <p>Machines over 3 HP ---- 1150 watts per horsepower.</p>
Any equipment rated in K.W. or K.V.A., other than appliances and office machines supplied through standard 15 amp-125 volt two-wire attachment plugs.	<p>1000 watts per K.W. or 1000 watts per K.V.A.</p> <p>(whichever is greater if K.W. and K.V.A. ratings are given for the same equipment)</p>

SCHEDULE III

DESCRIPTION OF BUILDING
STANDARD ELECTRICAL ITEMS

Lighting Fixture

Four (4) foot long, four (4) tube fluorescent unit designed for recessing into the ceiling and provided with a suitable light diffusing element under the lamps. All wired up and connected in complete operating condition.

Wall Mounted Toggle Switch for Lighting Control

Quiet operating toggle switch set in a flush wall plate capable of controlling lighting limited to a total of three-thousand (3000) watts operating at two-hundred and sixty-five (265) volts (fifteen (15) building standard fixtures) or to a total of thirteen-hundred (1300) watts operating at one-hundred and twenty (120) volts. All wired up and connected in complete operating condition.

Wall Mounted Convenience Receptacle Outlet

Wall mounted, duplex convenience receptacle outlet set in flush wall plate suitable for portable lamps and appliances having standard rated (fifteen (15) amp - one-hundred and twenty-five (125) volt) two (2) wire attachment plugs. All wired up and connected in complete operating condition.

Floor Mounted Convenience Receptacle Outlet

Floor stanchion type duplex convenience receptacle outlet, suitable for portable lamps and appliances having standard rated (fifteen (15) amp - one-hundred and twenty-five (125) volt) two (2) wire attachment plugs, all wired up and connected in complete operating condition.

OUTLINE DESCRIPTION
OF
HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS
FOR
MAINE SAVINGS BANK OFFICE TOWER

1. GENERAL

Materials, equipment and systems installed shall meet all pertinent requirements of all nationally recognized approval agencies as well as applicable local codes.

2. SCOPE OF WORK

- a. Provide all material equipment and labor for complete execution of the work as herein described, including generally, but not limited to the following:
- b. Complete HVAC system including:
 - 1) Heating medium for Building shall be electric.
 - 2) A self-contained, water-cooled air conditioning unit (one per floor for floors 2 thru 9). Unit shall be complete with evaporator fan, direct-expansion cooling coil, compressors, refrigerant piping, water-cooled condensers, ventilation cycle, dampers, control, etc. This System shall serve the interior zone of the above floors. An electric duct reheat coil (one per floor for floors 2 thru 9) shall be provided for the interior zone. This coil shall be set up for either step or proportional control.
 - 3) The perimeter zone (floors 2 thru 9) shall be provided with an incremental "thru-wall" air conditioning unit. Five incremental units shall be provided for each two building bay. The units shall be complete with evaporator fans, direct-expansion cooling coils, compressor, air-cooled condenser, electric heating coils, controls and time-clock control and night setback of increment units.
 - 4) An air conditioning system similar to that described in item 1 above shall be provided to the Lobby.
 - 5) Return air fans.
 - 6) Toilet, special.
 - 7) All duct work associated with the above.

- 8) All air terminals for supply, return and exhaust as indicated for base building.
- 9) All automatic temperature controls.
- c. A complete condenser water system including:
 - 1) Cooling towers.
 - 2) Distribution system consisting of pumps, piping, valves, and all appurtenances.
- d. A fuel-oil supply system for the emergency generator. System shall be complete with transfer pump, exhaust pipe, day tank, oil storage tank, and all necessary appurtenances.
- e. All electric motors, starters, motor control centers, switches, pilot lights, etc. for mechanical equipment.
- 3. PERMITS, CODES AND BY-LAWS

Conform to all local codes and requirements.
- 4. GUARANTEE

Labor and material for one year from date of acceptance.
- 5. TESTING

All required balancing tests and adjustments for all systems including air systems, automatic control and piping systems.
- 6. SHEET METAL WORK

Gages and bracings shall conform to the latest issue of the A.S.H.R.A.E. guide or S.M.A.C.N.A.
- 7. MATERIAL FOR PIPE

Condenser water piping schedule 40 standard weight steel ASTM A 53 lap welded or seamless black steel.

8. MATERIAL FOR FITTINGS

All 3" and larger piping to be welded. 2½" piping and smaller may be screwed or welded at Contractor's option.

9. VALVES

Furnish and install all the valves necessary for the control and easy maintenance of all piping and equipment. All valves shall be first quality and of approved manufacture, shall have proper clearance, and shall be tight at the specified test pressure. Each valve shall have the maker's name or brand, the figure list number and the guaranteed working pressure cast on the body and cast or stamped on the bonnet, or shall be provided with other means of easy identification. All valves shall be the product of one manufacturer except for special applications.

10. GRILLES, REGISTERS & DIFFUSERS

Provide all Grilles, Registers & Diffusers as shown on plans.

11. DAMPERS

Provide all dampers required for proper balancing of systems; provide all fire dampers as required by code.

12. CENTRIFUGAL PUMPS

Pumps to be end suction. Provide mechanical seals for all water pumps.

13. FANS

Centrifugal fans shall be of the air foil type.

14. STRAINERS

There shall be approved strainers in the inlet connections to each steam trap, each water feeder and make-up connection, each water regulating valve, each pump, each vent, and each diaphragm valve. The intention is to protect by strainers all apparatus of an automatic character whose proper functioning would be interfered with by dirt on that seat or by scoring of the seat.

15. COOLING TOWERS

- a. Furnish and install a forced draft-type cooling tower.
- b. Performance shall be guaranteed for arrangement and installation as indicated on drawings.
- c. Two cooling towers shall provide the cooling medium for the building. One cooling tower shall supply condenser water to the Lobby system and the air conditioning Units serving floor 2 thru 9. A second cooling tower shall supply condenser water to all Commercial Areas including the first floor and basement areas of the Maine Savings Bank.

16. INSULATION

- a. Insulation shall be applied on clean dry surfaces after inspection and release for insulation application.
- b. Insulation shall be continuous through wall and ceiling openings and sleeves.
- c. Insulation on cold surfaces where vapor barrier jackets are used shall be applied with a continuous unbroken vapor seal.
- d. Inserts shall be installed at hangers for cold insulated piping.
- e. Insulation shall have composite (insulation, jacket or facing, and adhesive used to adhere the facing or jacket to the insulation) fire and smoke hazard ratings as tested by procedure ASTM E 84, NFPA 255 or UL 723 not exceeding:

Flame Spread	25
Smoke Developed	50

- f. Accessories such as adhesives, mastics, cements, tapes and asbestos cloth for fittings shall have the same component rating as listed above.

S. Insulation for Sheet Metal:

- 1) Insulation on rectangular ductwork, where exposed shall be rigid type. All other duct insulation shall be flexible covering.
- 2) Flexible duct insulation shall be 1 lb. per cu. ft. density glass fiber with a maximum K factor of 0.29 at 75°F mean temperature, with reinforced foil-faced, flame-resistant kraft vapor barrier.
- 3) Rigid duct insulation shall be 4.2 lbs. per cu. ft. density glass fiber with maximum K factor of .24 at 75°F mean temperature with vapor barrier facing.
- 4) All supply, return, spill, O.A.I. and exhaust plenums shall be insulated.
- 5) Low-pressure supply and return ductwork in unconditioned spaces and in mechanical equipment rooms shall be insulated (1"). Low-pressure supply and return ductwork above air conditioned spaces (except as noted above) or where exposed in air conditioned spaces will not be insulated.

17. VIBRATION ISOLATION AND ACOUSTICS

- a. Provide vibration bases, inertia blocks and equipment bases as required.

- b. Isolation bases shall have deflections as indicated on the schedules.
- c. Provide acoustical duct lining (conforming to NFPA 90-A) in all fan plenums, in ductwork 20 feet from fan discharge.

18. AUTOMATIC TEMPERATURE CONTROL

- a. Furnish and install a complete automatic temperature control system of the pneumatic type or electric type. All controls shall be fully modulating except where specified otherwise.
- b. All automatic dampers shall be by the automatic temperature control manufacturer.

19. COMMERCIAL AREA

Commercial Area shall be provided with capped condenser-water outlets and provisions for Outside air, Relief air and toilet exhaust only.

- 20. Maine Savings Bank shall except for second floor of office tower be provided with the services described in item 19 above.
- 21. A Ventilation systems supply and exhaust shall be provided for the Smokeproof enclosure. System shall be designed to supply simultaneously to each enclosure two air changes and exhaust one and one half air changes.
- 22. A Stairshaft Ventilation system shall be provided to supply 3,000 cubic feet per minute and discharge 2,500 cubic feet per minute at the top of the Stairshaft.

OUTLINE DESCRIPTION
OF
PLUMBING SYSTEMS
FOR
MAINE SAVINGS BANK OFFICE TOWER

1. GENERAL

Materials, equipment and systems installed shall meet all pertinent requirements of all nationally recognized approval agencies as well as applicable local codes.

2. SCOPE OF WORK

- a. Provide all material equipment and labor for complete execution of the work as herein described, including generally, but not limited to the following:
- 1) Sanitary drainage system including wet column with connections at each floor for future extensions by tenants.
 - 2) Storm drainage system for roof, area and terrace drains.
 - 3) A combined house sewer from outside the exterior wall to the connection with the combined public sewer in the street.
 - 4) A domestic water supply system including the service from the public main in the street, curb valve and box, approved type water meter, distribution main and risers to core toilets and wet column. Hot-water supply shall be provided by means of an electric water heater located in the janitors' closet on each floor. Approximate capacity of water heater shall be 15 gallons with a minimum of 1.5 KW single heating element (A. O. Smith PEN 15 or other approved). Piping shall be extended to lavatories and mop receptors. Provide insulation as specified hereinafter.
 - 5) An approved standpipe system shall be provided including service from street main, curb valve and box, 500 G.P.M. approved fire pump, mains and risers with a 2½-inch hose valve located in the stairwell and a 1½-inch hose valve located in the corridor adjacent to the stairwell. Provide hose cabinet, 100 feet of 1½-inch hose, and 2½-gallon fire extinguisher at each floor. Provide roof manifold and Fire-Department connections as required.

- 6) Provide plumbing fixtures and trim, floor drain in each toilet, and required equipment for above Systems.

3. MATERIALS

- a. Storm and sanitary piping below ground-- extra-heavy cast-iron soil pipe with neoprene gaskets or lead-caulked joints.
- b. Storm and sanitary piping above ground-- extra-heavy cast-iron soil pipe with neoprene gaskets or lead-caulked joints or hubless cast-iron soil pipe with stainless steel clamps, bolts and housing.
- c. Water
 - 1) Service (domestic and standpipe) -- Class 150 cement-lined cast-iron water pipe with Class D cement-lined cast-iron fittings.
 - 2) All water piping inside building above ground -- Type 'L' copper with wrought copper or cast-brass fittings and 95-5 solder joints.
 - 3) Water piping inside building below ground (other than service) -- Type 'K' copper with wrought copper or cast-brass fittings and 95-5 solder joints.
- d. Standpipe -- black steel pipe with malleable iron, ductile iron, victaulic or welded fittings.

4. INSULATION

- a. Hot and cold water -- $\frac{1}{2}$ -inch thick fiberglass with vapor barrier and fire retardant jacket.
- b. Horizontal leader offsets immediately below the roof, machine-room drains and electric water-cooler drains to point of connection with vertical stacks-- one-inch thick fiberglass with vapor barrier and fire retardant jacket.

5. FIXTURES

- a. Water Closets -- wall hung, siphon jet, flush valve, chair carrier.
- b. Lavatories -- 20" X 18" vitreous china, slab type, spray spout, perforated strainer, chair carrier.
- c. Urinals -- wall hung, blowout, flush valve, chair carrier.
- d. Mop Receptor -- moulded stone 24" X 36" with combination faucet, hose and wall hook.
- e. Electric Water Cooler -- Cordley Model FRC-11 fully recessed, stainless steel basin and grille.

6. SPEAKERS

- a. Provide automatic wet sprinklers in stairwell and corridor at each floor, one upright brass heads in stairwell and four chromeplated pendent type in corridor. Supply sprinklers from standpipe riser. Each floor shall be provided with lock-shield valve and waterflow alarm device. Piping shall be as specified for standpipe system.

OUTLINE DESCRIPTION
OF
ELECTRICAL SYSTEMS
FOR
MAINE SAVINGS BANK OFFICE TOWER

1. ELECTRIC POWER DISTRIBUTION

A. The electric power distribution system shall include all the elements necessary to conduct electricity in an approved, safe manner, to all lighting fixtures, air conditioning equipment, heating equipment, plumbing equipment, fire protection equipment, sanitary equipment, elevators, receptacle and appliance outlets and signal and communication equipment. The electric power distribution system shall:-

- (1) Include the furnishing and installation of an underground primary concrete-encased empty conduit (transite) duct bank from property line to transformer vault. (Furnishing and installation of primary cables and transformers to be by the utility company.)
- (2) Include the furnishing of all secondary bus ducts, cables, connectors, etc. as required for bringing 480/277 volt, 3Ø - 4 wire low-tension power from transformers to main switchboard room. (Utility company shall make the secondary connections to the transformers and install all equipment within the transformer vault.)
- (3) Include the provisions necessary to permit all electricity consumed at the project by building service equipment, office floor lighting and appliances and public space lighting and appliances to be Utility Company metered through a single metering installation.
- (4) Include the provisions necessary to permit electricity consumed by commercial floor lighting, appliances and electric heating to be utility metered on a "tenant by tenant" basis. (Note that basement, first floor and part of second floor of Maine Savings Bank space will also be on one separate utility meter.)

7?
X
only
computer
Room

- (5) Incorporate one "one supply connection" N.E.M.A. Class III design, main switchboard.
- (6) Incorporate all required subsidiary panelboards (power, distribution, lighting and appliance).
- (7) Supply power with characteristics as follows:-
 - (a) 480 volts, three phase to all motors 1/2 horsepower and larger and duct heaters 4.1 KW and larger.
 - (b) 277 volts, single phase to all fluorescent (and other discharge-type lamp) lighting fixtures and electric heating units up to 4.0 KW.
 - (c) 120 volts, single phase to all incandescent lighting fixtures.
 - (d) 120 volts, single phase to all general convenience receptacle outlets.
 - (e) 120 volts, single phase, 208 volts, single phase, or 208 volts, three phase to specific use "solid connection" or receptacle outlets, as determined from the requirements of the appliances assigned to the outlets.
- (8) Incorporate three phase, dry-type transformers (480 volt, delta to 208/120 volt wye) provided in general on a "one per floor" basis and located in the electric closets, as required to produce the aforementioned supply characteristics where they are not available from direct connection off the main service characteristics.
- (9) Incorporate devices in each main switchboard as follows:-
 - (a) Main unit-----3 pole, 4000 amp. (estimated) bolted pressure-type switch with 4000 amp. (estimated) time-delay cartridge fuses.

- (b) Feeder units-----3 pole, circuit breaker contact, "Q.M.Q.M." type switches (sized as required) with time-delay cartridge fuses (sized as required).
 - (c) Ground fault current transformers.
- (10) Incorporate devices in panelboards as follows:-
- (a) 480/277 volt-----Lugs only in mains, 3 pole distribution "Q.M.Q.B." type switches (sized as required) with current limiting fuses (sized as required) in panels. branches.
 - (b) 480 volt-----Lugs only in mains, 3 pole power "Q.M.Q.B." type switches (sized as required) with time-delay fuses (sized as required) in panels. branches.
 - (c) 480/277 volt-----Lugs only in mains, single lighting & pole, 20 amp. molded case appliance circuit breakers in panels. branches.
 - (d) 208/120 volt-----Lugs only in mains, 3 pole power & dis- molded case circuit break- tribution ers (sized as required) in panels. branches.
 - (e) 208/120 volt-----3 pole molded case circuit lighting breakers (sized as required) panels. in mains; single pole, 20 amp. molded case circuit breakers in branches.
 - (f) 208/120 volt-----3 pole molded case circuit appliance breakers (sized as required) panels. in mains, single pole molded case circuit breakers (sized 20 through 70 amps. as required) in branches.

- (11) Incorporate wiring methods as follows:-
- (a) For main, submain and branch feeders, lighting and appliance branch circuitry in "CORE", "public" and "building service" spaces, acceptable conduit types shall be as follows:-
 - galvanized rigid steel
 - Aluminum except not where embedded in concrete or subject to mechanical damage
 - Electric metallic tubing (EMT) except where subject to mechanical damage.
 - (b) #12 A.W.G. (minimum) copper wire -- or the aluminum equivalent -- with 600-volt thermoplastic insulation.
 - (c) Any code-approved wiring method, except non-metallic sheathed cable (ROMEX), for lighting and appliance branch circuitry in office spaces.
 - (d) Bus duct, run vertically only thru electric closets.
- (12) Incorporate a minimum riser capacity to office floors figured on a basis of $7\frac{1}{2}$ watts per square foot of net usable area for lighting and appliances plus approximately 16 watts per square foot for electric heating.
- (13) Include all motor starters and motor control centers required for all motors (purchasing starters and motor control centers will not be part of the electrical work).

2. PUBLIC SPACE LIGHTING

- A. Lighting fixtures shall be furnished and installed for Public Space lighting throughout the project incorporating:-

- (1) Two 4" empty conduits (estimated) from point of telephone-company service entry to main frame room in basement.
- (2) Five 4" empty conduits (estimated) from main frame room to lowest of telephone company "riser slots" through floor slabs in telephone rooms on second floor (riser slots not part of electric work).

6. EXTERIOR LIGHTING

- A. Exterior lighting shall be with fixtures complete with lamps, introducing:-
- (1) Appearance coordination with architectural features.
 - (2) Floodlighting where required.

7. TIME SWITCH CONTROL OF LIGHTING

- A. Time switch control of lighting shall be with time switches and contactors of the electrically operated, mechanically held type, interposed in the feeders to certain lighting panels as required to allow for separate automatic control for each of the following:-
- (1) Exterior lighting.
 - (2) Main lobby lighting (except 24-hour night lights).

8. FIRE ALARM SYSTEM

- A. The fire alarm system will be of the closed circuit, master coded, zone indicating, electrically supervised type, incorporating:
- (1) A manual, non-coded actuating station at each natural exit on each floor.
 - (2) Automatic stations of the combination fixed temperature and rate of rise type located in storage rooms, equipment rooms, and other critical areas.

- (6) Provisions for tying into the fire-alarm system so as to sound the horns when a detector has been triggered.
- (7) Automatic electric supervision of the wiring of the system to annunciate wiring derangements which would make the regular functioning of the system inoperative.
- (8) A feature which will enable the detectors located in air ducts to shut down associated fans so as to prevent the spread of fire and to relieve the hazard of smoke poisoning.
- (9) Miscellaneous features required for control of other related equipment.

10. MECHANICAL EQUIPMENT ALARM SYSTEM

- A. The mechanical equipment alarm system shall incorporate a central annunciator panel in the Engineer's Office, which will provide an alarm and an identification indication in response to the failure of any item of mechanical equipment whose inability to operate might cause damage.

11. FLOOR SLAB WIRING PROVISIONS

- A. The construction schedule, which calls for the pouring of concrete at a time when layouts for certain spaces will not be available and which therefore excludes the possibility of embedment of electric work, requires that the instructions to conceal circuitry in such spaces be fulfilled by locating horizontal runs in the void space between slabs and hung ceilings. For floor and wall outlets, the required concealed-in-hung-ceiling arrangement of circuitry shall conform to so-called "poke through system" criteria. These criteria are as follows:
 - (1) Circuitry shall be run in the hung ceiling space of the story which it serves or in the hung ceiling space of the story immediately below, utilizing openings cut through the floor slab when necessary.

- (2) The running of circuitry at the story below the one served shall be held to an absolute minimum and shall be used only for tying floor outlets to their nearest adjacent outlets or for other such unavoidable purposes.
- (3) No outlet boxes, pull boxes, junction boxes, openable raceway fittings, etc. in the circuitry shall be located such that the required access to their removable cover side must be obtained from the story below the one being served.
- (4) Circuitry serving a given story shall emanate from local supply or central facilities on the same story and none other.
- (5) Openings through floor slabs shall be cut and patched as part of the Electrical work.
- (6) Openings through floor slabs shall not exceed 4" in diameter.

12. GENERAL CRITERIA FOR LIGHTING AND APPLIANCE BRANCH CIRCUITRY

- A. 100 to 125 volts to neutral circuits shall be supplied from 20 amp. panel branches.
- B. 250 to 300 volts to neutral circuits shall be supplied from 20 amp. panel branches.
- C. Except as specified below, minimum conductor size shall be #12 A.W.G. copper.
- D. Conductors for 100 to 125 volts to neutral circuitry extending in excess of 100 feet, from the point of supply, to the last outlet or fixture tap shall be #10 A.W.G. copper throughout.
- E. Conductors for 250 to 300 volts to neutral circuitry extending in excess of 200 feet, from the point of supply, to the last outlet or fixture tap shall be #10 A.W.G. copper throughout.

- F. Conductors used in home runs consisting of more than 4 wires in a single conduit or cable shall be #10 A.W.G. copper minimum.
- G. Raceway sizes shall conform to standard minimum occupancy requirements except where these are exceeded by other requirements specified elsewhere.
- H. Loading on circuits shall be restricted to:-
 - (1) Not more than 1,650 total watts on a 20 amp., 100 to 125 volts to neutral circuit.
 - (2) Not more than 4,000 total watts on a 20 amp., 250 to 300 volts to neutral circuit.
- I. 250 to 300 volts to neutral circuitry shall be maintained in raceways or separate from 100 to 125 volts to neutral circuitry.
- J. Only fixtures containing discharge-type lamps shall be supplied from 250 to 300 volts to neutral circuitry.
- K. Circuits shall be balanced on phases at their supply point as evenly as possible.

13. GENERAL CRITERIA FOR CIRCUITING TELEPHONE OUTLETS

- A. For each wall or floor outlet, provide a 1" empty conduit from outlet down through floor to a point immediately below within the suspended ceiling space of the story below.

14. DESCRIPTION OF BUILDING STANDARD ASSEMBLIES

- A. Certain assemblies of electric work are in addition to those which are specifically indicated. Such assemblies are identified as "Building Standard" assemblies, and definitions and descriptions pertaining to them are as hereinafter specified.

- (2) "Building Standard"-----120 volt duplex
Normal duty wall convenience recept-
acle assembly. acle furnished and
installed complete
with wall plate and
box and circuited
up (receptacle fig-
ured at 180 watts).
- (3) "Building Standard"-----Telephone wall plate
Wall telephone out- and box furnished
let assembly. and installed com-
plete and circuited
up.
- (4) "Building Standard"-----Single pole toggle
Single pole toggle switch furnished and
switch assembly. installed complete
with wall plate and
box and circuited up.
- (5) "Building Standard"-----120 volt duplex con-
Normal duty floor venience receptacle
convenience recept- furnished and
acle assembly. installed complete
with floor stanchion
and circuited up
(receptacle figured
at 180 watts).
- (6) "Building Standard"-----Telephone floor
Floor telephone out- stanchion furnished
let assembly. and installed com-
plete and circuited
up.

15. BULK QUANTITIES OF BUILDING STANDARD ASSEMBLIES INCLUDED IN
BASE BID

- A. The following quantities of "Building Standard" assemblies
are to be included in the base bid:-

- (1) "Building Standard" Troffer lighting fixture
assemblies-----1,080

- (2) "Building Standard" Normal duty wall convenience receptacle assemblies-----432
- (3) "Building Standard" Wall telephone outlet assemblies-----216
- (4) "Building Standard" Single pole toggle switch assemblies-----216
- (5) "Building Standard" Normal duty floor convenience receptacle assemblies-----216
- (6) "Building Standard" Floor telephone outlet assemblies-----216

B. The above quantities are based on an average of 10,800 square feet of net rentable tenant space for floors 2 thru 9 inclusive in accordance with the following criteria:-

- (1) Lighting Fixtures-----One (1) for every eighty (80) square feet of Tenant's area.
- (2) Wall-mounted Convenience Receptacle Outlet-----One (1) for every two-hundred (200) square feet of Tenant's area.
- (3) Wall-mounted Telephone Outlet-----One (1) for every four-hundred (400) square feet of Tenant's area.
- (4) Wall-mounted Switches for Lighting Control-----One (1) for every four-hundred (400) square feet of Tenant's area.
- (5) Floor Stanchion Type Convenience Receptacle Outlet-----One (1) for every four-hundred (400) square feet of Tenant's area.
- (6) Floor Stanchion Type Telephone Outlet-----One (1) for every four-hundred (400) square feet of Tenant's area.

16. LIGHTNING PROTECTION SYSTEM

- A. The lightning protection system shall incorporate all elements necessary to assure that no damage to the project occurs in the event of a lightning strike and also to assure that no metallic parts in the project acquire any hazardous static electricity voltage in the event of a lightning strike.

17. FIRE-STANDPIPE AND SPRINKLER-ALARM SYSTEM

- A. The fire-standpipe and sprinkler-alarm system shall be of the closed-circuit, normally open device contact, circuit indicating type and shall function in conjunction with the automatic fire-standpipe alarm and sprinkler-alarm actuating stations set in piping by other trades. The system shall incorporate:-

- (1) A sounding device in the Engineer's Office indicating when any actuating station has been triggered.
- (2) An annunciator panel in the Engineer's Office providing a visual identification of the individual actuating station which has been triggered.
- (3) Automatic electric supervision of the system providing an alarm in the Engineer's Office in the event that any wiring derangement occurs which would make the regular functioning of the system inoperative.
- (4) Provisions for tying into the fire-alarm system so as to sound the horns when an actuating station has been actuated.

Branch Office
378 CONGRESS STREET
PORTLAND, MAINE 04101
207 - 774-0313
MAINE MUTUAL BUILDING
555 MAIN STREET
PRESQUE ISLE, MAINE 04969
207 - 764-0153

JORDAN GORRILL ASSOCIATES
Consulting Soils Engineers
FLORIDA AVENUE
BANGOR INTERNATIONAL AIRPORT
BANGOR, MAINE 04401
207 - 947-0172

Service
TO
GOVERNMENT
AND
INDUSTRY

May 4, 1972
7202830 S

Maine Savings Bank
15 Casco Street
Portland, Maine

ATTN: Mr. T. Juenemann

SUBJ: Preliminary Subsurface Investigation
Maine Savings Bank
Casco and Congress Streets
Portland, Maine

Gentlemen:

In response to Mr. T. Juenemann's oral request of March 21, 1972, we have completed the subject investigation. A brief description of the investigation, our findings, and our preliminary foundation recommendations are presented herein.

Site and Proposed Construction - The site, as shown on the attached Site & Boring Plan, Sheet 1, is encompassed by Casco, Congress and Brown Streets, and Cumberland Avenue in downtown Portland. Although no definite plans have been established as yet, we understand that the proposed construction may consist of several multi-story office and parking facility structures.

Exploration and Testing - The subsurface conditions were explored by five test borings made during the period of March 27 to April 13, 1972 by Maine Test Borings, Inc. of Brewer. The locations of the borings, as selected by your office, are shown on Sheet 1. Logs of the borings, based on the driller's field notes and modified on the basis of our laboratory examination of the samples and field data, are presented on Sheets 2 through 6.

All of the soil and rock samples were examined in our laboratory. Grain-size analyses were made of four representative soil samples; the results are plotted on Sheet 7. Seven rock core specimens were tested in compression. The results of these tests are tabulated on Sheet 8.

Site and Subsurface Conditions - Most of the entire site is now or was formerly occupied by two-to four-story brick commercial buildings. Several of these structures have recently been demolished and their areas are presently being used for parking lots.

Site and Subsurface Conditions - As may be seen from Sheet 1, the ground surface across the site varies from about elev. 91 (City Base) in the southwesterly corner to about elev. 63 in the northeasterly corner. However, as the spot elevations on Sheet 1 indicate, the several building and parking lot levels are stepped down through the use of various retaining walls and stabilized slopes.

As the test borings revealed, the site is underlain by varying thicknesses of miscellaneous fill and compact native soil which overlie the undulating surface of the bedrock. The fill was found to consist of loose to compact mixtures of sand, gravel, bricks, concrete and ashes and to vary from a few inches to as much as 10' thick at the boring locations. It appears that most or all of the material above elev. 80 is fill. The native soils beneath the fill were found to be firm to very compact gravelly and silty sands with pieces of weathered and decomposed rock (glacial till). As may be seen from the grain size distribution curves on Sheet 7, they are well graded and contain about 20 to 40% silt and clay size particles. At four of the borings the native till deposits were found to be generally less than 3 feet thick. However, in Boring 5 at the corner of Congress and Brown Streets, the till was found to be about 18 feet thick.

The bedrock was found to consist of nearly vertically foliated green and gray schists of the Spring Point formation. Although the rock appears to have been subjected to considerable stress and distortion in its geologic past, as evidenced by the irregular and broken foliations, occasional slicken siding (shear slip surfaces), and occasional quartz seams, it was found to be relatively sound and strong in its present state. However, as noted on the logs, the rock has undergone some recent weathering as indicated by the thin (generally less than 3 feet) decomposed to slightly weathered surface zones, the water stained fractures, and the occasional small (less than 1/4 inch) solution voids. The crushing strengths of the seven representative specimens of rock tested (tabulated on Sheet 8) ranged from 228 to 865 tsf.

A review of the groundwater observations indicates that the groundwater table generally slopes with the site topography and the bedrock surface. The groundwater table was found to be about 1 to 6 feet below the rock surface in Borings 1, 2 and 3 and about 2 and 9 feet above the rock surface in Borings 4 and 5 respectively, in early April, 1972. The U.S.G.S. Water Resources Division reported that groundwater levels in southern Maine were above the normal range at the end of March, 1972. Normal groundwater levels are expected to be several feet (at least 2 to 5 feet) lower in the summer and early autumn seasons.

We note that southwestern Maine has experienced occasional moderate earthquakes and that the site is located within Zone 2 (subject to moderate damage) on the U.S.C. & G.S. Environmental Science Services Administration "Seismic Risk Map for Conterminous United States", 1968.

Subsurface Evaluation and Recommendations - Based on the results of the five widely spaced preliminary test borings, we offer the following comments and recommendations:

1. We recommend that any proposed structures be supported on foundations seated on or in the compact native soils or the underlying bedrock.

All major structures should be founded on the bedrock, whereas minor structures could be satisfactorily supported on the native soil where rock is not encountered within normal foundation depths. However, to reduce the effects of possible minor differential settlements, we suggest that any one structure be founded entirely on rock or entirely on soil.

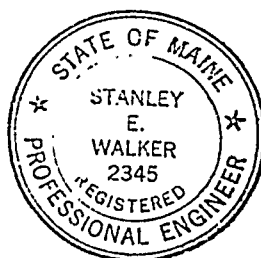
2. The City of Portland Building Code (1965) allows a maximum bearing pressure of 40 tsf or 20% of crush strength on solid ledge rock. As tabulated on Sheet 8, the crushing strengths of all the tested specimens from the preliminary borings were in excess of 200 tsf. Therefore indicating an allowable bearing pressure of 40 tsf for foundations seated on the sound (un-decomposed) schist bedrock. We wish to point out that much of the schist bedrock in Portland has appreciably lower strength than that indicated by these preliminary test results and that upon the completion of a final design investigation some reduction in allowable bearing pressure may be necessary.
3. The sampling penetration resistances indicate the undisturbed firm to very compact native tills and decomposed bedrock have an allowable bearing capacity of at least 3.5 tsf with the groundwater controlled at or below the footing level.
4. Although much of the existing fill material may be suitable for reuse as sub-floor fill, we recommend that slab-on-grade floors not be supported on any of the existing fill in its present condition. Where slab-on-grade floors are to be constructed in fill areas, all of the existing fill should be removed and replaced with a well compacted granular fill.
5. Peripheral foundation and sub-floor drainage should be provided for all structures to reduce potential floor dampness and to improve foundation stability.
6. Although some groundwater is expected to be encountered in deep excavations, its control is not expected to present any unusual construction difficulties. However, this matter should be evaluated further.
7. In view of the geologic conditions and the indicated moderate earthquake potential of the region, we recommend that appropriate consideration be given to the possibility of moderate seismic activity in the design of any major structures.

JORDAN GORRILL ASSOCIATES.
CONSULTING ENGINEERS

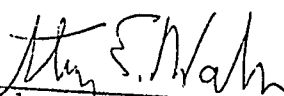
-4-

The results of this investigation and the comments and recommendations presented herein are preliminary in scope and are intended to assist your design consultants in establishing preliminary design criteria and concepts. More detailed investigations should be made in conjunction with the final design of any proposed structures.

It has been a pleasure to assist you with this phase of the project. If you have any questions, or if we can be of further service during design or construction, please do not hesitate to contact us.



Very truly yours,
JORDAN GORRILL ASSOCIATES


Stanley E. Walker, P.E.

SEW/jg

Encls.

MOLE NO. P-1

[illegible]

MAINE TEST BORINGS, INC. BREWER, MAINE 04412						CLIENT Jordan - Gorrill				SHEET <u>1</u> OF <u>1</u> HOLE NO. <u>B-3</u>			
DRILLER Al Stitham						PROJECT NAME Maine Savings Bank				LINE & STATION			
M.T.B. JOB NUMBER 914-26						LOCATION Portland, Maine				OFFSET			
GROUND WATER OBSERVATIONS CASING @ 3.7 AT <u>4.2</u> FT AFTER <u>2</u> HOURS AT _____ FT AFTER _____ HOURS						TYPE SIZE I.D. HAMMER WT HAMMER FALL		CASING NX 3" 300 17"		SAMPLER SS 1 3/8 140 30"		CORE BARREL	
						DATE START <u>3/5/72</u> DATE FIN <u>3/7/72</u>		SURFACE ELEV <u>82.4</u>		GROUND WATER ELEV. <u>78 ± ?</u>			
CASING BLOWS PER FOOT	NO	OD.	PEN.	REC.	DEPTH @ BOT	BLOWS PER 6" ON SAMPLER 0-6 6-12 12-18			VANE READING	DEPTH	STRATUM DESCRIPTION		
26											<u>ELEV. 82.4</u>		
21													
350	1D	2"	12"		3.0	36	40			3.7	Brown sand & Brick w/Rotten Rock <u>ELEV. 78.7</u>		
262	1R	3"	19"	17"	5.2	90%					DARK GREEN-GRAY CHLORITE SCHIST, FOLIATIONS IRREGULAR & 45°-90°, W/ FREQUENT STAINED FRACTURES, OCCASIONAL SMALL (<1/4") SOLUTION VOIDS, FREQUENT PYRITE XLS. — BECOMING GRAY QUARTZITIC SCHIST W/ OCCASIONAL QUARTZ SEAMS, FOLIATIONS IRREGULAR TO BROKEN, W/ STAINED FRACTURES & 20°-30° <u>FOLIATIONS BECOMING REGULAR & 60°-70°</u> <u>ELEV. 63.7</u>		
	2R	"	6"	6"	5.8	100%							
	3R	"	8"	8"	6.4	100%							
	4R	"	15"	14"	7.7	93%	X						
	5R	"	30"	29"	10.2	97%							
	6R	"	2"	2"	10.3	100%							
	7R	"	8"	4"	11.0	50%							
	8R	"	19"	18"	12.6	95%							
	9R	"	10"	9"	13.4	90%							
	10R	"	12"	12"	14.4	100%							
	11R	"	7"	7"	15.0	100%							
	12R	"	12"	9"	16.0	75%							
	13R	"	32"	32"	18.7	100%							
										18.7	Bottom of boring @ 18.7'		

MAINE TEST BORINGS, INC. BREWER, MAINE 04412		CLIENT Jordan - Gorrill		SHEET <u>1</u> OF <u>1</u> HOLE NO. <u>B-4</u>	
DRILLER Al Stitham		PROJECT NAME Maine Savings Bank		LINE & STATION	
M.T.B. JOB NUMBER 914-26		LOCATION Portland, Maine		OFFSET	
GROUND WATER OBSERVATIONS AT <u>0</u> FT AFTER <u>0</u> HOURS CASING @ 2' IN PROGRESS		TYPE SIZE I.D. HAMMER WT HAMMER FALL		DATE START <u>4/12/72</u> DATE FIN <u>4/13/72</u> SURFACE ELEV <u>80.1 PCD</u> GROUND WATER ELEV. <u>80±</u>	
Casing NX 3" 300 17"		Sampler SS 1 3/8 140 30"			

Casing Blows per Foot	Sample				Depth @ Bot	Blows per 6" on Sampler			Vane Reading	Depth	Stratum Description
	NO	OD	PEN	REC		0-5	6-12	12-18			
18											ELEV. 80.1
33										2.0	ELEV. 78.1
	1R	3"	60"	47"	7.0				78%		GRAY SCHIST W/ OCCASIONAL QUARTZ SEAMS, FOLIATIONS & 60°-90° SOME BROKEN AND FOLDED. SOME FRACTURES 4"-8" QUARTZ SEAM MOSTLY SOUND
	2R	"	12"	10"	8.0				83%		
	3R	"	5"	5"	8.4				100%		
	4R	"	36"	35"	11.4				98%		
	5R	"	48"	48"	15.4				100%		
	6R	"	60"	56"	20.4				93%		
										20.4	ELEV. 59.7
											Bottom of Boring @ 20.4'

PROPORTIONS

AND = 35-50%

SOME = 10-35%

SOIL CLASSIFIED BY

☒ DRILLER-VISUALLY

☒ SOIL TECHNICIAN-VISUALLY

☐ LABORATORY TESTS

REMARKS

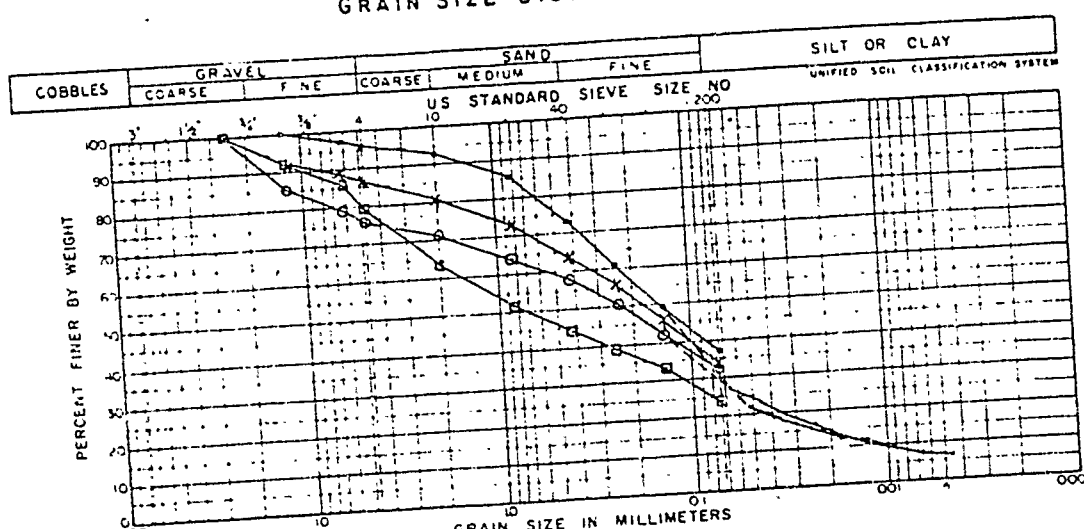
HOLE NO B-4

MAINE TEST BORINGS, INC. BREWER, MAINE 04412		CLIENT Jordan - Gorrill		SHEET <u>1</u> OF <u>1</u> HOLE NO. <u>B-5</u>	
DRILLER Al Stitham		PROJECT NAME Maine Savings Bank		LINE & STATION	
M.T.B. JOB NUMBER 911-26		LOCATION Portland, Maine		OFFSET	
GROUND WATER OBSERVATIONS AT <u>5.5</u> FT. AFTER <u>OVERNIGHT</u> CASING @ <u>15'</u> AT <u>12.2</u> FT. AFTER <u>0</u> HOURS CASING @ <u>20'</u> CAVED, DRY @ <u>2'</u> " <u>0</u> "		TYPE SIZE I.D. <u>3"</u> HAMMER WT <u>300</u> HAMMER FALL <u>17"</u>		SAMPLER <u>SS</u> CORE BARREL <u>1 3/8</u> DATE START <u>4/7/72</u> DATE FIN <u>4/11/72</u> SURFACE ELEV <u>82.1</u> GROUND WATER ELEV. <u>70± ?</u>	

CASING BLOWS PER FOOT	SAMPLE				DEPTH @ BOT	BLOWS PER 6" ON SAMPLER			VANE READING	DEPTH	STRATUM DESCRIPTION
	NO.	OD.	PEN.	REC.		0-6	6-12	12-18			
15											GRAVELLY Brown Sand - coarse (Fill) ~ LOOSE TO FIRM ~ ELEV. 79
15	7	10	2"	18"	3.5	5	5	5		3.0	
20											
15											GRAY-BROWN SILTY SAND, TRACE OF GRAVEL Brown sandy gravel (Till) ~ FIRM ~ ELEV. 72
8	20	"	"	"	6.5	6	9	18			
15											
122											BROWN-GRAY GRAVELLY SILTY SAND ~ VERY COMPACT ~ ELEV. 60
35	30	"	"	"	11.5	25	31	23		10.0	
115											
75	0	"	0	0	15.0						DARK GRAY SCHIST, w/ OCCASIONAL QUARTZ SEAMS, FOLIATION IRREGULAR FOLDED AND BROKEN & 60°-90°, FREQUENT FRACTURES IN UPPER ZONE ELEV. 45
52											
50											
72											BROKEN & RESOLIDIFIED Bottom Of Boring @ 36.2'
103											
111											
	10	"	14"		21.2	20	30	35		21.2	
	12	3"	12"	12"	22.2	100%					REMARKS: HOLE NO. B-5
	22	"	24"	24"	24.2	96%					
	34	"	12"	11"	27.7	98%					
	12	"	51"	51"	32.2	100%					
	52	"	36"	36"	35.2	100%					
	62	"	12"	6"	36.2	50%					

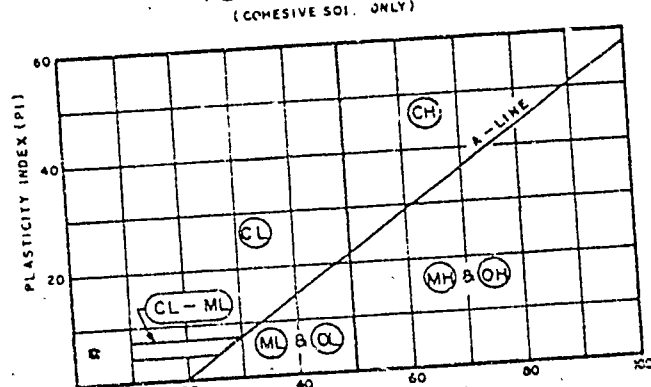
PROPORTIONS AND = 33-50% SOME = 10-35% OTHER = 2-10%	SOIL CLASSIFIED BY <input checked="" type="checkbox"/> DRILLER-VISUALLY <input checked="" type="checkbox"/> SOIL TECHNICIAN-VISUALLY <input checked="" type="checkbox"/> LABORATORY TESTS
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GRAIN SIZE DISTRIBUTION



SOURCE	SAMPLE	DEPTH	CLASSIFICATION	MC	LL	PL	ORG
B-2	30	—	SILTY MEDIUM FINE SAND				
B-3	10	□-□	GRAVELLY SILTY SAND				
B-5	20	x-x	SILTY SAND, TRACE OF GRAVEL				
B-5	30	○-○	GRAVELLY SILTY SAND				

PLASTICITY CHART (COHESIVE SOILS ONLY)



NOTES:

SOIL CLASSIFICATION TEST RESULTS

MAINE SAVINGS BANK
CASCO & CONGRESS STREETS
PORTLAND, MAINE

PROJ. NO. 7202B30 DATE MAY 78

SHEET 7

JORDAN GORRILL ASSOCIATES
CONSULTING ENGINEERS

Maine Savings Bank
Casco and Congress Streets
Portland, Maine

ROCK CORE COMPRESSION TEST RESULTS

Boring	Core Run	Depth		Crushing Strength	
		Below Ground (ft)	Below Rock (ft)	(Equivalent Cube) (psi)	(tsf)
1	1R	3.6	1.1	3,160	228
1	3R	9.1	6.6	10,130	730
3	5R	9.0	5.3	12,000	865
4	2R	7.2	5.2	8,940	634
4	2R	7.5	5.5	9,630	693
5	2R	22.6	1.4	12,000	865
5	3R	26.5	5.3	4,170	300

7202830 S

Sheet 8

CITY OF PORTLAND, MAINE

Department of Building Inspection

499 CONGRESS

New Maine Savings Bank Building

Feb. 16, 1973

Mr. Anthony C. Belluschi
Pietro Belluschi, Inc. and
Jung/Brannel Associates, Inc.
665 Boylston Street
Boston, Massachusetts, 02116

Dear Mr. Belluschi:

In response to our meeting on Wednesday, February 14th, and the preliminary review sketches you brought, Mr. Soule and myself have given this some thought and taken time to review some of the high points of the exit situation and we still conclude that the plans as submitted would not be acceptable. In referring to the BOCA Code, Section 609.2 for remote locations, you will recall that it states "they shall be placed as remote from each other as practical, and shall be arranged to provide direct access in separate directions from any point in the area served." The table No. 11 for length of exitway access travel indicates for business use under type 1 and 2 construction that the maximum allowable distance is 150 feet. The plan submitted on the alternate method of escape would be far in excess of that.

I would like to call your attention to the BOCA Section 612.1 titled "Access Passageways" which states "direct exitway access shall be required exitways to continuous passageways, aisles or corridors, conveniently accessible to all occupants and maintained free of obstruction."

The plan submitted also does not meet the requirements of the code for distance between exits which in accordance with the BOCA Code should be no closer than 20 percent of the perimeter, the perimeter being about 450 feet would yield a distance of approximately 90 feet between the exits. It is our suggestion therefore, that a redesign of the exits be considered and designed such that the occupants of a building or part thereof be equally distributed to the various means of egress and the exit location shall be located such that they shall be arranged so that a hazard involving one would not be likely to make any others impassable or inaccessible and that at ground level they shall discharge to the open air or open space of land controlled by the owner of the building or structure and exit onto public streets or walks.

Very truly yours,

R. Lovell Brown, Director

RLB:m

499 Congress St
Meeting with Consolidated
Constructors - on Fri May. 33 9:30 AM.

Mr. M. LUNNEY & Mr. HUTTON -
w/ R. L. BROWN
FAST TRACT.

PLANS AS IT IS BEING BUILT.
Arch. - wish to submit -
Spec. Bldg.
NOT FINISHED INSIDE -
OPEN FLOOR SPACE.

- no plan of tenants -

FOR PLANS - APR. 7 - y dur.
SITE " " " "

ELEC HEAT.

MA 1 - MONO PLANS.

I told Mr. M. LUNNEY -
I will only accept final
working drawings. NO permit
will be issued unless the
drawings are satisfactory for
Cable checking & are
"working drawings".

R. L. B. 3/23/73.