

and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.

1. Balancing of rooftop unit systems is specified in Division-15 Section 15841: "Low Pressure Ductwork and Accessories".
- G. Provide positive equipment ground for rooftop heating and cooling unit components.

END OF SECTION 15771

SECTION 15841

LOW PRESSURE DUCTWORK AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK:

Extent of low pressure ductwork is indicated on drawings and in schedules, and by requirements of this section. Low pressure ductwork is defined as ductwork subjected to velocities of 2500 fpm or less, and operating pressure of 2" w.g. or less, positive or negative.

Types of low pressure ductwork required for project include the following:

Air-conditioning supply and return air systems

1.3 QUALITY COMPLIANCE:

- A. SMACNA Standards: Comply with SMACNA "HVAC DUCT Construction Standards Metal and Flexible"; 1st Edition 1985.
- B. ASHRAE Standards: Comply with ASHRAE Handbook and Product Directory, 1988 Equipment Volume, Chapter 1 "Duct Construction", for fabrication and installation of low pressure ductwork.
- C. NFPA Compliance: Comply with the following as applicable:
 - 1. Standard HVAC supply, return, relief, transfer and exhaust ducts not itemized below:
 - a. NFPA 90A "Standard for the Installation of Air Conditioning and Ventilating Systems", 1985 Edition.

D. SUBMITTALS:

1. Product Data: Submit manufacturer's specifications on manufactured products and factory fabricated ductwork used for work of this section.
2. Shop Drawings: Submit dimensioned layouts of ductwork showing both the accurately scaled ductwork and its relation to space enclosure. Show modifications of indicated requirements made to conform to local shop practice, and how those modifications ensure that free area, materials, and rigidity are not reduced.

E. DIMENSIONS:

1. The size of ducts marked on the drawings will be adhered to as closely as possible. The right is reserved to vary duct sizes to accommodate structural conditions during progress of work without additional cost to Owners. Duct layout is schematic to indicate size and general arrangement only. All ducts shall be arranged to adjust to "field conditions". Sheet Metal Contractor shall coordinate work with Electrical Contractor and other trades.

PART 2 - PRODUCTS

2.1 DUCTS:

- A. Ducts shall be constructed of galvanized steel in accordance with the following table of duct sizes and latest ASHRAE Guide and Data Book unless otherwise shown on drawings.

<u>Dimensions of Longest Side</u> (inches)	<u>Sheet Metal Gauge</u>
---	--------------------------

Standard Ducts:

UP thru 12	26
13 - 39	24

B. DAMPERS AND SPLITTERS:

All dampers and deflectors shall be a minimum of #22 gauge and stiffened as required. Splitter dampers shall be sized to perform control of air desired.

C. FLEXIBLE CONNECTORS:

Furnish and install flexible connections on both supply and return duct at air handling unit. Connections shall be made from Ventglas neoprene coated glass fabric, as furnished by Ventfabrics, Inc., or equal.

D. DIFFUSERS AND GRILLES:

1. Diffusers and return grilles shall be installed at air supply and return openings as shown. The following list is based on Krueger model numbers to establish standard of quality. Equal units by other manufacturers are acceptable. All units shall be steel and provided with white baked enamel finish and countersunk screw holes. Mounting screws shall be oval head type with head painted to match finish.
2. Return Grilles: Series S8CH with horizontal stationary deflecting vanes on 3/4" centers and set 35° up to restrict vision.
3. Air Relief Grilles: SH-3 (3-way) or SH-4 (4-way) square type with Ultraflow. Provide frame style for surface mount and integral anti-smudge frame. Units shall have removable core, extractor, and air straightener.

E. SEALANT:

All ducts are to be sealed with Hardcast AM-401 instant tape sealant.

F. DUCT LINING:

Duct liner shall be installed in all ducts where indicated on drawings. Liner shall be thickness shown on drawings; 3.0 lb. density neoprene or acrylic coated fiberglass on air stream surface. Liner shall have 100% of inside side surface of duct. Additionally, liner shall be secured to duct with mechanical fasteners. Fire hazard classification shall be flame spread 25 and smoke developed 50. Noise reduction coefficient shall be no less than 0.80.

PART 3 - EXECUTION

3.1 GENERAL:

Assemble and install ductwork in accordance with recognized industry practices to achieve air tight (5% leakage) and noiseless (no objectional noise) system, and capable of performing each indicated service. Install each run with minimum of joints. Align ductwork accurately at connections, within 1/8" misalignment tolerance and with internal surfaces smooth. Support ducts rigidly with suitable ties, braces, hangers and anchors of type which will hold ducts true-to-shape and to prevent buckling.

3.2 SEALING DUCT:

After installation, seal to class recommended in SMACNA "HVAC Duct Standards - 1st Edition 1985". Use sealant described in Paragraph 2.1 (F) of this section. All joints in sheetmetal ducts shall be made airtight, and all branches and turns shall be made with long radius elbows and fittings. If long radius elbows are not used, elbows shall be provided with fixed double wall turning vanes designed to reduce resistance of the elbow to equivalent of a long radius elbow with throat radius not less than duct width.

3.3 LOCATION OF DUCT:

- A. Locate ductwork runs in soffit as shown on drawings. Limit clearance to 1/2" where furring is shown for enclosure or concealment of ducts, but allow for insulation thickness, if any. Where possible, locate insulated ductwork for 1" clearance outside of insulation. Coordinate layout with soffit construction, ceiling, lighting layout and similar finished work.
- B. Coordinate duct installations with installation of accessories, dampers, coil frames, equipment, controls and other associated work of ductwork system.
- C. Support ductwork in manner complying with SMACNA "HVAC Duct Standards - 1st Edition 1985" hangers and supports section.

3.4 CLEANING AND PROTECTION:

- A. Clean ductwork internally of dust and debris as it is installed. Clean external surfaces of foreign substances which might cause corrosive deterioration of metal.

E Temporary Closure: At ends of ducts which are not connected to equipment or air distribution devices at time of ductwork installation, provide temporary closure of polyethylene film or other covering which will prevent entrance of dust and debris until such time connections are to be completed.

3.6 BALANCING:

Test, adjust, and balance for air quantities shown on drawings. Seal any leaks in ductwork that become apparent in balancing process.

END OF SECTION 15841

SECTION 16000 - ELECTRIC WORK

PART 1 - GENERAL

1.1 GENERAL PROVISIONS:

A. All Contractors, Subcontractors and material suppliers shall be responsible for becoming fully informed of all specifications, procedures, etc., given in the General portion of these Specifications as well as all Addenda, any other divisions of the Specifications, and all drawings as they may affect the work of this Division or the coordination of this work with that of others.

1.2 SCOPE OF WORK:

A. The work described herein shall be interpreted as work to be done by the Electrical Subcontractor. Work to be performed by other trades will always be specifically referenced to a particular contractor or subcontractor.

B. The work covered by this section consists of furnishing all labor, materials, equipment, supplies, fixtures, devices, etc., and in performing all operations including setting sleeves, channelling and chasing necessary for the installation of a complete wiring system, all in strict accordance with this section of the specifications and the accompanying drawings, and subject to the terms and conditions of the contract and including but not restricted to the following:

1. Fuse blocks and switches.
2. Circuit Breakers.
3. Fixtures and lamps.
4. Wiring devices and plates.
5. Equipment connections.
6. Record plans of "As-Built" construction.

C. Related work specified elsewhere. The following work is not included under the Electrical Section:

1. Excavation and backfilling.
2. all cutting and patching.

3. all finish painting is included under the work of finish painting.

D. Other requirements of this Section. The Electrical Sub-Contractor shall study the specifications of the other phases of the General Contract and all of its subdivisions. All electrical work and wiring material requirements, including unit supplied by others, but not motors of appliances which may be necessary therein, are to be considered as part of and required under the Electrical Sub-Contractor's specifications and contract, even though as such no mention or notations have been included in the Electrical drawings or specifications, unless same shall have been specifically excluded as Electrical Sub-contractor's requirements.

1.3 GENERAL:

A. The Contractor shall arrange with the Owner for all required power outages as the premises must be continually occupied.

B. The Owner will provide Temporary Power. This Contractor shall provide all temporary wiring.

C. This Contractor shall furnish and install a 200 watt lamp outlet (or equivalent) for each 1000 sq. ft. of construction for temporary power and light.

D. Due to the nature of the work, this Contractor is advised that he should visit the site to determine the extent of work to be completed in the existing building. And that, furthermore, no extra work at additional cost to the Owner will be permitted due to the Contractor's failure to examine the site.

F. This Contractor shall coordinate his work with the progress of the building and other trades such that he shall complete his work as soon as conditions permit and so that interruptions of building functions will be at a minimum. Any overtime hours worked or additional costs incurred due to lack of or improper coordination with other trades or the Owners by this Contractor shall be assumed by this Contractor without any additional cost to the Owner.

F. Waste material shall be removed promptly from the premises. all materials and equipment stored on the premises shall be kept in a neat and orderly fashion. No material shall be stored where exposed to adverse weather conditions.

G. This Contractor shall erect and maintain at all times necessary safeguards for the protection of life and property of Owners, workmen, staff and public.

H. After the interior wiring system installation is completed, and at such time as the Engineer or Owner may direct, the Contractor shall conduct an operating test for approval. The test shall be performed in the presence of the Owner, Engineer, or their authorized representative. The Contractor shall furnish all instruments and personnel required for the tests, and the Owner will furnish the necessary electric power

I. The Contractor shall guarantee in writing all workmanship, materials and equipment to be free from defects for a period of one year from date of acceptance of the project, and shall make good any and all defects within that period without cost to the Owner.

J. No change shall be made from the work, equipment or materials as called for by the Specification and the accompanying drawings, except on a written order of the Owner. When such changes reduce the Contractors materials, labor, equipment or expense, the saving thus affected shall be used in full to reduce the contract price. No charge for extra work will be allowed unless such extra work has been authorized by a written order of the Owner, stating the charge to be made for such work.

1.4 CODES AND STANDARDS

A. Unless otherwise indicated in writing by the Engineer, the materials furnished under this specification shall be the standard products of manufacturers regularly engaged in the production of such equipment and shall be the manufacturer's latest standard design and shall also conform to such standards as to their quality and fabrication as have been established by the following:

- 1) National Electric Code (current edition)
- 2) State Department of Public Safety
- 3) Standards of the Underwriter's Laboratories (UL)
- 4) National Electric Safety Code, American National Standards Institute
- 5) Institute of Electrical and Electronic Engineers (IEEE)

- 6) National Electrical Manufacturer's Association (NEMA)
- 7) American Society for Testing and Materials (ASTM)
- 8) Local Codes
- 9) National Board of Fire Underwriters

B. Where the contract documents indicate more stringent requirements than the above codes and ordinances, the contract documents shall take precedence.

C. The installation shall comply with all local laws applying to the electrical installation in effect with regulations of any other governmental body or agency, having jurisdiction, and with the regulations of the National Electrical Code where such regulations do not conflict with those laws.

D. This Contractor shall obtain and pay for all permits required by local ordinances. After completion of the work, this Contractor shall furnish to the Engineer, for the Owner, a certificate of final inspection and approval from the Inspection Bureau having jurisdiction.

1.5 Drawings

A. The Contract documents indicate the extent and schematic arrangement of the conduit and wiring systems. If any departures from the drawings are deemed necessary by the Contractor, details of such departures shall be submitted as soon as practical and within 30 days after award of Contract, to the Engineer for approval. No such departures shall be made without the prior written approval of the Engineer.

B. These specifications are accompanied by floor plans of the building showing the locations of outlets, switch controls, devices, and feeder distribution, power apparatus, and equipment. Schematic wiring diagrams, structure construction, working drawings, and certain details are also shown. The drawings, except the structure, are intended to indicate only diagrammatically the extent, general character and approximate locations of the work included. Work indicated but having minor details obviously omitted, shall be furnished complete to perform the function intended without additional cost to the Owners.

C. The Architectural, Structural, and Mechanical Drawings should be followed and this section of the work fitted thereto. If any departures from the contract drawings are deemed necessary by this Contractor, details of such departures and the reasons therefore shall be submitted, as soon as practical and within 30 days after award of the contract, to the Engineer for approval. No departures shall be made without the prior written approval of the Engineer or this authorized agent.

D. These drawings and these specifications are complementary each to the other and any items specified but not shown or vice versa shall be referred to the Engineer for clarification, and shall consequently be furnished and installed as if both shown and specified.

E. Revised drawings of all changes to the contract plans shall be kept during construction, and one clean set of prints neatly marked in red ink shall be turned over to the Engineer upon completion of the project, for the Owners use.

PART 2 - PRODUCTS

2.01 MATERIALS AND WORKMANSHIP

A. The materials and workmanship shall be the best of their kinds and in full accord with the most modern electrical construction. All materials shall be new.

B. Defective equipment or equipment damaged in the course of installation or test shall be replaced or repaired in a manner meeting the approval of the Engineer.

C. In cases where equipment and materials are specifically specified, equal substitute material will be permitted only upon specific approval in writing by the Engineer before the installation is made or material ordered.

D. This Contractor shall submit detailed shop drawings (cuts, brochures, drawings including custom schematics of systems, etc.) in sextuplicate (6) of all equipment: switches, receptacles, control devices, wiring devices, lighting fixtures, etc., within 30 days after award of Contract to the Engineer for review.

E. All shop drawings shall be submitted at one time and partial submittals forwarded from time to time will not be accepted.

F. Corrections or comments made on the shop drawings during this review do not relieve the Contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor is responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; and performing his work in a safe manner.

G. At the completion of the work, this Contractor shall turn over to the Engineer, for the Owner's use, three (3) sets of operating and maintenance instructions of all equipment. The Contractor shall explain and demonstrate the operation of each system to the Owner's representative.

2.02 RACEWAYS AND FITTINGS

A. Wiring in masonry walls shall be run in electrical metallic tubing. Concealed wiring in stud walls may be run in non-metallic sheathed cable. Concealed wiring above suspended acoustical ceilings may be in non-metallic sheathed cable, but shall be run neatly. Wiring run in or under slab or below grade shall be run in either rigid steel conduit or PVC Schedule 40. All conduit above grade or slab shall be steel.

B. Connectors for EMT conduit shall be threaded, Compression Type. Set-screw type connectors for 1" and smaller will not be permitted.

2.03 CONDUCTORS

A. A complete system of conductors shall be installed in the raceway systems. Line voltage branch circuit conductors shall be #12AWG, copper, minimum except as otherwise noted on the drawings. Home runs over 100 feet shall be #10AWG minimum.

B. Conductors shall be thermoplastic insulated, Type THW, THWN, THHN or XHHW (where permissible).

C. All wire shall be copper.

2.04 GROUNDING SYSTEM

A. Run a separate grounding wire to all outlets.

B. Ground wire secured under conduit bushings or cable clamps will not be permitted.

2.5 ELECTRICAL DISTRIBUTION SYSTEM

A. This Contractor shall furnish and install where indicated on the drawings, circuit breakers and disconnect switches fused as required and of a size as indicated or required.

B. Switches shall be heavy duty type, general Electric, Square D, ITE, or Westinghouse.

C. The Contractor shall furnish and install on each disconnect switch, a name plate of engraved plastic material inscribed with the purpose of the particular piece of equipment.

2.6 WIRING DEVICES

A. this Contractor shall furnish and install receptacles and switches equal to the following:

1. Wall switches: Arrowhart, 1991; Ivory.
2. Duplex receptacles: Arrowhart, 5735-S; Ivory.
3. Switch and receptacle plates shall be impact resistant plastic - Ivory.

B. All switches and receptacles shall be flush mounted in all areas, where possible.

2.07 LIGHTING FIXTURES

A. This Contractor shall furnish, install and connect complete to the building wiring system, ready for proper and satisfactory operation, all lighting fixtures shown. The number and type of lighting fixtures are as shown on the drawings, and as scheduled herein. The manufacturer's name and catalogue numbers referred to are given for identification of type of fixtures desired for locations as indicated on the drawings. Fixtures of other manufacture, similar in design and equal in operation, efficiency, utilization, quality and finish to the various units scheduled may be submitted as substitutes, provided cuts of units, together with all necessary and pertinent photometric and construction data and prices, showing either additional cost or saving to the Owner, are

Included with, but not as part of the bidding documents. This Contractor shall not assume that a fixture may be substituted or to show or include same in his bid.

B. All fixtures shall bear the Underwriters Inspection Label, and be ETL certified.

C. Each fixture shall be supplied with the necessary supports, hangers, canopies, or other miscellaneous materials and devices to install them in a satisfactory manner and to conform to the architectural treatment in the areas in which they are to be installed. The Contractor shall consult all architectural and structural plans in order that he may familiarize himself with all necessary details for the various units to be installed throughout the project. Failure to do this will not relieve him of the necessary materials, etc., to perform the function intended for the lighting system as shown on the drawings.

D. All fixtures shall have installed therein a lamp of wattage noted and shall be of the incandescent filament inside frost type. Lamps shall be rated at 125 volts. All lamps shall be furnished by the Contractor. All incandescent lamps shall be extended life type.

2.6 SNOW MELTING HEATING MATS

A. Supply and install "Easy Heat" electric heating mats for use on 208 volts. Heating mats shall consist of an insulated resistance wire, spaced on a predetermined pattern and bonded to form a mat.

B. The heating cable shall be a resistance wire core insulated with .032" of 90° C. thermoplastic compound with a nylon jacket. A No. 18 A.W.G. copper mesh shall be braided over the nylon jacket to provide a means for grounding the heater. An additional jacket of .020" polyvinyl chloride insulation shall be extruded over the copper braid. The heating cables shall be complete with ten feet of cold lead at each end as standard. Heater wire and cold lead must be factory assembled with a waterproof molded splice connection.

C. The cold leads shall be a stranded copper conductor insulated with .032" P.V.C. and nylon jacket. A No. 16 A.W.G. copper mesh shall be braided over the nylon jacket to provide a means for grounding the heater and an additional PVC jacket shall be extruded over the braid. The cold lead shall be A.W.G. as determined by maximum allowable amperage.

D. Each unit shall dissipate 60 watts per square foot when energized with 208 volts.

E. The complete unit shall conform to standards specified by Underwriters' Laboratories. Installation shall be in accordance with manufacturers' specifications as listed by Underwriters' Laboratories and N.E.C.

PART 3 - EXECUTION

3.1 RACEWAYS AND FITTINGS

A. Outlets shall be installed in the locations shown on the drawings. The Contractor shall study the general building plans in relation to the spaces surrounding each outlet in order that his work may fit the other work required by these specifications.

B. When necessary, the Contractor shall relocate outlets so that, when fixtures or other fittings are installed they will be symmetrically located according to room layout and will not interfere with other work or equipment. Cast metal or cadmium plated sheet steel boxes, of a class to satisfy the conditions for each outlet, shall be used. Boxes shall be installed in a rigid and satisfactory manner, expansion shields on masonry, or machine screws on steel work. Fixture outlet boxes at ceilings shall be of the 4" octagonal concrete type.

C. Conduit systems shall be installed in accordance with the applicable provisions of the National Electrical Code. Rigid steel conduit shall be zinc-coated. Electric metallic tubing shall be installed in accordance with provisions of the National Electric Code.

D. Runs of conduit shall be installed with runs parallel or perpendicular to walls, structural members or intersections of vertical planes and ceilings, with right-angle turns consisting of cast-metal fittings of symmetrical bonds. Bends and offsets shall be avoided where possible, but where necessary, shall be made with an approved hickey or conduit bending machine. The use of a pipe tee or vise for bending conduit will not be permitted. Conduit which has been crushed or deformed in any way shall not be installed. Expansion fittings or other approved devices shall be used to provide for expansion and contraction where conduit crosses expansion joints.

E. Wooden plugs inserted in masonry or concrete shall not be used as a base to fasten conduit supports. Conduits shall be supported on approved types of galvanized wall brackets, ceiling trapeze, strap hangers, or pipe straps, secured by means of toggle bolts on hollow masonry units or expansion bolts in concrete or brick and

machine screws on metal surfaces. Nails shall not be used as means of fastening boxes or conduits.

F. Conduit shall be installed in such manner as to insure against trouble from the collection of trapped condensation, all runs of conduit shall be arranged so as to be devoid of traps wherever possible. The Contractor shall exercise the necessary precautions to prevent the lodgement of dirt, plaster, or trash in conduit, fittings, and boxes during the course of installation. A run of conduit which has become clogged shall be entirely freed of these accumulations, or shall be replaced.

G. Conduit shall be securely fastened to all cast or sheet metal outlet, junction, and pull boxes with galvanized locknuts and bushings, care being observed to see that the full number of threads project through to permit the bushing to pull tight against the end of conduit, after which the locknut shall be made up sufficiently tight to draw the bushing into firm electrical contact with the box. Wiring shall be installed in telephone system conduits unless otherwise specified.

H. Exposed surface wiring in finished areas shall be run in Wiremold raceway or EMT, sized to suit capacity required; i.e., cross section based upon number and size of wires.

3.2 CONDUCTORS

A. Home runs may be combined in one conduit, provided all connections are in accordance with National Electric Code requirements, and the maximum unbalanced current in the neutral does not exceed the capacity of the conductor. Conductors shall be continuous from outlet to outlet, and no splices shall be made except within outlet of junction boxes. Junction boxes may be utilized wherever required or as shown on the drawings.

B. Wire connectors, insulating material or solderless pressure connectors, properly taped, shall be utilized for all splices in wiring.

3.04 EQUIPMENT CONNECTIONS

A. Equipment connections shall be made with liquid tight flexible metal conduit. Controllers for motor, disconnect switches and all control, protective and signal devices for motor circuits shall be connected and left in operating condition. The number and size of conductors between motors and control or protective apparatus shall be as shown on the plans or recommended by the manufacturer of the apparatus. Where equipment is furnished and installed by other

trades for connection to the electrical system, this Contractor shall supervise such installation. All work shall conform to the National Electric Code requirements.

'D OF SECTION 16000

C-8802 Cumberland Club
Sunroom Addition

Page 11 - 16000



APPLICATION FOR PERMIT
DEPARTMENT OF BUILDING INSPECTIONS SERVICES
ELECTRICAL INSTALLATIONS

Date January 18, 1989 19
 Receipt and Permit number 29953

To the CHIEF ELECTRICAL INSPECTOR, Portland, Maine:
 The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of
 Maine, the Portland Electrical Ordinance, the National Electrical Code and the following specifications:

LOCATION OF WORK: 116 High Street
 OWNER'S NAME: Cumberland Club ADDRESS: _____ FEES _____

OUTLETS: 11
 Receptacles 3X Switches 7 Plugmold _____ ft. TOTAL 18 3.00
 FIXTURES: (number of)
 Incandescent 37 Fluorescent _____ (not strip) TOTAL 37 5.70
 Strip Fluorescent _____ ft.

SERVICES:
 Overhead _____ Underground _____ Temporary _____ TOTAL amperes 200 . 3.00

METERS: (number of) _____
 MOTORS: (number of)
 Fractional _____
 1 HP or over _____

RESIDENTIAL HEATING:
 Oil or Gas (number of units) _____
 Electric (number of rooms) _____

COMMERCIAL OR INDUSTRIAL HEATING:
 Oil or Gas (by a main boiler) _____
 Oil or Gas (by separate units) _____
 Electric Under 20 kws _____ Over 20 kws _____

APPLIANCES: (number of)
 Ranges _____ Water Heaters _____
 Cook Tops _____ Disposals _____
 Wall Ovens _____ Dishwashers _____
 Dryers _____ Compactors _____
 Fans _____ Others (denote) _____

TOTAL _____
 MISCELLANEOUS: (number of) 1.00

Branch Panels 1
 Transformers _____
 Air Conditioners Central Unit _____ 2.00
 Separate Units (windows) 1 50 amp.

Signs 20 sq. ft. and under _____
 Over 20 sq. ft. _____
 Swimming Pools Above Ground _____
 In Ground _____

Fire/Burglar Alarms Residential _____
 Commercial _____
 Heavy Duty Outlets, 220 Volt (such as welders) 30 amps and under _____
 over 30 amps _____

Circus, Fairs, etc. _____
 Alterations to wires _____
 Repairs after fire _____
 Emergency Lights, battery _____
 Emergency Generators _____

FOR ADDITIONAL WORK NOT ON ORIGINAL PERMIT INSTALLATION FEE DUE:
 FOR REMOVAL OF A "STOP ORDER" (304-16.b) DOUBLE FEE DUE:
 TOTAL AMOUNT DUE: 14.70

INSPECTION:
 Will be ready on Jan 20, 1989, 19__; or Will Call _____
 CONTRACTOR'S NAME: Energy Elec.
 ADDRESS: 296 Warren Ave.
 TEL: 797-9340
 MASTER LICENSE NO.: 03270 SIGNATURE OF CONTRACTOR:
 LIMITED LICENSE NO.: _____ *[Signature]*

ELECTRICAL INSTALLATIONS -

Permit Number 24953

Location 116 High St

Owner Carroll Wood

Date of Permit 1/18/89

Final Inspection [Signature]

By Inspector [Signature]

Permit Application Register Page No. 54

INSPECTIONS Service _____ by _____

Service called in _____

Closing-in 1/20/89 by [Signature]

PROGRESS INSPECTIONS _____

DATE:

REMARKS:

1/20/89 Violations in basement wires, unground cables etc -

3/28/89 Owner was notified this date as to violations listed - Temporary Certificate of Occupancy will be issued until corrections are made -

15 PERMIT # 1336 CITY OF Portland BUILDING PERMIT APPLICATION

MAP # 1071

Please fill out any part which applies to job. Proper plans must accompany form.

Owner: Cumberland Club (775-6402)

Address: 116 High Street, Portland

LOCATION OF CONSTRUCTION 116 High Street

CONTRACTOR: Lodgewood, Inc. SUBCONTRACTORS: 775-0741

ADDRESS 41 Bates Street, Portland

Est. Construction Cost: \$97,971 Type of Use: EM Business Club

Past Use: _____

Building Dimensions L. W. S. Ft. # Stories: _____ Lot Size: _____

Is Proposed Use: _____ Seasonal: _____ Condominium: _____ Apartment: _____

Conversion-Explain Constructing new addition as per attached

COMPLETE ONLY IF THE NUMBER OF UNITS WILL CHANGE

Residential Buildings Only:

Of Dwelling Units: _____ # Of New Dwelling Units: _____

Foundation:

1. Type of Soil: _____
2. Set Backs - Front _____ Rear _____ Side(s) _____
3. Footing Size: _____
4. Foundation Size: _____
5. Other: _____

Floor:

1. Sills Size: _____ Sills must be anchored.
2. Girder Size: _____
3. Lally Column Spacing: _____ Size: _____
4. Joists Size: _____ Spacing: 16 O.C.
5. Bridging Type: _____ Size: _____
6. Floor Sheathing Type: _____ Size: _____
7. Other Material: _____

Exterior Walls:

1. Studding Size: _____ Spacing: _____
2. No. windows: _____
3. No. Doors: _____
4. Header Sizes: _____ Spacing: _____
5. Framing: Yes _____ No _____
6. Corner Posts Size: _____
7. Insulation Type: _____ Size: _____
8. Sheathing Type: _____ Size: _____
9. Siding Type: _____ Weather Exposure: _____
10. Masonry Material: _____
11. Metal Material: _____

Interior Walls:

1. Studding Size: _____ Spacing: _____
2. Header Sizes: _____ Spacing: _____
3. Wall Covering Type: _____
4. Fire Wall if required: _____
5. Other Material: _____

For Official Use Only	
Date: <u>October 24, 1988</u>	Subdivision: Yes <input type="checkbox"/> No <input type="checkbox"/>
Inside Fire Limits: _____	Name: _____
Blkg Code: _____	Loc: _____
Time Limit: _____	Block: _____
Estimated Cost: <u>\$97,971</u>	Permit Expiration: _____
Value: _____	Ownership: _____ Public <input type="checkbox"/> Private <input type="checkbox"/>
Fee: <u>\$500.00</u>	

Ceiling:

1. Ceiling Joists Size: _____
2. Ceiling Strapping Size: _____ Spacing: _____
3. Type Ceiling: _____
4. Insulation Type: _____
5. Ceiling Height: _____

PERMIT ISSUED

Roof:

1. Truss or Rafter Size: _____ Span: _____
2. Sheathing Type: _____
3. Roof Covering Type: _____
4. Other: _____

OCT 26 1988

City Of Portland

Chimneys:

Type: _____ Number of Fire Places: _____

Heating:

Type of Heat: _____

Electrical:

Service Entrance Size: _____ Smoke Detector Required: Yes No

Plumbing:

1. Approval of soil test if required: Yes No
2. N. of Tubs or Showers: _____
3. N. of Flushes: _____
4. N. of Lavatories: _____
5. N. of Other Fixtures: _____

Swimming Pools:

1. Type: _____
2. Pool Size: _____ Square Footage: _____
3. Must conform to National Electrical Code and State Law

Zoning:

District: _____ Or _____ Frontage Req: _____ Provided: _____

Review Required:

Required Setbacks: Fr. _____ Back _____ Side _____

Zoning Board Approval: Yes _____ No _____ Date: _____

Planning Board Approval: Yes _____ No _____ Date: _____

Conditions Use: _____ Variance _____ Site Plan _____ Subdivision _____

Shore and Floodplain Mgmt _____ Special Exception _____

Other: (Explain) _____

Date Approved: _____

Permit Received By: Nancy Grossman

Signature of Applicant: [Signature] Date: 10/24/88

Signature of CEO: [Signature] Date: _____

Inspection Dates: (8) Hrd

White-Tax Assessor

Yellow-GPCOG

White Tag -CEO

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APPLICATION FOR PERMIT
DEPARTMENT OF BUILDING INSPECTIONS SERVICES
ELECTRICAL INSTALLATIONS

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The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the Portland Electrical Ordinance, the National Electrical Code and the following specifications:

LOCATION OF WORK: 116 High Street
 OWNER'S NAME: Cumberland Club ADDRESS: _____

	FEES
OUTLETS:	
Receptacles <u>33X</u> switches <u>7</u> Plugmold _____ ft. TOTAL <u>18</u>	3.00
FIXTURES: (number of)	
Incandescent <u>37</u> Fluorescent _____ (not strip) TOTAL <u>37</u>	5.70
Strip Fluorescent _____ ft.	
SERVICES:	
Overhead _____ Underground _____ Temporary _____ TOTAL amperes <u>200</u> ..	3.00
METERS: (number of) _____	
MOTORS: (number of)	
Fractional _____	
1 HP or over _____	
RESIDENTIAL HEATING:	
Oil or Gas (number of units) _____	
Electric (number of rooms) _____	
COMMERCIAL OR INDUSTRIAL HEATING:	
Oil or Gas (main boiler) _____	
Oil or Gas (by separate units) _____	
Electric Under 20 kws _____ Over 20 kws _____	
APPLIANCES: (number of)	
Ranger _____	
Cook Tops _____	
Wall Ovens _____	
Dryers _____	
Fans _____	
Water Heaters _____	
Disposals _____	
Dishwashers _____	
Compactors _____	
Others (denote) _____	
TOTAL	
MISCELLANEOUS: (number of)	
Branch Panels <u>1</u>	1.00
Transformers _____	
Air Conditioners Central Unit _____	
Separate Units (windows) <u>1</u> 50-amp	2.00
Signs 20 sq. ft. and under _____	
Over 20 sq. ft. _____	
Swimming Pools Above Ground _____	
In Ground _____	
Fire/burglar Alarms Residential _____	
Commercial _____	
Heavy Duty Outlets, 220 Volt (such as welders) 30 amps and under _____	
over 30 amps _____	
Circus, Fairs, etc. _____	
Alterations to wires _____	
Repairs after fire _____	
Emergency Lights, battery _____	
Emergency Generators _____	
FOR ADDITIONAL WORK NOT ON ORIGINAL PERMIT	
FOR REMOVAL OF A "STOP ORDER" (304-16.b)	
INSTALLATION FEE DUE:	
DOUBLE FEE DUE:	
TOTAL AMOUNT DUE:	14.70

INSPECTION:

Will be ready on Jan 20, 1989, 1989; or Will Call _____

CONTRACTOR'S NAME: Energy Elec.

ADDRESS: 296 Warren Ave.

TEL: 797-9340

MASTER LICENSE NO.: 03270 SIGNATURE OF CONTRACTOR: _____

LIMITED LICENSE NO.: _____

