

UNIT D COMMITTEE

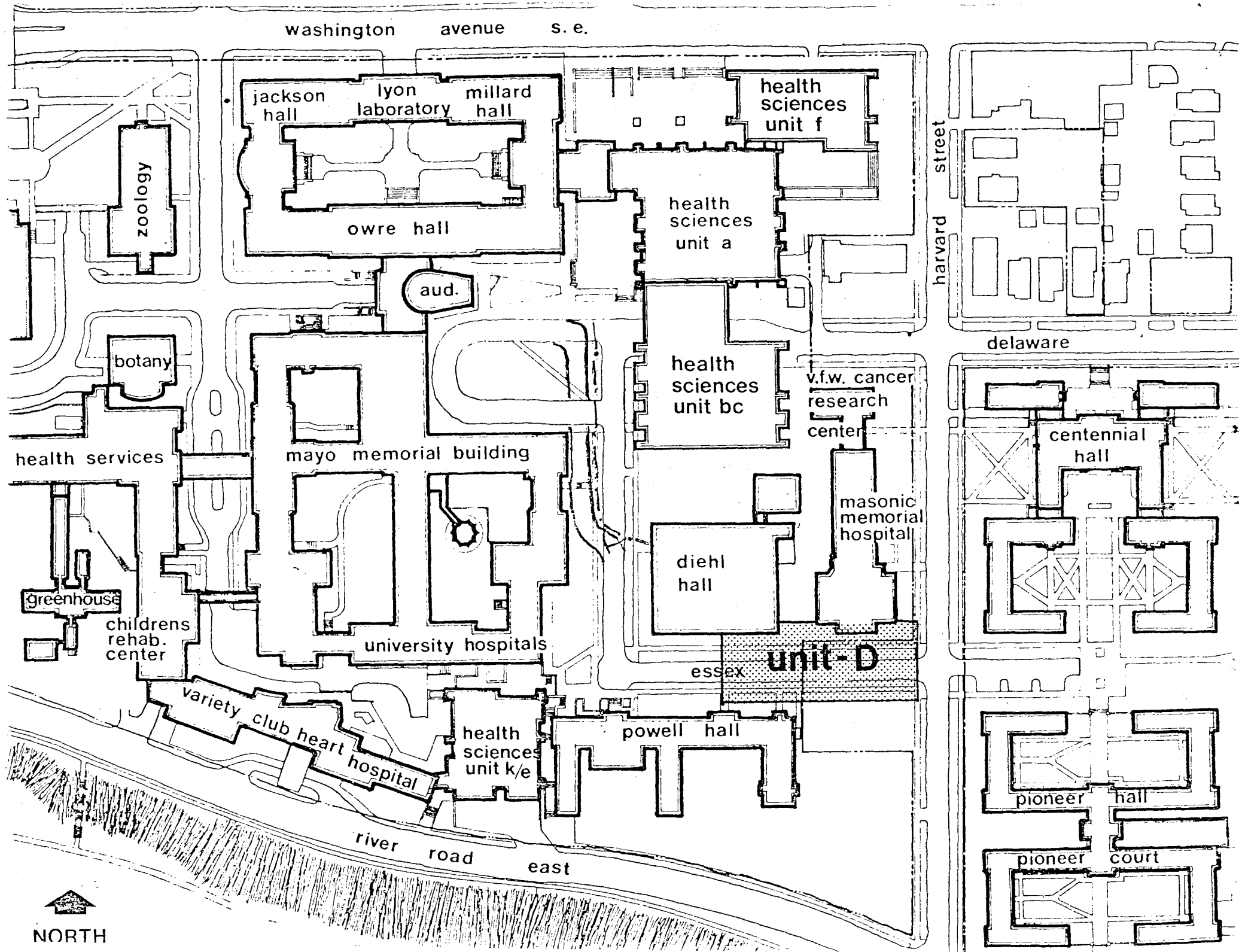
B.J.Kennedy, M.D., Chairman	Box 286	373-4303
Cherie Perlmutter	432 Morrill Hall	373-7610
Tom Jones	Box 603	3-8959
Seymour Levitt, M.D.	Box 494	3-8586
William Krivit, M.D.	Box 284	3-4314
Leland Larson	Box 605	3-8328
Tom Kyle (Health Science Planning)	4107 Powell	376-5571
John Scott TAC	46 Brattle Street Cambridge, Mass 02138	
David Croce- JFB Associates	1200 Prospect St LaJolla Calif 92038	

Project Description

This project is designed to continue the development of the Masonic Cancer Center into a cohesive center dedicated to improving the health of the community, specifically in the area of cancer, to upgrade patient care throughout the state and region by coordinating ongoing research programs and developing new inter-disciplinary research into the cause, prevention, treatment and cure of cancer. This will be accomplished by providing adequate facilities to support basic and clinical research, as well as, training of medical professionals, public education programs, and continuing education programs for health professionals in the area of cancer.

The proposed facility is a three story underground building with an above ground four story elevator tower connected directly to the existing Masonic Hospital.

There will be approximately 25,000 net square feet of area comprised of research and administrative offices, radiation therapy facilities, chemotherapy facilities, educational facilities, research labs and support facilities. This building will be fully intergrated into the master plan for the development of the University of Minnesota.



Lyle French, M.D.
VICE PRESIDENT FOR HEALTH SCIENCES

MEDICAL SCHOOL
Dean N.L.Cault

UNIVERSITY HOSPITALS
Director John Westerman

RESEARCH & EDUCATION

PATIENT SERVICES

B.J.Kennedy, M.D.

Cancer Center Coordinator
Mr. xxx

Assistant Directors
Mr. Dick Pierson
Mr. Robert Baker

COOPERATING
ONCOLOGY
PROGRAMS

Medicine

Therapeutic
Radiology

Pediatrics

Surgery

Gynecology

Lab Medicine
& Pathology

MASONIC CANCER CENTER

UNIT D

Masonic Radiation Oncology
Clinic Research and
Clinical Center

MASONIC MEMORIAL HOSPITAL

Cancer Detection Center
Clinical Research Center
Oncology In-Patient Services

VETERAN FOREIGN WARS

CANCER RESEARCH CENTER

B.J.Kennedy, M.D. - Study of Advanced Malignant Diseases

B.J.Kennedy, M.D. - Cancer Education Program

Principal Investigator-Cooperative Groups (A, B, COG,

Principal Investigator-Individual Research Grants

Principal Investigator-Contracts

Seymour Levitt, M.D. - Radiation Oncology Research & Clinical Cntr

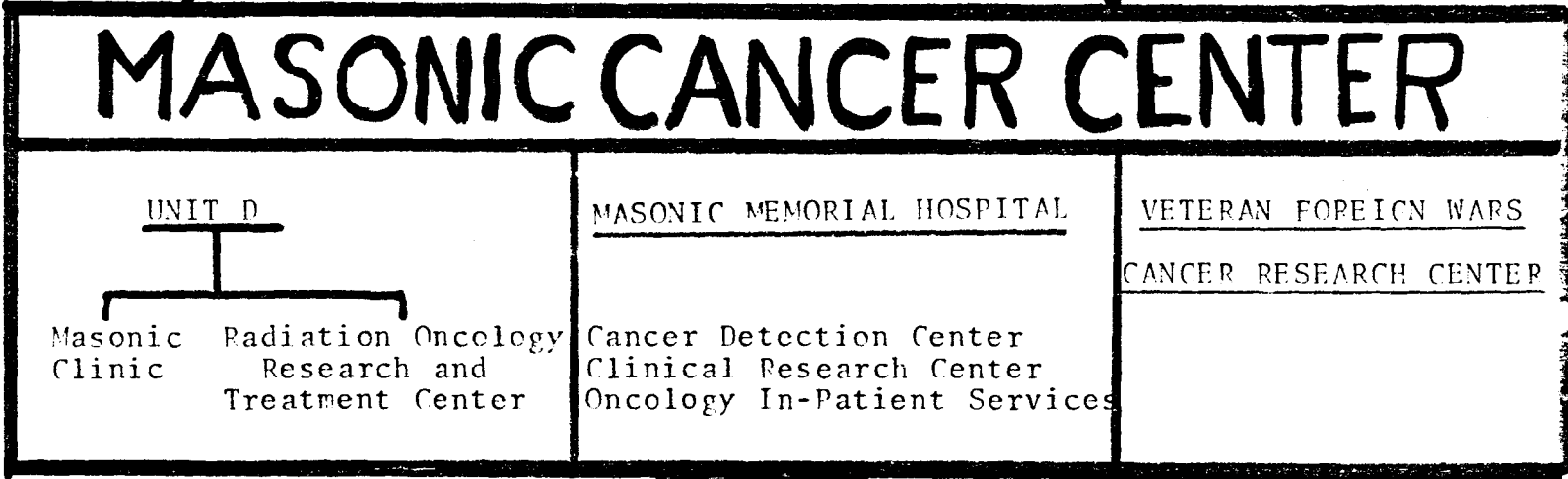
LYLE FRENCH, M.D.
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UNIVERSITY HOSPITALS
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RESEARCH AND EDUCATION

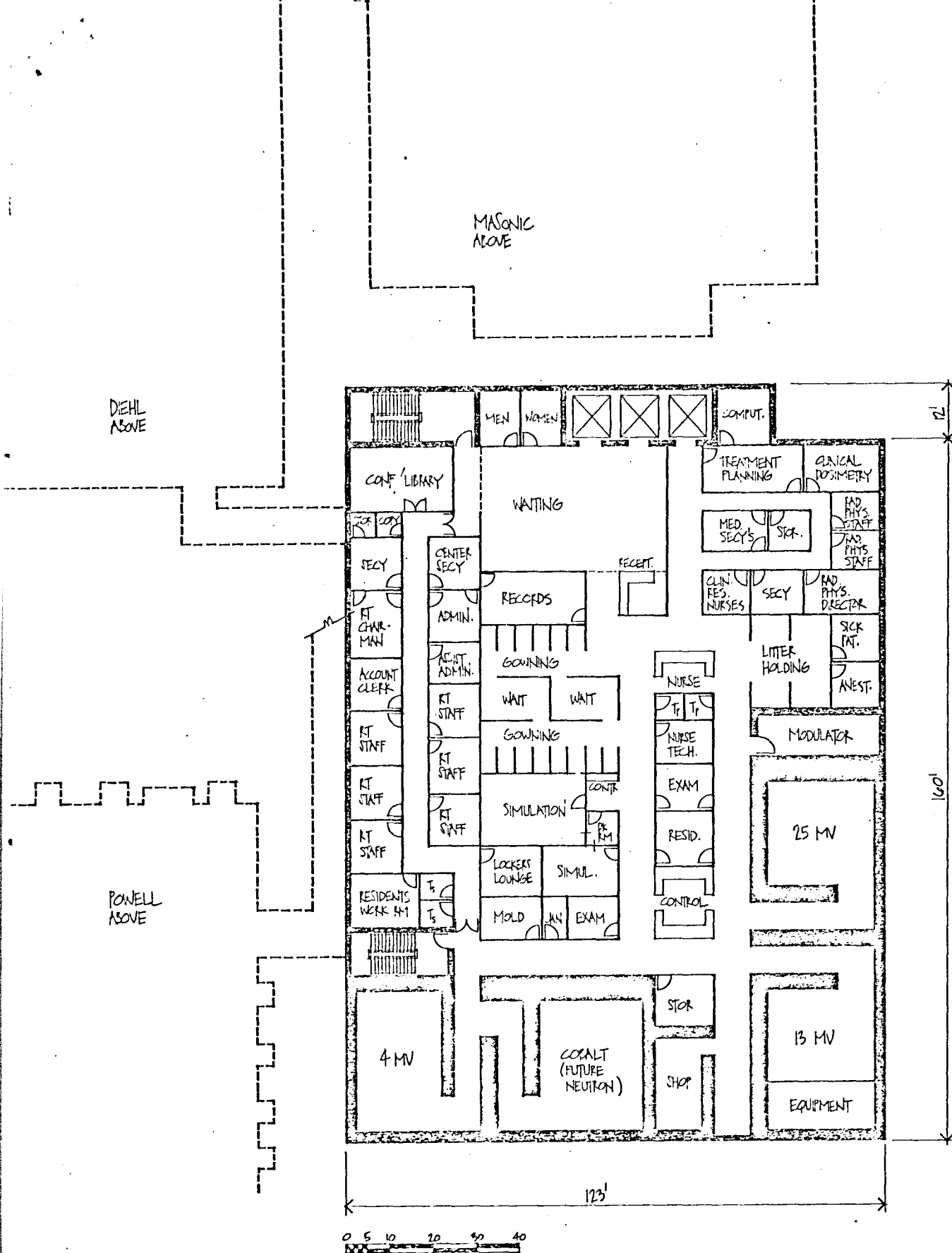
PATIENT SERVICES



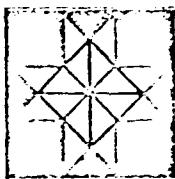
COOPERATING ONCOLOGY PROGRAMS

- Medicine
- Therapeutic Radiology
- Pediatrics
- Surgery
- Gynecology
- Lab Medicine & Pathology

Principal Investigator:		Grant:
B.J.Kennedy, M.D.	Interdisciplinary Project Coordinator	Study of Advanced Malignant Diseases Cancer Education Program Cancer and Leukemia Group B
Seymour Levitt, M.D.	Project Coordinator	Radiation Oncology Research and Clinical Center
William Krivit, M.D.		Cooperative Group A
Individuals:	Contracts	Research Grants



LOWER LEVEL ELEV. 800-0

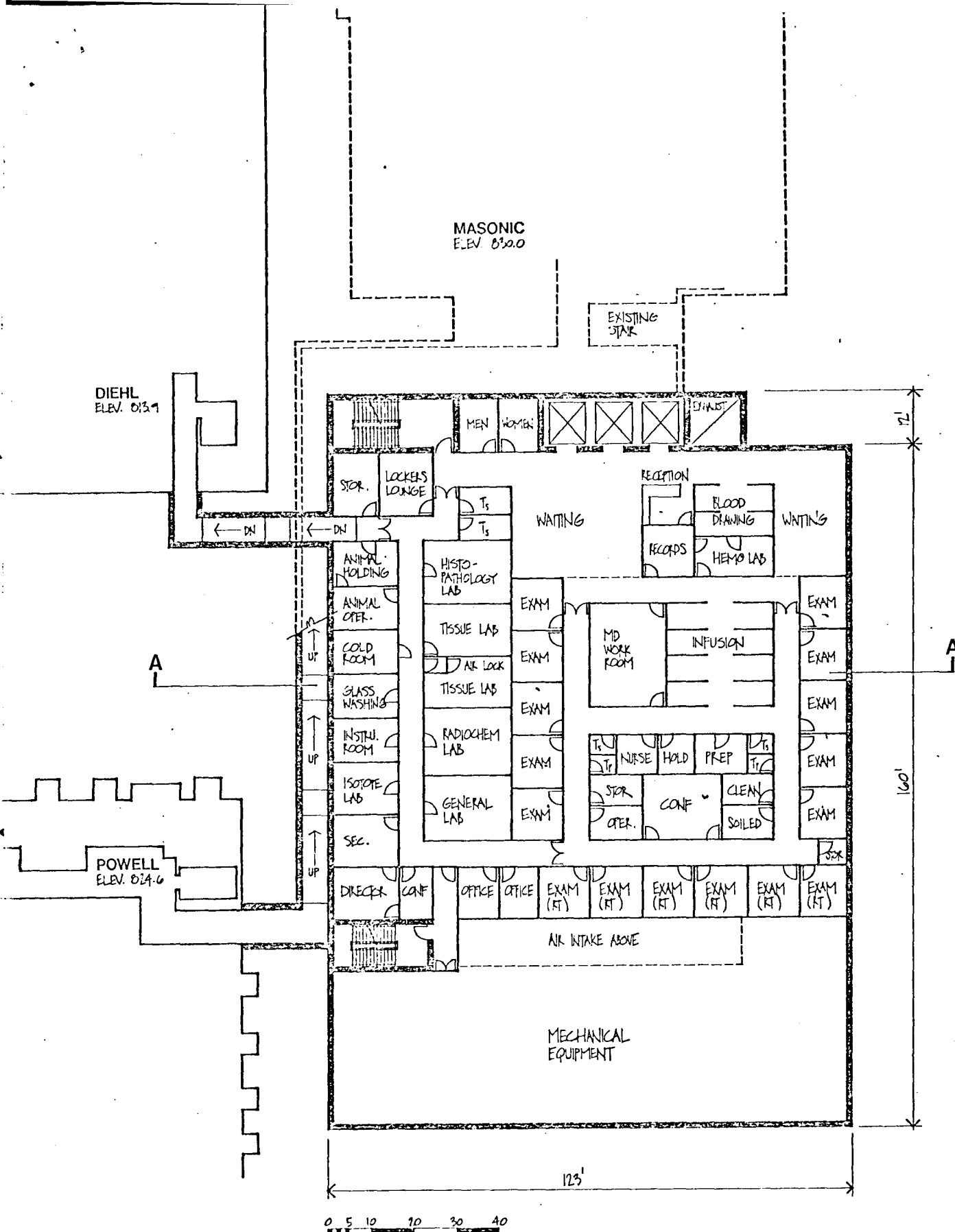


SEPTEMBER 76

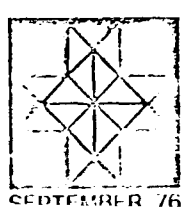
MASONIC CANCER CENTER

UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION
MINNEAPOLIS, MINNESOTA

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.



UPPER LEVEL ELEV. 817-4

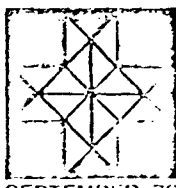
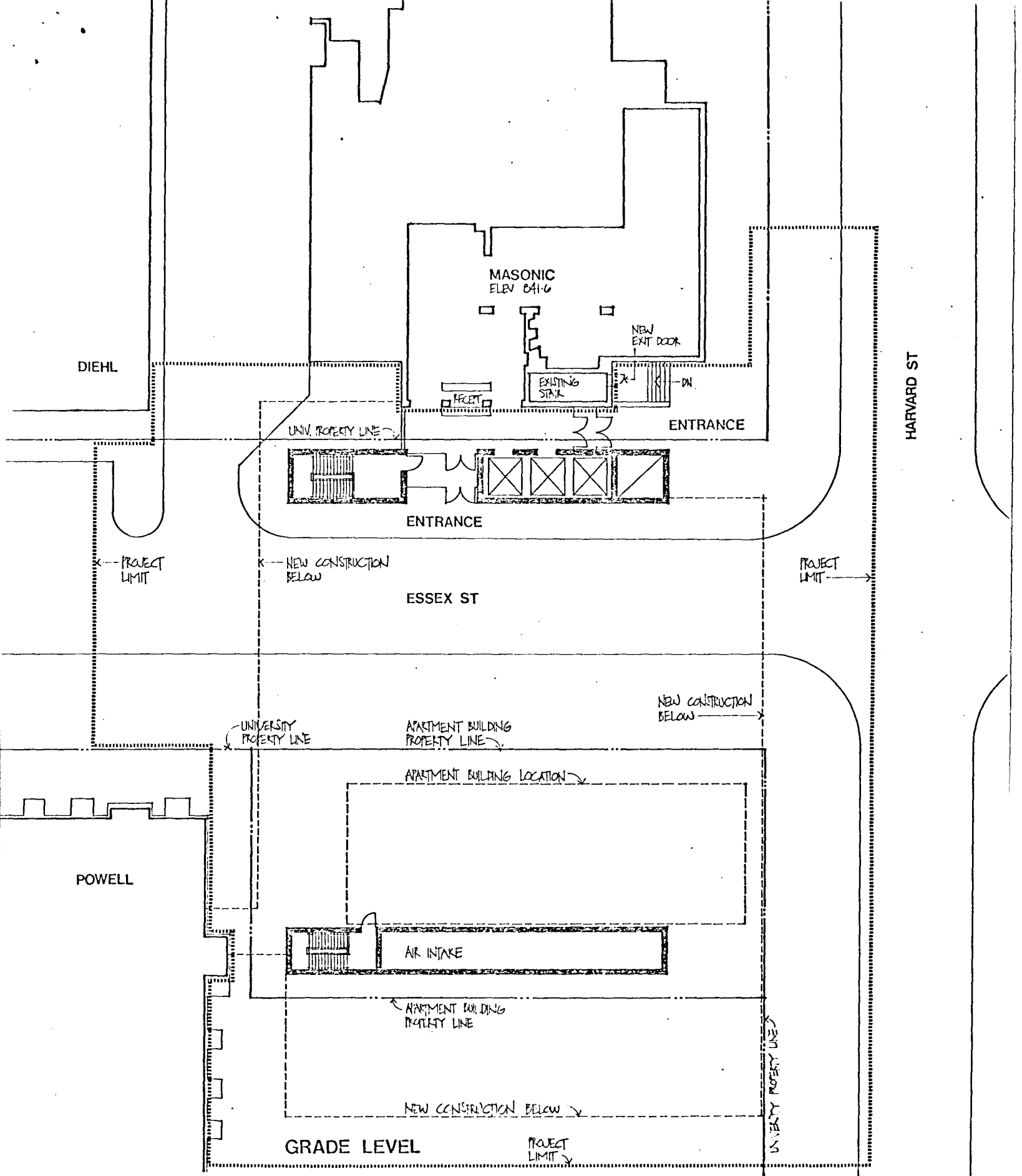


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 MINNEAPOLIS, MINNESOTA

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.

SEPTEMBER 76



SEPTEMBER 76

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UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION
MINNEAPOLIS, MINNESOTA

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.

DIEHL

MASONIC

EXISTING STAIR

EXHAUST

ELEVATOR TOWER

DIEHL

ELEVATORS

MASONIC BEYOND

NEW STAIR

ESSEX ST

DIEHL ELEV. 827.9

RAMPED CONNECTION TO MASONIC

DIEHL ELEV. 833.1

RAMPED CONNECTION TO DIEHL

RADIATION BIOLOGY

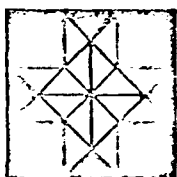
ONCOLOGY TREATMENT CLINIC

UPPER ELEV. 817.4

THERAPEUTIC RADIOLOGY

LOWER ELEV. 800.0

SECTION A-A



MASONIC CANCER CENTER

UNIVERSITY OF MINNESOTA
 HEALTH SCIENCES EXPANSION
 MINNEAPOLIS, MINNESOTA

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.

MASONIC CANCER CENTER
CONSTRUCTION GRANT APPLICATIONS

B. BUDGET LINE

TOTAL ELIGIBLE FOR
FEDERAL ASSISTANCE

1. BUILDING WORK

A. General Construction	\$2,957,741	
B. Plumbing	\$ 336,560	
C. Heating, Air Cond., Ventilation	\$1,203,440	
D. Electrical	\$ 609,280	
E. Elevators	\$ 282,240	
F. Other		
G. Total for Building Work	\$5,389,261	\$5,389,261

2. SITE WORK

A. Site Preparation		
1. Demolition & clearance	\$ 60,000	
② Cut off utilities	\$ 25,000	
B. Site Development		
1. Reconstruct Roadway		
2. Permanent Street Lighting	\$ 80,000	
Walks		
Curbs		
Landscaping (Seeding & Sodding)	\$ 30,000	
C. Utility Connecting Lines	\$ 8,000	
Electrical Feeder		
Water & Sewer Connections		
D. Special Use Items		
E. Total For Sitework	\$ 203,000	\$ 203,000

3. OFFSITE WORK

Control Center

$\frac{53,008}{1,330,123 \text{ sfg Phase I}} \times \$254,353 =$	\$ 10,136
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Total for Offsite work	\$ 10,136	\$ 10,136
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MASONIC CANCER CENTER
 CONSTRUCTION GRANT APPLICATIONS
 Page 2

ELEGIBLE FOR
TOTAL FEDERAL ASSISTANCE

4. CENTRAL UTILITY PLANT (steam)

$\frac{5,400 \text{ \#/hr.}}{175,000 \text{ \#/hr. Phase I}} \times \$1,805,125$	\$ 55,700	\$ 55,700
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5. TOTAL CONSTRUCTION COSTS

\$5,658,097 \$5,658,097

6. BUILT-IN EQUIPMENT

\$1,030,400 \$1,030,400

7. ARCHITECTURAL AND ENGINEERING

A. Architects Basic Fee		\$ 472,786
7% x \$6,419,661	\$ 449,376	
Change Orders	\$ 23,410	

B. Supervision & Inspection		\$ 80,246
1-1/4% x \$6,419,661	\$ 80,246	

C. Surveys & Test Borings		\$ 21,000
Site survey	\$ 4,000	
Soil testing	\$ 2,000	
HVAC balancing	\$ 15,000	

D. Other Items		\$ 346,085
Grant preparation (arch & consultant)	\$ 50,000	321,085
Consultants	\$ 68,000	
Cost	\$ 25,000	43,000
Vibration	\$ 8,000	
Radiation Protection (U/M)	\$ 10,000	
Schedule	\$ 25,000	
Special Charges	\$ 19,839	
SAC Charge	\$ 7,000	
Permit (.002%)	\$ 12,839	
U/Minn	\$ 133,246	
Misc. Engineering	\$ 45,000	
HSPO (1.25%)	\$ 80,246	
Activation & Incidentals	\$ 8,000	
Reimbursables Expenses	\$ 75,000	
Travel	\$ 25,000	
Printing	\$ 20,000	
Additional Services		
Field Verification, Etc.	\$ 30,000	

E. TOTAL ARCHITECTURAL & ENGINEERING COSTS

\$ ~~920,117~~ \$ ~~920,117~~

895,117 895,117

MASONIC CANCER CENTER
CONSTRUCTION GRANT APPLICATIONS

Page 3

758 3614

TOTAL ELEGIBLE FOR FEDERAL ASSISTANCE

8. MOVABLE EQUIPMENT:

Scientific Equipment
Furnishings
Graphics & Signage

10% 641,966 (- 320,083)

\$ ~~962,049~~
641,966

9. TOTAL COSTS FOR CONSTRUCTION
FIXED EQUIP. A/E FEES AND
MOVABLE EQUIPMENT

8,225,580 7,583,614
~~\$8,571,563~~ ~~\$7,608,614~~

10. CONTINGENCY - Total Bldg.
Costs & Built-in Equipment
5% x 6,622,661

\$ 331,133 \$ 331,133

11. PURCHASE OF LAND

12. PURCHASE OF BUILDING

\$ 160,000 \$ 160,000

13. OTHER

Relocation of existing radiology machines
Relocation of Apartment occupants
Relocation of Departments
Legal Services

\$ 100,000
35,000 \$ 15,000
\$ 20,000
1,000 \$ 10,000

\$ ~~145,000~~ \$ 145,000
156,000 156,000

14. TOTAL DEVELOPMENT COSTS

8,872,713 8,230,747
~~\$9,207,696~~ ~~\$8,244,747~~

75% MATCH CANCER
OTHER (MASON'S)

\$ 3,699,653 \$ 6,173,060

APPENDIX C
NCI GRANT APPLICATION: MASONIC CANCER CENTER
UNIVERSITY OF MINNESOTA HEALTH SCIENCES

A. SITE LOCATION

The proposed Masonic Cancer Center will be located within the Health Sciences Complex on the Minneapolis campus of the University of Minnesota directly contiguous with the present Masonic Memorial Hospital. The site is bounded by Harvard Street on the east, by Diehl and Powell Halls on the west, by the Masonic Memorial Hospital on the north, and extends to the south under Essex Street into land presently occupied by a 3-story apartment building. ~~The dimensions of the site are 138 feet east to west by 100 feet north to south.~~ While construction of the building will require the temporary closing and excavation of Essex Street, the completed facility will leave the site largely unchanged, with Essex Street returned to its present configurations.

B. FACILITIES PROGRAM

1. PROGRAMS TO BE HOUSED

The project is designed to provide adequate space for the continuing development of the Masonic Cancer Center into a comprehensive facility dedicated to the development of new interdisciplinary research programs in all aspects of cancer, its cause and prevention and patient treatment and care. The new facilities will support both basic and clinical research and professional medical training, continuing education programs, and public education programs.

2. FACILITY DESCRIPTION

The Masonic Cancer Center Building will be a two-level underground structure

connected to all levels of the Masonic Memorial Hospital by stairs and elevators. The building extends under Essex Street and will be totally below grade, except for the new elevator tower on the north side of Essex Street, and stairway exits, air intakes, and skylights projecting above grade on the south side of the street.

a. UPPER LEVEL

The upper most of the two underground levels will accommodate the Oncology Treatment Clinic and the Radiation Biology research laboratories. The Oncology Clinic will consist of examination rooms with support facilities for blood sampling and testing, chemotherapy infusions and injections, and staff conference and work space. Patient waiting areas will be subdivided to allow staff discretion in inter-patient contacts.

The Radiation Biology portion of this level will consist of five laboratories for research work: an Isotope Lab, two Tissue Culture Labs, a Histopathology Lab, and a Radiochemistry and Immunology Lab. Research animals will be introduced to the building through an underground tunnel connection to the existing animal facilities in Diehl Hall and held for use on a daily basis.

b. LOWER LEVEL

On the lower level will be the clinical treatment facilities and administrative offices of the Department of Therapeutic Radiology. Four radiation treatment rooms will be provided, grouped in pairs with a central control station.

Treatment Rooms will be provided for a High Energy Linear Accelerator (25MEV), a Medium Energy Linear Accelerator (13 MEV), a Low Energy Linear Accelerator (4 MEV), and a Cobalt-60 radiation therapy unit.

The latter will be housed in a room designed for future conversion to a fast neutron generator. The room configuration and radiation shielding will be planned for the future neutron unit, with additional space provided for the future housing of the generator and a radioisotope laboratory.

The plan provides for a clear and discreet separation of outpatients and inpatients to the maximum extent possible. Two elevators from the ground level entrance lobby lead directly to the outpatient reception and waiting area. Outpatients are then directed to dressing booths for gowning, and thence to waiting spaces for gowned patients, with adults separated from children.

A separate inpatient elevator transports litter patients from the upper floors of the Masonic Memorial Hospital directly to the lower level, where they are conducted to a screened litter holding area. A central nursing station, with visual control of the gowned outpatient waiting areas and the inpatient holding area, will direct patient traffic from that point to the two simulation rooms, the exam rooms, and the four radiation therapy treatment rooms.

The west side of the lower level is devoted to the administrative functions of the Department of Therapeutic Radiology and offices for the staff doctors. A nearby stairway provides ready access for the staff to the exam rooms of the Interdisciplinary Clinic on the Upper Level above. The treatment planning, computer, and clinical dosimetry functions form a suite on the north side of the lower level in combination with offices for the Radiation Physics staff.

3. PEDESTRIAN AND VEHICLE ACCESS

The entrance to the Masonic Cancer Center will also serve as a new entrance to the Masonic Memorial Hospital. It will be located near the corner of Harvard and Essex Streets allowing vehicular access to patient dropoff points on both Streets. Connections to the Health Sciences parking ramp are provided by a University-sponsored shuttle bus system.

C. ENVIRONMENTAL ANALYSIS

Reference Appendix ?

D. DESIGN ANALYSIS

I. ARCHITECTURAL

a. MASTER PLAN

Since 1968 the long range Master Plan for the Health Sciences Complex

of the University has designated the site south of Masonic Memorial Hospital underneath Essex Street as the proposed location of a comprehensive cancer research facility. The accompanying schematic plans illustrate the implementation and development of that Master Plan concept. The proposed location is ideal because of its connection to the Masonic Memorial Hospital (where the majority of cancer patients in the University Hospitals are accommodated), its connection to the present research facilities in Diehl Hall, and its future relationship to the University Hospital Proposed Bed Replacement Facility. The Masonic Cancer Center will thus be located in a pivotal position for access by inpatients from all inpatient facilities, by outpatients with ready vehicular access and shuttle bus connections to the parking ramp, and by the clinical and research staffs. Since the building extends under a portion of the Proposed Bed Replacement Facility the building structure in that area will be designed to support the added loads that the future structure will impose.

b. FUTURE EXPANSION AND FLEXIBILITY

The floor elevation of the Upper Level is designed to align with the service and distribution floor level already established in the completed buildings of the new Health Sciences complex and planned for the Proposed Bed Replacement Facility. Expansion of the facilities on both levels will thus be feasible either prior to or in conjunction with the construction of the Proposed Bed Facility.

c. CIRCULATION

A new bank of three elevators is planned contiguous with the south end of the Masonic Memorial Hospital. These elevators will serve the four upper floors of that building, its basement, and the two underground levels of the new Masonic Cancer Center. One of the three will be restricted for inpatient use, while the other two will be utilized by outpatients. Key control will ensure that this separation is maintained.

At present time there is a patient and service tunnel crossing under Essex Street connecting Powell Hall with the basement of the Masonic Memorial Hospital. That tunnel connection will be relocated along the west perimeter of the Masonic Cancer Center to avoid the problems of through traffic.

The basement of the Masonic Memorial Hospital will house functions closely related to the Masonic Cancer Center, but outside of the scope of this application. Those functions, primarily the New Oncology Clinic and other student teaching facilities will be readily accessible to the Masonic Cancer Center by the new elevators and stairs.

d. BIOHAZARD CONTROL AND CONTAINMENT

The research laboratories on the upper level that are used for oncogenic

virus research will be provided with means of controlling biohazards in conformance with all applicable state and federal requirements. Negative pressure entrance air locks will be provided for all containment areas. Pass-through autoclaves will be provided to decontaminate all contaminated materials leaving the containment area.

Walls in containment areas will be sealed around fixtures, ducts and piping and inside conduits. Doors will be vermin proofed. Casework will be of tight construction to minimize harboring vermin. Ultra-violet lights will be provided as required with a floor intensity of ten microwatts per square centimeter.

Containment areas will maintain a negative pressure of 0.33 to 0.10 inches of water guage relative to adjacent areas. Hepa filters will be provided in the path of the air supply to tissue culture areas and on exhaust air as required. Exhaust ducts will have sealed joints. Manometers to guage pressure differentials will be provided and filters will be readily accessible for decontamination prior to removal.

Vacuum breakers will be provided on laboratory water outlets and no piped vacuum will be allowed within the containment areas; Water aspirators will be provided instead. Foot operated potable drinking water fountains will

be provided within the containment area. Contaminated waste will be treated as required before disposing to the city sewer system.

2. STRUCTURAL SYSTEM

The structural bay for the Masonic Cancer Center will be designed to be compatible with that already established for the University Hospital Proposed Bed Replacement Facility. Exterior walls will be of reinforced cast-in-place concrete. The lower floor will be slab-on-grade, the intermediate a two-way reinforced concrete slab and the "roof" a one-way reinforced concrete slab. Intermediate supports will be columns of reinforced concrete, terminating at major beams at the "roof" level to support the additional loads and minimize the vibration imposed by Essex Street above.

The facility will be located to minimize the necessity of underpinning adjacent structures. The elevator tower linking the facility to Masonic Memorial Hospital will be of reinforced cast-in-place concrete below grade and of steel construction above, bridging the elevators to the Hospital at each level. Provision will also be made to receive a future bridge link at each level from the University Hospital Proposed Bed Replacement Facility giving all inpatients direct access to the Masonic Cancer Center.

3. MECHANICAL SYSTEM

a. UTILITY DISTRIBUTION

1. Heating Media

Steam will be supplied to the Masonic Cancer Center through a connection to

the existing campus distribution system at the northeast corner of the Masonic Memorial Hospital. Steam flow meters will be installed to record the facility's steam consumption.

2. Chilled Water

Chilled Water will be supplied to the facility through a new connection to the existing equipment in the Unit B/C mechanical facilities. System components provided under this project will include a primary chilled water pump, located in Unit B/C and secondary pumps, piping, and central station unit cooling coils located in the upper level mechanical equipment room.

3. Site Utilities

Due to the location of the Masonic Cancer Center under Essex Street, existing sewer, storm, water and gas systems will by necessity be interrupted and relocated. The existing capacity of each, however, is sufficient to serve the new facility through connections immediately adjacent to the site.

b. HEATING, VENTILATING AND AIR CONDITIONING

1. Ventilation System

The ventilation system will consist of central built-up air handling units supplying the facility through low velocity duct distribution containing terminal reheat coils and discharging into ceiling located air diffusers.

Toilets, custodial rooms, mechanical spaces, laboratories and animal facilities will all be exhausted. All of these spaces will be in balance,

supply to exhaust, except where odors are a problem. These areas will be negative as compared to adjacent areas with make-up air supplied to adjoining corridors and received to these spaces. The remaining spaces will be in balance with supply and return air systems.

2. Fume Hoods

All laboratories with fume hoods will be 100% exhausted. General fume hoods, with "air-foil" inlet designs, will be exhausted at a rate to produce 100 FPM over the face of the hood. Radio-isotope hoods will be exhausted at a rate to produce a velocity of 150 FPM. Radio-isotope hood ducts will be routed around counting rooms or other areas where interference could be a problem. Radio-isotope hoods will require absolute filters at the hoods. Hoods for use with infectious materials will have an absolute filter at the hood fan discharge.

Hood exhaust will be by individual fan or by grouping hoods depending on location and type. Galbestos or type 316 stainless steel will be used for hood exhaust ductwork. Exhaust fans will be located in a roof penthouse on the elevator tower to create negative pressure in the exhaust ductwork.

3. Controls

A pneumatic automatic control system will be provided for the control of all air temperature and humidity conditions. Room humidity will be controlled on a zone basis. Except in special isolated cases, a zone will consist of all rooms supplied by a single air handling unit. Room temperature will be controlled on an individual basis. A room thermostat will control a valve regulating the

water flow to the reheat coil serving the room.

To accomodate planned future central control and surveillance of the mechanical systems of this facility, all features and devices necessary for remote central control shall be provided.

4. Acoustics and Vibration

Acoustical and thermal insulation will be provided on ducts and piping as required. Special foundation and support designs will be provided for all fans, pumps, compressors, etc., to reduce vibration to a minimum.

5. Design Criteria

a. Temperature and Humidity

Winter: Outdoor - -19°F , Northwest prevailing wind at 15mph.

Indoor - All occupied areas 68°F (except in special critical areas), approximately 30% relative humidity.

Summer: Outdoor - 89°F Dry bulb

75°F Wet bulb

Indoor - All occupied areas $78^{\circ}\text{F} \pm 2^{\circ}\text{F}$, approximately 50% relative humidity.

The above criteria are in compliance with the new Minnesota Energy Conservation Code requirements.

b. Air Changes

All air change requirements of the Code will be met. The animal quarters

will comply with the air change rates as required by the National Institute of Health.

c. PLUMBING

1. General

Plumbing systems will be installed in accordance with all applicable codes. The systems will be arranged and constructed to be readily expanded and/or modified to meet program requirements. The following risers and/or services will be provided:

- a. Waste stack (acid)
- b. Vent stack (acid)
- c. Domestic cold water
- d. Domestic hot water
- e. Domestic circulating hot water
- f. Laboratory cold water
- g. Laboratory hot water
- h. Laboratory circulating hot water
- i. Gas
- j. Compressed air (laboratory)
- k. Vacuum (laboratory)
- l. Distilled water
- m. Standpipe, hose cabinets and sprinklers

- n. Oxygen
- o. Nitrogen
- p. Nitrous oxide
- q. Downspouts

Tees with shut-off valves or wyes will be provided on the risers for each service at every floor to facilitate future remodelling.

2. Scope of Work

- a. A sanitary drainage system will be provided with a connection to the existing system.
- b. A storm drainage system will be provided with a connection to the existing system.
- c. An acid resistant drainage system will tie into the sanitary sewer after proper dilution.
- d. Domestic water piping systems (hot, cold and circulation) will be provided, including connections to the existing cold water main. A domestic hot water heating system will be installed.
- e. A non-potable water supply system for the laboratories will be installed incorporating a central barometric loop. The system will include cold water and circulating hot water. A laboratory hot water heating system will be also installed.
- f. Natural gas will connect to the existing Minnesota Gas Company main adjacent to the site.
- g. Compressed air (laboratory) will connect to the existing central compressed air system.

- h. Vacuum (laboratory) will connect to the existing central vacuum system.
- i. A fire standpipe system including fire department connections and hose cabinets will be provided. A sprinkler system will be installed in all areas required by Code.
- j. An oxygen piping system will be provided as required with connections to an existing tank manifold.
- k. Nitrogen piping will be provided as required with connections to a new tank manifold.
- l. Nitrous oxide piping will be provided as required with connections to a new tank manifold.

3. Installation

The piping systems serving laboratory equipment shall have risers running vertically in mechanical shafts supplied with horizontal mains located above a suspended ceiling.

The hot water systems shall be completely recirculating systems with reversed return where possible to eliminate the need for balancing various branches.

Each service or drain not extended to connecting locations shall be provided with capped or valved connection at each vertical shaft.

4. ELECTRICAL SYSTEM

a. EXISTING ELECTRICAL UTILITIES

The University buys power from the local utility, Northern States Power, and owns and maintains an underground 13.8 KV electrical distribution system on the campus. The construction of the Masonic Cancer Center will require the rerouting of the primary service in Essex Street to the south side of Powell Hall.

b. PRIMARY ELECTRICAL SERVICES

Underground primary service for the Masonic Cancer Center will be provided from an existing manhole in Harvard Street on the east side of the proposed site. Two primary feeders will be provided to improve service reliability. Feeders for this project are identified by the Owner as Cam 20X and 15Y. Primary switches and two transformers will be located in a vault adjacent to the mechanical space. Transformers will be substation type 3 phase, fan cooled, askarel filled units, connected in a double ended manner, sized to provide 100% back-up upon failure of one unit.

c. SECONDARY ELECTRICAL SYSTEM

Principal secondary voltage will be 277/480 volts, 3 phase, 4 wire wye for lighting and motors. A 120/208 volt, 3 phase, 4 wire wye system from dry type transformers will be provided for receptacles and medical equipment.

d. COMMUNICATION SYSTEMS

1. Public telephone systems will be provided to Offices and Lab spaces.
2. Closed circuit T.V. and intercom systems will be provided between radiology treatment spaces and control rooms.

e. LIGHTING

All but radiology treatment areas will have recessed fluorescent lighting at levels to comply with the Minnesota State Energy Code requirements.

Radiology treatment areas will be served by incandescent lighting on a dimming system as required by the treatment program.

f. FIRE ALARM SYSTEM

A complete audible alarm, zone annunciated, double supervised, fire alarm system will be provided with automatic and manual alarm initiating devices as required by Codes.

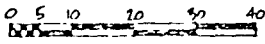
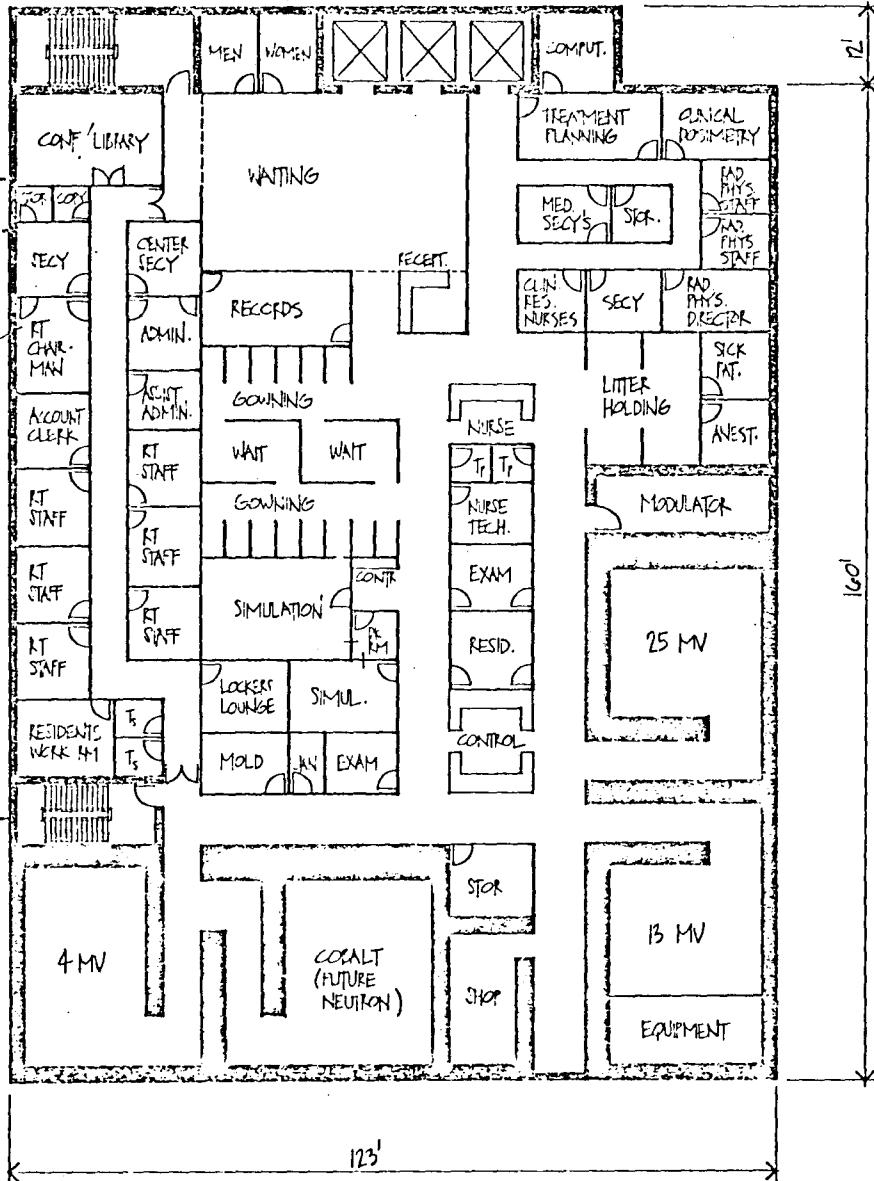
g. EMERGENCY ELECTRICAL POWER

An emergency generator with an automatic control system will be provided for egress lighting in corridors and appropriate spaces. The generator will provide emergency power to elevators (selective operation of one elevator at a time) and critical equipment such as lab refrigerators, incubators, etc.

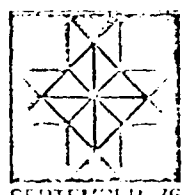
DEHL ABOVE

MASONIC ABOVE

POWELL ABOVE



LOWER LEVEL ELEV. 800-0

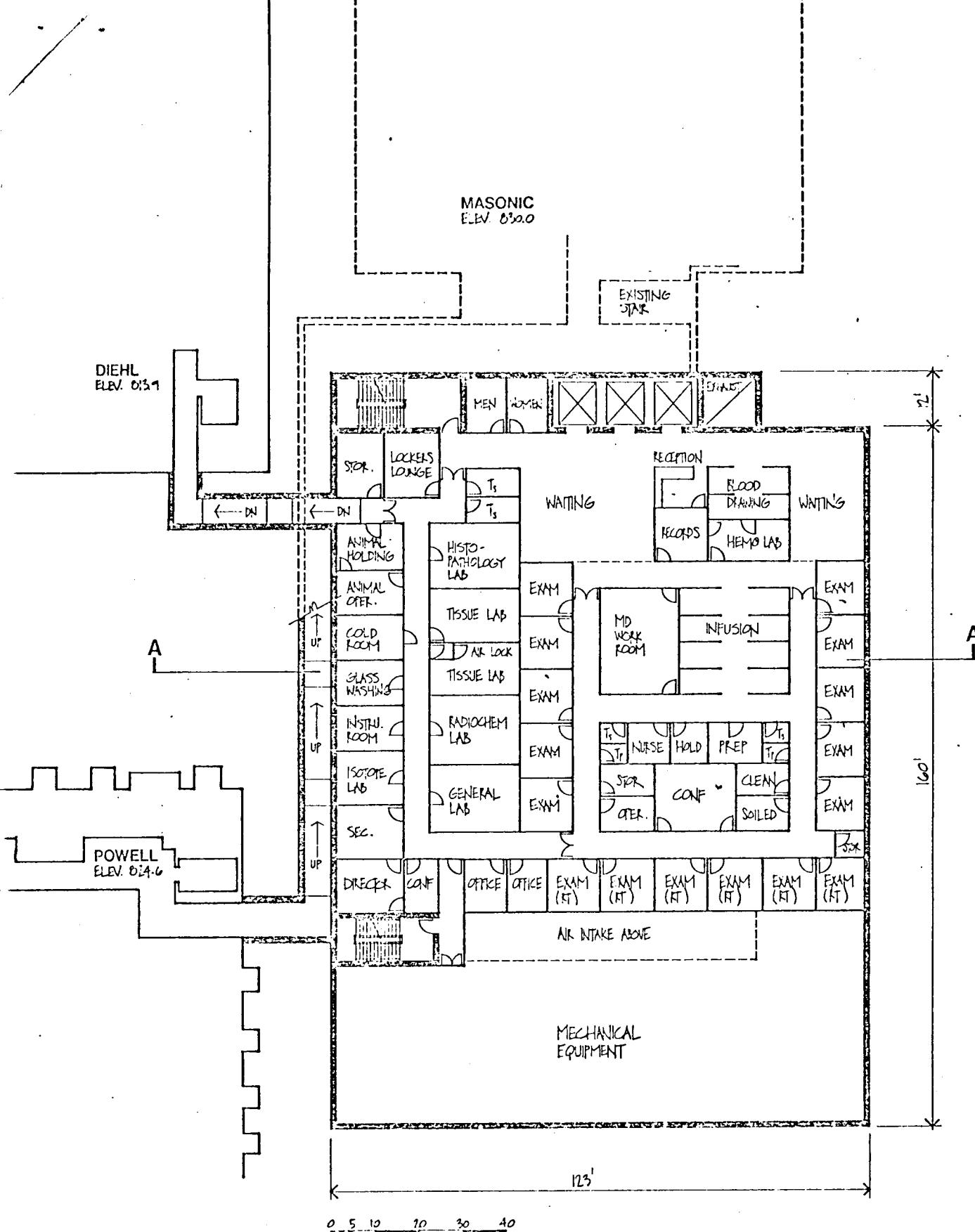


MASONIC CANCER CENTER

UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION
MINNEAPOLIS, MINNESOTA

SEPTEMBER 76

THE ARCHITECTS COLLABORATIVE INC CAMBRIDGE MASS



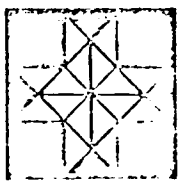
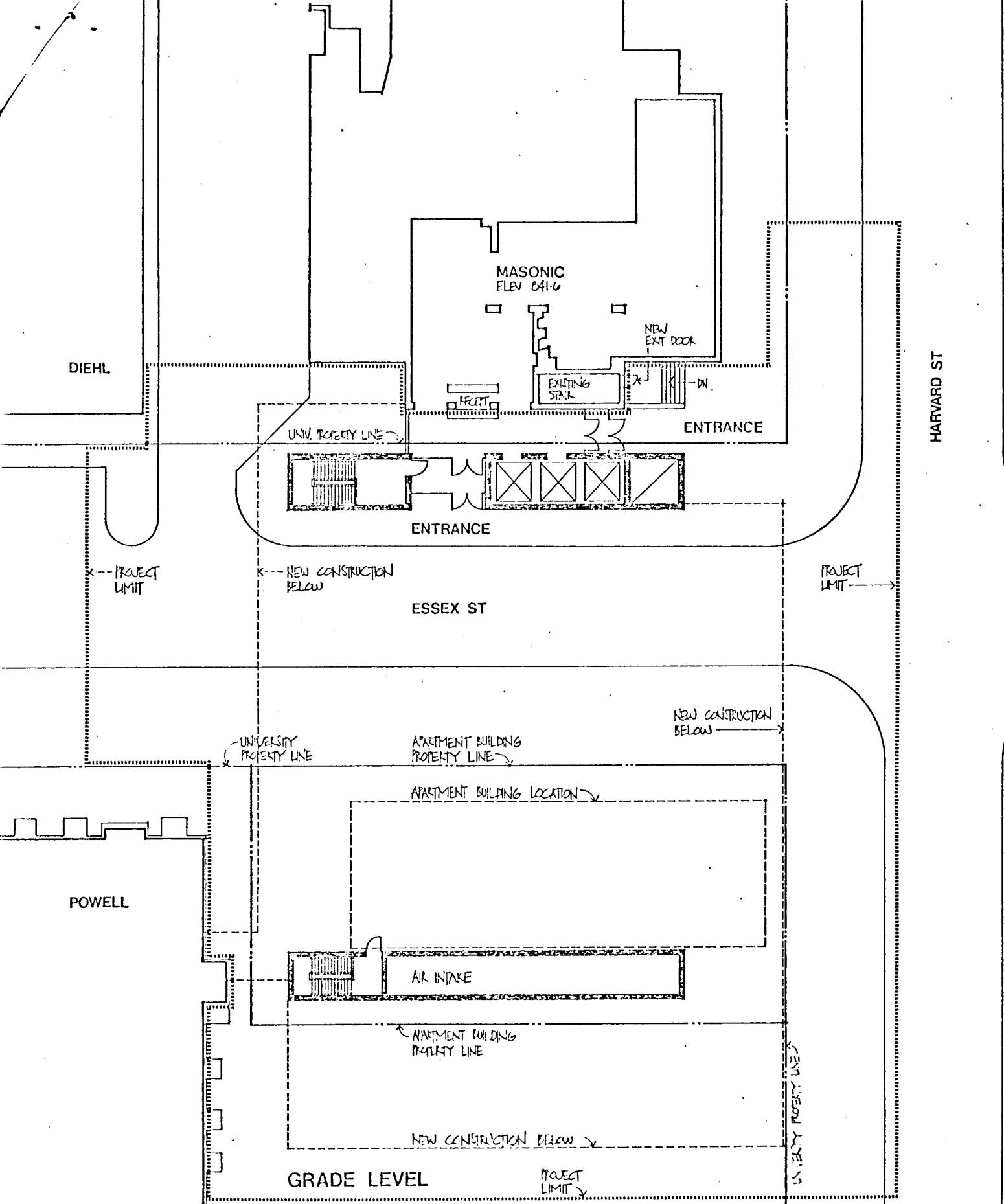
UPPER LEVEL ELEV. 817.4



MASONIC CANCER CENTER

UNIVERSITY OF MINNESOTA
 HEALTH SCIENCES EXPANSION
 MINNEAPOLIS, MINNESOTA

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.



MASONIC CANCER CENTER

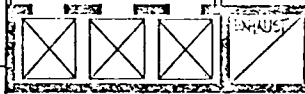
UNIVERSITY OF MINNESOTA
 HEALTH SCIENCES EXPANSION
 MINNEAPOLIS, MINNESOTA

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.

DIEHL

MASONIC

EXISTING STAIR



ELEVATOR TOWER

DIEHL

ELEVATORS

MASONIC BEYOND

NEW STAIR

ESSEX ST

DIEHL ELEV. 627.9

RAMPED CONNECTION TO MASONIC

DIEHL ELEV. 613.1

RAMPED CONNECTION TO DIEHL

RADIATION BIOLOGY

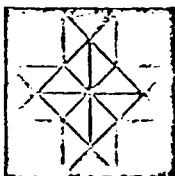
ONCOLOGY TREATMENT CLINIC

THERAPEUTIC RADIOLOGY

UPPER ELEV. 617.4

LOWER ELEV. 600.0

SECTION A-A



MASONIC CANCER CENTER

UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION
MINNEAPOLIS, MINNESOTA

SEPTEMBER 2006

THE ARCHITECTS COLLABORATIVE, INC. CAMBRIDGE, MASS.

UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION

MASONIC CANCER CENTER
AREA TABULATION

	NET ASSIGNABLE SF	GROSS SF
TOTAL PROJECT	20,920	53,008
1. <u>LOWER LEVEL</u>		
1.1 Therapeutic Radiology, Clinical Unit	7,318	15,253
1.2 Therapeutic Radiology, Clinical Support	1,407	1,676
1.3 Radiation Physics	477	536
1.4 Therapeutic Radiology, Administration	<u>2,554</u>	<u>3,600</u>
SUBTOTAL	11,756	21,065
2. <u>UPPER LEVEL</u>		
2.1 Oncology Treatment Clinic	5,642	9,976
2.2 Radiation Biology	3,522	5,181
2.3 Mechanical	—	5,908
2.4 Ramps	<u>—</u>	<u>2,684</u>
SUBTOTAL	9,164	23,749
3. <u>GRADE LEVEL</u>		
3.1 Elevators and Entrance	—	1,350
3.2 Egress Stairs	—	756
3.3 Mechanical	<u>—</u>	<u>1,108</u>
SUBTOTAL	—	3,214
4. <u>ELEVATOR TOWER</u>		
4.1 Elevators and Lobbies	—	3,200
4.2 Mechanical (Incl. Penthouse)	<u>—</u>	<u>1,780</u>
SUBTOTAL	—	4,980
TOTAL	20,920	53,008

UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION

MASONIC CANCER CENTER
AREA TABULATION

1.1 THERAPEUTIC RADIOLOGY, CLINICAL UNIT

PROGRAM SPACE	NET ASSIGNABLE SF
Patient Waiting	480
Reception/Appointments/Switchboard	120
15 Dressing Cubicles w/ Lockers	336
Adult Gowned Waiting	176
Child Gowned Waiting	176
Litter Holding (Inpatients)	252
Sick Patient Holding Room	121
Anesthesia Room (Children)	121
Nurses Station	140
2 Patient Toilets	72
Office, Head Nurse/Technologist	140
2 Exam Rooms	260
Residents Room	168
Control Area	224
Simulator-Tomograph Room (For 4 MV, 13 MV LINAC's and Cobalt-60)	384
Simulator Room (For 25 MV LINAC)	216
Darkroom	64
Mold Room	140
Janitor's Closet	60
Storage (Future Radioisotope Lab)	168
4 MV LINAC (608 plus Maze)	824
13 MV LINAC (768 plus Maze)	972
25 MV LINAC (576 plus Maze)	780
Cobalt 60 (720 plus Maze)	924
(Future Neutron Generator Room)	
	<hr/>
SUBTOTAL	7,318

MASONIC CANCER CENTER
AREA TABULATION

Page 2

1.2 THERAPEUTIC RADIOLOGY, CLINICAL SUPPORT

PROGRAM SPACE	NET ASSIGNABLE SF
Patient Records	288
Clinical Dosimetry	187
Treatment Planning	253
Computer Room	144
Office, 2 Clinical Research Nurses	110
Office, 3 Medical Secretaries	135
Storage Room	90
Shop	200
(Future Generator Room)	
SUBTOTAL	<u>1,407</u>

1.3 RADIATION PHYSICS

PROGRAM SPACE	NET ASSIGNABLE SF
Director's Office	170
Secretary's Office	120
2 Staff Offices	187
SUBTOTAL	<u>477</u>

1.4 THERAPEUTIC RADIOLOGY, ADMINISTRATION

PROGRAM SPACE	NET ASSIGNABLE SF
Department Chairman's Office	168
Secretary's Office	144
6 Staff Offices	864
Administrator's Office	144
Assistant Administrator's Office	120
Center Secretary's Office	144
Account's Clerk's Office	144
Conference/Library	322
Photocopy Room	36
Storage	36
Staff Toilets	72
Resident's Work Room	192
Staff Lounge/Locker Room	168
SUBTOTAL	<u>2,554</u>

MASONIC CANCER CENTER

AREA TABULATION

Page 3

2.1 ONCOLOGY TREATMENT CLINIC

PROGRAM SPACE	NET ASSIGNABLE SF
2 Patient Waiting Areas	806
Reception/Appointments	120
Patient Records	144
Injections & Blood Drawing	216
Hematology Lab	180
10 Exam Rooms (Oncology)	1,380
6 Exam Rooms (Radiation Therapy)	792
M.D. Work Room	432
Infusions	456
Nurse's Office	90
Patient Holding Room	90
Preparation Room	108
2 Patient Toilets	60
2 Staff Toilets	60
2 Storage Rooms	132
Operating Room (Biopsies, Bone Marrow)	96
Conference/Work Room	288
Clean Utility	96
Soiled Utility	96
SUBTOTAL	<u>5,642</u>

2.2 RADIATION BIOLOGY

PROGRAM SPACE	NET ASSIGNABLE SF
Director's Office	180
Secretary's Office	180
Conferences	120
2 Staff Offices	240
Isotope Lab	180
Instrument Room	180
Glass Wash	150
Cold Room	150
Animal O.R.	150
Animal Holding	160
Storage	140
Lounge/Locker	168
2 Staff Toilets	144
Histopathology Lab	300
2 Tissue Labs	480
Radiochemical/Immunology Lab	300
General Lab	300
SUBTOTAL	<u>3,522</u>

TOTAL NET ASSIGNABLE SF

20,920

Job Description

ADMINISTRATOR Masonic Cancer Center Coordinator

Under the aegis of the cancer research grant, "Study of Advanced Malignant Diseases", a position of a cancer coordinator has been developed. The function of this position is to coordinate the fiscal and administrative activities of the research and teaching unit under the scope of the above grant and its affiliated services. It is a developmental position designed to promote the concept of the Masonic Cancer Center, to encourage coordinated teaching, research and patient care within that facility (Masonic Memorial Hospital), Unit D, and the VFW Cancer Research Building.

Administrative Structure:

The coordinator would be responsible to Dr. B. J. Kennedy as Principal Investigator of the Study of Advanced Malignant Diseases Special Cancer Center. The coordinator would relate to the following units or individuals:

1. Medical School Dean's Office: administrative, fiscal and teaching matters
2. Mr. Richard Pierson, Associate Director of the Masonic Hospital, who is in charge of the patient care activities in the Masonic Cancer Center
3. Cancer Education Program: Dr. B. J. Kennedy, Principal Investigator
4. Unit D Feasibility and Building Committee
5. Masons of Minnesota
6. Minnesota Foundation
7. University Hospital Public Relations: Mrs. Susan Stuart Otto

Duties:

The role of coordinator involves the following activities:

1. Research grant and teaching grant administration
2. Coordination of the activities sponsored by the following grants:
 - a. Study of Advanced Malignant Diseases
 - b. Cancer Education Program
 - c. Cooperative group studies
 - d. Unit D feasibility, planning and construction activity
3. Public Relations: Cancer activities of the Masonic Cancer Center relating to various community and University groups
4. Business administration
5. Personnel management

Job Description

Page 2

6. Space Management of the Masonic Cancer Center
7. Cancer grantsmanship: Knowledge of grantsmanship, contracts, etc., as they relate to the National Cancer Institute, the American Cancer Society and other cancer grant agencies.

Responsibilities:

The administrator would handle responsibility for administrative matters for B. J. Kennedy and function for him on administrative matters during his absence and/or as delegated. He would assist in the development and implementation of administrative policies and procedures. He would represent the Masonic Cancer Hospital to other administrators and outside agencies with selected authority to make commitments on administrative policies and procedures. He would direct the administrative functioning in accounting and budgeting, personnel, space allocation, purchasing, etc. He would supervise the preparation of the grant budgets and maintain budget control records. He would be assisted by a bookkeeper and a secretary. He would approve charges against unit funds. He would monitor the financial status of the grant funds. He would study the service needs of the unit and recommend staff facilities and equipment to the Director. He would coordinate development of new facilities and alteration of existing facilities. He would direct personnel functions such as job definition, selection of staff, staffing levels and performance evaluation.

Qualifications:

A bachelor's degree in Business Administration, considerable administrative experience, expertise in accounting, personnel management, and short range fiscal planning or equivalent experience and training are the basic requirements for this position. Familiarity with hospital needs is desirable. Knowledge of University policies, regulations and rules is desirable. Familiarity with Public Health Service granting systems would be of value.

Funding:

The position will be initially funded by a special grant in Medical Oncology. Following the first 18 months, support of the position will be part of the grant, "Study of Advanced Malignant Diseases".

Time:

The position is available immediately.

MASONIC CLINIC

ONCOLOGY TREATMENT CLINIC

Waiting room
Patient toilets (men , women)

Receptionist desk

Secretary: scheduling
 appointemnts

Record storage area

Exam rooms: 14 (7 physisians)
 Desk, 2 chairs, exam table, wash basin

M.D. work room: x-ray viewing
 phone calls.

M.D. Conference Room --consultation and teaching

Treatment rooms:

 Injections and blood drawing : x 4

 Preparation room (medication prep by nurses) x 1

 Infusions x 5 interchangeable

 Transfusions x 1

 M.D. office x 1 Supervisor

Storage: supplies etc.

Operating Room: Biopsies
 Bone marrows

Holding Room: x 1 Emergencies
 Waiting for sick patients to be admitted.

Nurses office and Conference (nursing education)

Staff toilets: x 2

NEW ONCOLOGY CLINIC

Exam rooms : x 5

Proctoscopy ?

Cancer teaching: 5 small rooms for M.D.-student presentations
writing

Conference Room (like 407) x : Multi-use

M.D. office: Cancer education coordinator

Secretary: Cancer education

ancillary

ANCILLARY (Masonic basement)

Hematology

Pharmacy (satellite) with waiting room

Cancer Center Coordinator office

Cancer Center Coordinator secretary office

Cancer Center Bookkeeper office

Nursing supervisor office

Nursing assistant office

Dietician office x 2

Chart research data processing area (not cancer registry)

Lyle French, M.D.
VICE PRESIDENT FOR HEALTH SCIENCES

MEDICAL SCHOOL
Dean N.L.Gault

UNIVERSITY HOSPITALS
Director John Westerman

RESEARCH & EDUCATION

PATIENT SERVICES

B.J.Kennedy, M.D.

Cancer Center Coordinator
Mr. xxx x xxxxx

Assistant Director
Mr. Dick Pierson
Mr. Robert Baker (x112)

DEPARTMENTS

- Medicine
- Therapeutic Radiology
- Pediatrics
- Surgery
- Gynecology
- Lab Medicine & Pathology

MASONIC CANCER CENTER

<p><u>UNIT D</u></p> <p>Masonic Radiation Oncology Clinic Research and Clinical Center</p>	<p><u>MASONIC MEMORIAL HOSPITAL</u></p> <p>Cancer Detection Center Clinical Research Center Oncology In-Patient Services</p>	<p><u>VETERAN FOREIGN WARS</u></p> <p><u>CANCER RESEARCH CENTER</u></p>
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B.J.Kennedy, M.D.	-Study of Advanced Malignant Diseases
B.J.Kennedy, M.D.	-Cancer Education Program
Principal Investigator-Cooperative Groups (A, B, COG, COC, POC)	
Principal Investigator-Individual Research Grants	
Principal Investigator-Contracts	
Seymour Levitt, M.D.	- Radiation Oncology Research & Clinical Cntr

UNIVERSITY OF MINNESOTA
TWIN CITIES

Section of Medical Oncology
Department of Medicine, School of Medicine
Box 286, University Hospitals
Minneapolis, Minnesota 55455
(612) 373-4303

RECEIVED

MAR 11 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

March 9, 1976

Mr. Paul Maupin
Coordinator, Health Sciences Planning
4104 Powell Hall
University Hospitals

Dear Paul:

A Feasibility Committee for Unit D is in process. It consists of Drs. Levit and Krivit, Tom Jones and Cherrie Perlmutter. I am Chairman. We feel that it would be appropriate if one of your group or you were also a part of this Committee to help us in some of our planning problems.

We are planning to meet Saturday mornings at 11:00 a.m. in 407 Masonic on rather a regular basis. Would you or someone be able to participate?

Sincerely yours,

B. J. Kennedy
B. J. Kennedy, M.D.
Professor of Medicine
Director of Medical Oncology

BJK/as

dicatated, but not read

UNIVERSITY OF MINNESOTA HOSPITALS • MINNEAPOLIS, MINNESOTA 55455

AIR MAIL

December 13, 1968

Mr. John Harkness
The Architects Collaborative
46 Brattle Street
Cambridge, Massachusetts 02138

Dear Mr. Harkness:

The purpose of this letter is to share our concern about the development of the Hospital and to request a meeting with you or your representatives to discuss the program.

After a number of programmatic questions related to the overall health sciences development program were answered during October of this year, the Hospitals was asked to further refine its program and space allocation. In a series of meetings during the month of November the Hospitals Planning Group worked out these refinements and is currently up-to-date in responding to all questions raised by your firm.

In doing this work the Planning Group was able to bring to bear information which had not been available previously. As a result, they have raised some questions which in our judgment require further definitive discussion with the architects. These questions are summarized in a portion of a memorandum from Peter Sammond, Chairman of the Hospital Planning Group, to me from which I quote:

"...we must be concerned that the architectural solution to that program is as good as is possible under the circumstances. We are not convinced that the plan presently proposed by TAC is the best possible solution. We should like the following points to be reconsidered:

1. What are the alternatives to establishing another small bed unit remote from the main hospital? If not, would not 72 beds per floor be more economical than 36?
2. Is it practical to contemplate doubling operating room space in the present location and then replacing the entire operating room in five to ten years or being committed to the existing location for future phases?

-2- Mr. John Harkness
December 13, 1968

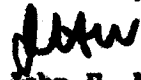
3. Can radiology be located more central to the main mass of beds? (Particular thought should be given to Phase II in this regard.)
4. Can the distance between the emergency room and the operating rooms be reduced? It has been suggested that in the proposed plan a discreet elevator be included to transport emergency patients through Building C to the operating room. Is this feasible?
5. In light of uncertainties about future clinic load, has sufficient thought been given to expansion of the outpatient clinics?
6. Is the program for Phase II firm enough so that design assumptions may be made as to what will happen to operating rooms, the Building C beds, C.S.S., and other hospital departments at that time? Can we then base Phase I plans for these units on those assumptions?

We believe considerable interplay between the architects and us, the clients, is still necessary to resolve these outstanding fundamental questions."

I would like to suggest a meeting between ourselves and the representatives of TAC at the next possible time for the discussion of these issues. In the hopes that this might be arranged during your visit next week, I am sending a copy of this letter to Mr. Peacock so that he might schedule such a meeting, hopefully late Wednesday morning.

With best regards.

Sincerely yours,



John H. Westerman
Director

JHW:hg

cc: Mr. Roland Kluver
Dr. Elmer Learn
Mr. Hugh Peacock
Mr. Peter Sammond ✓

Unit 8.

HERMAN SMITH ASSOCIATES / OF CALIFORNIA

359 SAN MIGUEL DRIVE, NEWPORT BEACH, CALIFORNIA 92660

(714) 644-6411

March 3, 1972

Mr. Tom Jones
Associate Director
University of Minnesota Hospitals
412 Union Street S. E.
Minneapolis, Minn. 55455

Dear Mr. Jones:

It was a pleasure meeting with you and representatives of University of Minnesota Hospitals to review your facility and the capabilities of our firm in conducting a physical facility survey and report for the Hospital.

In accordance with our discussions, this letter will serve as a Letter of Intent to provide the services outlined below. This proposal outlines our recommendations for an approach to the study and may be modified in any manner mutually satisfactory to both parties.

Services to be provided by Herman Smith Associates to the University of Minnesota Hospitals are as follows:

- John C. Dumas *
- William E. Nix
- Frank R. Vitale
- James P. Cooney, Jr.

- Herman Smith, M.D. *
- Frank R. Briggs *
- Jeffrey J. Frommelt *
- Leon C. Pullen *
- Mary Smith *
- Robert W. Bachmeyer
- Vera E. Crockett
- Bernard J. Lachner
- Herman J. Loellbach
- B. J. Rieb
- Aloys Rindler, Jr. *
- Gloria Swanberg, R.N.

PURPOSE OF THE STUDY

It shall be the purpose of this phase of the study to survey and evaluate the existing Hospital and related health facilities to determine their adequacy to meet the health needs, role, and program objectives of the Hospital, including immediate facility needs and potential alternative courses of development.

A. Specific Areas of Inquiry

1. The consultants will evaluate the existing Hospital and related elements to determine their adequacy to meet current programs and future programs as defined by the Hospital administration.

* Members/American Association of Hospital Consultants

A. Specific Areas of Inquiry - Cont'd.

2. The evaluation shall include, but not be limited to, such items as: facility obsolescence, facility standards, code deficiency and non-conforming areas, building efficiency, and circulation.
3. The consultants will review the mechanical/electrical systems as they relate to building operation, expansion potential, and ability to meet demand.
4. In the course of evaluating the existing hospital and related elements to determine their adequacy, the consultants will review comments, recommendations, and conformity to the Hospital Licensing Act and requirements, Joint Commission on Accreditation of Hospitals, and other relevant material with respect to facility operation and requirements.
5. The consultants will make recommendations regarding site.
6. Immediate programs of development, currently in planning, will be reviewed and commented upon as they relate to the existing facility; alternative potential courses of action will be submitted where appropriate.
7. The consultants, in the course of the survey, will meet with members of the Administrative Staff and others as appropriate.
8. A final documented report will be prepared and submitted.

B. Fee Schedule

1. The fee for this phase of the study will be \$10,000.00 including travel and related expenses. It is anticipated that the study could commence during the month of May 1972, and take 60 to 90 days to complete (the above is subject to negotiation).

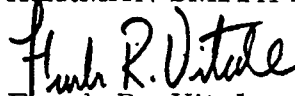
The principal individuals to be involved in this project are as follows:

1. Frank R. Vitale
2. Gary R. Caldwell
3. Herman Smith, M. D.
4. Don S. Lieb

However, all the resources of the firm will be used whenever and wherever appropriate.

Sincerely,

HERMAN SMITH ASSOCIATES



Frank R. Vitale
Principal

FRV/knj

ACCEPTED:

This _____ day of _____, 1972.

RECEIVED

OCT 20 1975

CONSTRUCTION GRANT MEETING

THERAPEUTIC RADIATION ONCOLOGY CENTER
UNIV. OF MICH.
HEALTH SCIENCES
PLANNING OFFICE

The Construction grant meeting was held in room M407 at 11:00 a.m. on Friday, October 3, 1975. Present were Drs. Levitt, Kennedy, Buchsbaum, Nesbit, Drehmel, Mr. Bob Baker, Mr. Tom Jones, Mr. Paul Maupin, Ms. Cherie Perlmutter, and Mr. Nelson.

Dr. Levitt opened the meeting describing the facilities, equipment, and space of the current Therapeutic Radiology Department. Dr. Levitt explained that the patient load in the Therapeutic Radiology Department had increased 70% since 1970 requiring additional space for treatment and anesthetizing rooms, in addition, to more examining rooms, waiting rooms, and washrooms for patients and staff.

Dr. Levitt, Kennedy, and Nesbit agreed that preliminary studies regarding facilities, equipment, and space should begin before approval for the \$10,000 line drawing. After the preliminary studies are concluded Dr. Kennedy will submit them to the Masons for possible approval for the \$10,000 line drawings. The National Cancer Institute will provide funding for 75% of the construction requiring the additional 25% funding from another source. Cherie Perlmutter assured the group that there were no available funds from Health Sciences for that purpose. The first grant application must be submitted by March 1, 1976.

The new cancer unit, according to Mr. Paul Maupin, would have to be below grade with possible skyway connection to Masonic Hospital with no more than six floors below and approximately 6,000 useable feet per floor. Mr. Maupin believed the construction of the cancer oncology building would be approximately 5 million dollars.

Dr. B.J. Kennedy elaborated on options concerning the new oncology center and the Masonic Hospital. He viewed that some of the space should be used for family counseling and cancer teaching.

Dr. Levitt, Kennedy, and Nesbit, decided to meet Saturday, October 18, 1975 in the forenoon for further work on the preliminary studies for the new oncology center.

The meeting adjourned at 12:00 noon.

Respectively submitted,

Sandy Christensen
Secretary



UNIVERSITY OF MINNESOTA
TWIN CITIES

United
Section of Medical Oncology
Department of Medicine, School of Medicine
Box 286, University Hospitals
Minneapolis, Minnesota 55455
(612) 373-4303

Ken

RECEIVED

NOV 6 1975

November 3, 1975

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Mr. Paul Maupin
Health Sciences Planning Office
4104 Powell Hall

Dear Mr. Maupin:

Enclosed is a preliminary plan for the addition to the Masonic Memorial Hospital. This proposal encompasses new facilities for radiation therapy, radiation research laboratories, and new outpatient facilities for oncology. It involves remodeling the south end of the Masonic Hospital on the first floor to a minor degree and a change in utilization of the basement level. In general, I do not believe that these changes represent a great cost, so that most of the projected expenditure would be in the new construction.

These are ideas that would help us begin to design a concept for what I would like to call the Masonic Cancer Center.

The Masonic Cancer Center would encompass the Masonic Memorial Hospital, the Radiation Oncology Center, the Special Cancer Center and could even include the Veterans of Foreign Wars Cancer Research Building.

The suggestions are accompanied by a very rough sketch of some of the change that might be made. I offer these as a means to begin some architectural planning and design concept by those involved.

Sincerely yours,

B. J. Kennedy

B. J. Kennedy, M.D.
Professor of Medicine
Director of Medical Oncology
Masonic Professor of Oncology

BJK:jn
cc: Dr. Seymour Levitt
Dr. Tom Jones
Dr. William Krivit
Mr. Robert Baker

The Masonic Cancer Center

The Masonic Memorial Hospital was originally designed and built to care for "terminal" cancer patients. It was conceived on the idea of providing control of cancer. As the years have passed, it is clear that "cure" of cancer is a potential and that the institution has become a center for which cancer patients of a wide scope are now admitted. Moreover, the greatest burden to the institution has been the rapidly increasing need for ambulatory facilities and supportive care.

The following proposals represent ideas that could be incorporated in the institution and add to the supporting facilities that are required:

I. Scope of Construction

The plan is based upon an understanding that a three story, underground building could be constructed south of the Masonic Hospital extending from the existing building to the wall of the apartment south of the Masonic Hospital. This width would amount to 89 feet. The length of the new structure would extend from the sidewalk in front of the Masonic Hospital to the Diehl Hall underground structure, a length of 144 feet.

The three floors of the new structure would be labeled levels A, B and C, the top level being A. For purposes of orientation the A level would contain a new outpatient clinic for Medical Oncology, Pediatric Oncology and New Medical and Radiation Oncology. Level B would contain radiation research laboratories and departmental offices for Therapeutic Radiology. Level C would contain a complete clinical unit for radiation therapy including the radiation therapy machines, patient examining rooms and waiting area to meet the needs of clinical radiation therapy.

With this orientation, the following represent more specific concepts of the new structure.

II. Masonic Hospital

A. New Entrance

The dining room wall of the Masonic Hospital Building would be extended to approximately the edge of the sidewalk. The wall would be windows. A new entrance to the Masonic Hospital would enter into this addition so that patients could go to the clinic levels via the elevator or the immediate stairway.

B. Reception Area

Where the existing food counter now stands, a reception desk would be installed. This reception desk would allow an information center for patients and families coming to the clinic system and the hospital.

C. Kitchen Area

As I understand it, the kitchen area will not be needed after the changeover to microwave food handling. Therefore, the current kitchen area would be converted to a large seminar room for cancer education. This would provide an easy entrance to medical students from the outside without interfering with hospital or clinic activities. It would also provide an excellent public education facility since it also has easy access from the street.

D. Existing Front Door Area

The existing front door would be closed off and the vestibule area converted to an office. The present reception desk would be converted to an office. The offices in this area would be devoted to two social workers for routine social work and two additional offices for the social workers carrying out family counseling activities. An additional office would provide secretarial services for the social service activities.

The existing nursing supervisor office should be converted to the basement level in the new planning of that area.

One of the offices would constitute expansion area. It is conceivable that the Fire Marshal would not allow closing off the door to this area and hence, this could be a waiting room area for family counseling.

E. Masonic I Nursing Station:

The existing nursing station on Masonic I has 26 beds. This unit would be converted to a low intensity care unit. It would provide beds for medical oncology patients, teen-age pediatric patients, radiation therapy, gynecology and surgery.

The unit would consist of patients who are self-care, diagnostic evaluations and overnight chemotherapy administration patients. Food would be served to the patients on this service. Low intensity nursing care is an important aspect of oncology and could be run economically. Severely ill patients would be maintained on the other nursing stations of the Masonic Hospital

E. Summary

The changes on the first floor of the Masonic Hospital would constitute an improvement in the entry system to the clinic and hospital area, providing open lounge and lobby region without congestion. Also it provides space for family counseling which is an important activity for the Cancer Center. The beds on the first floor would be devoted to low intensity care.

III. Masonic Basement

The Masonic basement would become a central part of the oncology outpatient clinic system.

A. Leukapheresis Unit

The leukapheresis laboratory would be converted to a hematology laboratory and service the clinic patients. Currently the Medical Oncology patients are tested on the fourth floor of the Masonic Hospital and this activity should be brought to the clinic level.

B. Auxillary Room

The former auxillary room and the hospital storage area behind it would be converted to the Cancer Registry and research charting by nurses and staff with respect to protocol type studies.

C. Existing Masonic Clinic

The existing Masonic Clinic would be converted to offices for two dietitians and two nursing supervisors and a cancer center manager. The waiting room of the clinic would become the waiting room for these important administrators of hospital and research services and a student teaching area.

D. Storage Area-Room M9

The M9 storage area is ineffectively used at the present time. Re-organization of this area should include installation of the time clock in this area and a linen entrance so that the linen carts are kept out of the hallway. This hallway in the long run will certainly become a major traffic region and should not have house-keeping supplies in the hallway. The vending machines at the entrance of the Diehl Hall tunnel should be removed since they are an obstruction to traffic.

The current door to the linen room should be changed to enter into the adjacent storage room and not into the hallway.

IV. New Building

The new building would contain the following activities on each floor. It is obvious that a major

corridor will exist through the center of the building in line with the existing basement corridor.

A. Level A

1. To the east of the corridor the Masonic Masonic Clinic should be located to consist of: reception desk, record area, large nurses treatment area, doctor's room for x-ray viewing, deak and discussion area separate from patient area, at least 9 examing rooms, a special room for minor operative procedures (including bone marrows). An additional area equivalent to three examing rooms should provide bed space for ambulatory patients receiving prolonged infusion chemotherapy.

2. To the west of the corridor would be two elevators and an open area in front of them so that patients getting off the elevator do not step into the major corridor. Adjacent to this region would be a large waiting room to accomodate the patients and their families attending the Masonic Clinic. Behind this area or south of it would be additional examining rooms for the new oncology patients. This is primarily a medical student activity and hence the room use would be slower than in the Masonic Clinic. There should be small conference rooms and x-ray viewing facilities. Since this would be for new patients only, extensive treatment facilities are not necessary.

B. Level B

1. On this floor would be the departmental offices for Therapeutic Radiology, a conference room/library, specific offices for Associate Professor and Professor level faculty, and radiation research laboratories. It is suggested that faculty of the Instructor and Assistant Professor level be provided study carrels in their research laboratories or small work area offices.

2. On this floor also will be physics laboratories as needed. There will be no animal laboratories in this area. Access will be provided to the Diehl Hall basement laboratories. The Therapeutic Radiology Laboratories now in Diehl Hall will be converted to animal facilities and animal research, so that all animal work is contained within that area.

C. Level C

1. Level C will be designed to accommodate the clinical needs of Therapeutic Radiology. The treatment machines will be placed on the ground level at the east end of the construction requiring the least amount of shielding. The area will contain examining rooms, simulator rooms, a waiting area, x-ray viewing and planning area, and a resident's room. There will be no staff offices as such. However, easy access to the second floor facility should be provided. Therefore, the faculty offices should be as close to the stair area and easy access to level C. The major portion of this floor should be devoted to the interests of patients receiving radiation therapy.

V. Special Notes

X-ray facilities will not be necessary in the new construction since the new X-ray Department in the B-C Building would provide most of these needs and they are not too far distant from the clinic area. The new B-C planning will provide direct tunnel access for hospitalized patients through the tunnel directly to the radiology floor in the main hospital.

Unit D-
Construction Grant *JK*
RECEIVED

CONSTRUCTION GRANT MEETING

NOV 7 1975

THERAPEUTIC RADIATION ONCOLOGY CENTER, UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

A Construction Grant Meeting was held in room 1020 Powell Hall on Monday, October 27, 1975 at 2:30. Present were Drs. Levitt, Khan, Song, Buchsbaum, Mr. T. Jones and Mr. Paul Maupin. ✓

Dr. Levitt asked Paul Maupin how far the construction could go in the direction of east and west. Mr. Maupin informed the group that construction could not go any farther east than the Harvard stop at the west end of the intersection and could go west to the east elevation of Diehl Hall.

It was decided that the floor space for the new construction could be 80x104. Mr. Maupin suggested that we stay in the confines of 89x104. It was decided that the construction could go three floors deep with a necessity for an elevator system. Dr. Levitt explained that we could share 6 exam rooms plus eliminate some animal space providing that the Diehl labs could be maintained. Dr. Levitt and Buchsbaum agreed that the center could get by with 20,000 sq. feet net space, if all the research space presently assigned to the Department were retained.

Mr. Maupin estimated that the approximate date for construction of the new center could possibly be early in 1978 with construction cost about 7 million by 1979.

Several other alternatives were considered. If enough space could not be obtained from Masonic then the Department could possibly take over the first floor (Station 12 and the Morgue) of the hospital until the new hospital was built. It was also suggested that the Department go on double shifts, but Dr. Levitt disagreed with this alternative because of availability of staff and exam space.

Mr. Jones and Mr. Maupin suggested to Dr. Levitt that he and Dr. Kennedy should have a meeting to consider these possibilities. Dr. Levitt was concerned about building a new cancer center that did not have enough building space. He felt then that we should wait and be included in the new hospital building that will replace Powell Hall. Dr. Levitt agreed that possibly an architectural firm should be hired to evaluate the space for the new cancer center.

The meeting adjourned at 3:30 p.m.

UNIVERSITY OF MINNESOTA
TWIN CITIES

University Hospitals
Minneapolis, Minnesota 55455

JANUARY 20, 1976

RECEIVED

JAN 21 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

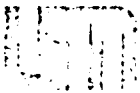
TO: PAUL MAUPIN
FROM: TOM JONES *Tom Jones*
SUBJ: UNIT "D" PLANNING

I HAVE ENCLOSED SOME PRELIMINARY UNIT "D" INFORMATION WHICH MIGHT BE USEFUL TO T.A.C. AND IMPACT FOR EARLY ANALYSIS.

THIS ANALYSIS COULD THEN LEAD TO PROPOSALS FOR ARCHITECTURAL FEASIBILITY AND COST CONSULTING SERVICES.

WE AGREED THAT YOU WOULD INITIATE THE NECESSARY CONTACTS WITH THESE FIRMS AND THUS THIS MEMO TO YOU.

THANKS FOR YOUR HELP.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Section of Medical Oncology
Department of Medicine, School of Medicine
Box 285 University Hospitals
Minneapolis, Minnesota 55455
(612) 373-4303

November 3, 1975

Mr. Paul Maupin
Health Sciences Planning Office
4104 Powell Hall

Dear Mr. Maupin:

Enclosed is a preliminary plan for the addition to the Masonic Memorial Hospital. This proposal encompasses new facilities for radiation therapy, radiation research laboratories, and new outpatient facilities for oncology. It involves remodeling the south end of the Masonic Hospital on the first floor to a minor degree and a change in utilization of the basement level. In general, I do not believe that these changes represent a great cost, so that most of the projected expenditure would be in the new construction.

These are ideas that would help us begin to design a concept for what I would like to call the Masonic Cancer Center.

The Masonic Cancer Center would encompass the Masonic Memorial Hospital, the Radiation Oncology Center, the Special Cancer Center and could even include the Veterans of Foreign Wars Cancer Research Building.

The suggestions are accompanied by a very rough sketch of some of the change that might be made. I offer these as a means to begin some architectural planning and design concept by those involved.

Sincerely yours,

B. J. Kennedy

B. J. Kennedy, M.D.
Professor of Medicine
Director of Medical Oncology
Masonic Professor of Oncology

BJK:jn

cc: Dr. Seymour Levitt
Dr. Tom Jones
Dr. William Krivit
Mr. Robert Baker

HEALTH SCIENCES

Issues:

- ✓ a) Clinic Space Relationship to Exam Rooms, B-L Lab, Registry
- ✓ b) Below grade imp. re J
- ✓ c) Reorientation of Masonic Entrance
- ✓ d) MI Bed Allocation
- ✓ e) Kitchen impact: Dietary Service

Satellite Pharmacy

~~Other~~
~~an~~
~~W~~
~~W~~
~~W~~

b) Contact award made in 12 mo.

The Masonic Cancer Center

The Masonic Memorial Hospital was originally designed and built to care for "terminal" cancer patients. It was conceived on the idea of providing control of cancer. As the years have passed, it is clear that "cure" of cancer is a potential and that the institution has become a center for which cancer patients of a wide scope are now admitted. Moreover, the greatest burden to the institution has been the rapidly increasing [^]for ambulatory facilities and supportive care.

The following proposals represent ideas that could be incorporated in the institution and add to the supporting facilities that are required:

I. Scope of Construction

The plan is based upon an understanding that a three story, ~~underground building could be constructed~~ south of the Masonic Hospital extending from the existing building to the wall of the apartment south of the Masonic Hospital. This width would amount to 89 feet. The length of the new structure would extend from the sidewalk in front of the Masonic Hospital to the Diehl Hall underground structure, a length of 144 feet.

The three floors of the new structure would be labeled levels A, B and C, the top level being A. For ^(a) purposes of orientation the A level would contain a new outpatient clinic for Medical Oncology, Pediatric Oncology and New Medical and Radiation Oncology. Level B would contain radiation research laboratories and departmental offices for Therapeutic Radiology. Level C would contain a complete clinical unit for radiation therapy including the radiation therapy machines, patient examining rooms and waiting area to meet the needs of clinical radiation therapy. } clinic -

With this orientation, the following represent more specific concepts of the new structure.

II. Masonic Hospital

A. New Entrance

The dining room wall of the Masonic Hospital Building would be extended to approximately the edge of the sidewalk. The wall would be windows. A new entrance to the Masonic Hospital would enter into this addition so that patients could go to the clinic levels via the elevator or the immediate stairway.

B. Reception Area

Where the existing food counter now stands, a reception desk would be installed. This reception desk would allow an information center for patients and families coming to the clinic system and the hospital.

C. Kitchen Area

As I understand it, the kitchen area will not be needed after the changeover to microwave food handling. Therefore, the current kitchen area would be converted to a large seminar room for cancer education. This would provide an easy entrance to medical students from the outside without interfering with hospital or clinic activities. It would also provide an excellent public education facility since it also has easy access from the street.

D. Existing Front Door Area

The existing front door would be closed off and the vestibule area converted to an office. The present reception desk would be converted to an office. The offices in this area would be devoted to two social workers for routine social work and two additional offices for the social workers carrying out family counseling activities. An additional office would provide secretarial services for the social service activities.

The existing nursing supervisor office should be converted to the basement level in the new planning of that area.

One of the offices would constitute expansion area. It is conceivable that the Fire Marshal would not allow closing off the door to this area and hence, this could be a waiting room area for family counseling.

E. Masonic I Nursing Station:

The existing nursing station on Masonic I has 26 beds. This unit would be converted to a low intensity care unit. It would provide beds for medical oncology patients, teen-age pediatric patients, radiation therapy, gynecology and surgery.

The unit would consist of patients who are self-care, diagnostic evaluations and overnight chemotherapy administration patients. Food would be served to the patients on this service. Low intensity nursing care is an important aspect of oncology and could be run economically. Severely ill patients would be maintained on the other nursing stations of the Masonic Hospital.

E. Summary

The changes on the first floor of the Masonic Hospital would constitute an improvement in the entry system to the clinic and hospital area, providing open lounge and lobby region without congestion. Also it provides space for family counseling which is an important activity for the Cancer Center. The beds on the first floor would be devoted to low intensity care.

III. Masonic Basement

The Masonic basement would become a central part of the oncology outpatient clinic system.

A. Leukapheresis Unit

The leukapheresis laboratory would be converted to a hematology laboratory and service the clinic patients. Currently the Medical Oncology patients are tested on the fourth floor of the Masonic Hospital and this activity should be brought to the clinic level.

B. Auxillary Room

The former auxillary room and the hospital storage area behind it would be converted to the Cancer Registry and research charting by nurses and staff with respect to protocol type studies.

C. Existing Masonic Clinic

The existing Masonic Clinic would be converted to offices for two dietitians and two nursing supervisors and a cancer center manager. The waiting room of the clinic would become the waiting room for these important administrators of hospital and research services and a student teaching area.

D. Storage Area-Room M9

The M9 storage area is ineffectively used at the present time. Re-organization of this area should include installation of the time clock in this area and a linen entrance so that the linen carts are kept out of the hallway. This hallway in the long run will certainly become a major traffic region and should not have house-keeping supplies in the hallway. The vending machines at the entrance of the Diehl Hall tunnel should be removed since they are an obstruction to traffic.

The current door to the linen room should be changed to enter into the adjacent storage room and not into the hallway.

IV. New Building

The new building would contain the following activities on each floor. It is obvious that a major

corridor will exist through the center of the building in line with the existing basement corridor.

A. Level A

1. To the east of the corridor the Masonic Masonic Clinic should be located to consist of: reception desk, record area, large nurses treatment area, doctor's room for x-ray viewing, deak and discussion area separate from patient area, at least 9 examining rooms, a special room for minor operative procedures (including bone marrows). An additional area equivalent to three examining rooms should provide bed space for ambulatory patients receiving prolonged infusion chemotherapy.

2. To the west of the corridor would be two elevators and an open area in front of them so that patients getting off the elevator do not step into the major corridor. Adjacent to this region would be a large waiting room to accomodate the patients and their families attending the Masonic Clinic. Behind this area or south of it would be additional examining rooms for the new oncology patients. This is primarily a medical student activity and hence the room use would be slower than in the Masonic Clinic. There should be small conference rooms and x-ray viewing facilities. Since this would be for new patients only, extensive treatment facilities are not necessary. ??

B. Level B

1. On this floor would be the departmental offices for Therapeutic Radiology, a conference room/library, specific offices for Associate Professor and Professor level faculty, and radiation research laboratories. It is suggested that faculty of the Instructor and Assistant Professor level be provided study carrels in their research laboratories or small work area offices.

2. On this floor also will be physics laboratories as needed. There will be no animal laboratories in this area. Access will be provided to the Diehl Hall basement laboratories. The Therapeutic Radiology Laboratories now in Diehl Hall will be converted to animal facilities and animal research, so that all animal work is contained within that area.

C. Level C

1. Level C will be designed to accommodate the clinical needs of Therapeutic Radiology. The treatment machines will be placed on the ground level at the east end of the construction requiring the least amount of shielding. The area will contain examining rooms, simulator rooms, a waiting area, x-ray viewing and planning area, and a resident's room. There will be no staff offices as such. However, easy access to the second floor facility should be provided. Therefore, the faculty offices should be as close to the stair area and easy access to level C. The major portion of this floor should be devoted to the interests of patients receiving radiation therapy.

V. Special Notes

X-ray facilities will not be necessary in the new construction since the new X-ray Department in the B-C Building would provide most of these needs and they are not too far distant from the clinic area. The new B-C planning will provide direct tunnel access for hospitalized patients through the tunnel directly to the radiology floor in the main hospital.

A RADIATION ONCOLOGY RESEARCH
AND TREATMENT CENTER
AT THE UNIVERSITY OF MINNESOTA

B/C Building

Basement Floor

<u>Room No.</u>	<u>Description</u>	<u>Preferred Area</u>	<u>Illustrated Area</u>
1	Toilet	75	72
2	Toilet	75	72
3	Darkroom for X-O-Mat	60	40
4	X-O-Mat Room	50	40
5	Clinical Dosimetry	200	210
6	Mould Room	180	175
7	Simulator-Tomograph	350	365
8	Hot Lab	150	320
9	Fast Neutron Treatment Room	850	820
10	Linen Storage	30	30
11	Staff Toilet	75	33
12	Storage	45	48
13	Linac 4 MeV Treatment Room	480	455
14	Cobalt-60 Treatment Room	480	510
15	Central Control Station	350	354
16	Medium Energy Linac	620	584
17	Storage	200	210
18	High Energy Linac (Clinac 35)	680	540
19	Modulator Room	320	235
20	Staff Lounge	200	200
21	Hyperbaric Oxygen Room	180	102
22	Storage	100	110
23	Resident's Study	300	190
24	Control Room	30	24
25	Super/Ortho	300	240
26	Toilet	30	36
27	Gowned Waiting	220	180
28	Gowned Waiting	220	180
29	Toilet	30	30
30	Simulator	200	320

Basement Floor - continued

<u>Room No.</u>	<u>Description</u>	<u>Preferred Area</u>	<u>Illustrated Area</u>
31	Treatment Planning	300	195
32	Computer	300	195
33	Examination Room	150	130
34	Examination Room	150	130
35	Examination Room	150	130
36	Nurses Station	60	60
37	Toilet	30	30
38	Toilet	30	30
39	Nurses/Technicians	200	130
40	Examination Room	150	115
41	Litters Waiting	160	120
42	Sick Patient Room	150	158
43	Examination Room	150	160
44	Records & File Secretary	400	200
45	Typing Pool	240	175
46	Staff	150	155
47	Staff	150	145
48	Staff	150	155
49	Reception	150	100
50	Waiting Room	400	360
51	Examination Room	150	135
52	Examination Room	150	120
53	Examination Room	150	126
54	Examination Room	150	142
55	Secretary	150	110
56	Examination Room	150	110
57	Examination Room	150	102
58	Staff	150	102
59	Janitor	50	55
60	Women's Toilet	140	144
61	Men's Toilet	140	168
62	Janitor	30	42
63	Staff	150	110
64	Staff	150	110
65	Staff	150	110
66	Secretary	100	102
67	Chairman's Office	200	189
68	Secretary	150	174
--	Patient Dressing Cubicles		
	20 each x 15 (22 illustrated)	300	245

Basement Floor - continued

<u>Room No.</u>	<u>Description</u>	<u>Preferred Area</u>	<u>Illustrated Area</u>
69	Conference/Classroom & Library	300	378
70	Machine Shop	400	729
71	Biophysics Laboratory	200	234
72	Isotope Laboratory	180	195
73	Isotope Laboratory	180	208
74	Staff	120	130
75	Staff	120	123
76	Secretary/Library	200	215
77	Staff	120	120
78	Staff	120	120
79	Staff	120	120
80	Staff	120	120
81	DarkRoom	120	120
82	X-ray	280	228
83	Storage	200	180
84	Control		
85	Preparation		
86	Animals	400	480
87	Animals	400	420
88	Animals	400	312
89	Animals	400	420
90	Cold Room/Dead Animals	150	138
91	Storage	200	144
92	Electronics Development	250	294
93	Physics Director	150	144
94	Secretary	100	126
95	Lockers	90	88
96	Tissue Culture	300	242
97	Tissue Culture		
98	Storage	50	72
99	Cold Room	100	126
100	Glass Wash & Glassware Storage	400	126
101	Instrument Room	240	322
102	Lockers	90	92
103	Histopathology	300	294
104	Chemistry Laboratory	300	270
105	Chemistry Laboratory	300	270

Basement Floor - continued

<u>Room No.</u>	<u>Description</u>	<u>Preferred Area</u>	<u>Illustrated Area</u>
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101	Instrument Room	240	322
102	Lockers	90	92
103	Histopathology	300	294
104	Chemistry Laboratory	300	270
105	Chemistry Laboratory	300	270

Basement Floor - continued

<u>Room No.</u>	<u>Description</u>	<u>Preferred Area</u>	<u>Illustrated Area</u>
106	Histopathology	300	294
107	Animal Operating Room	200	297
108	Animal Operating Room	200	280
109	Storage	150	193
--	Animal Operating Room	<u>200</u>	<u>--</u>
		21,910	

<u>Totals for Basement Floor</u>	<u>Gross Area</u>	<u>Illustrated Area</u>
	34,781	20,663

CONSTRUCTION COST ESTIMATE FOR A
RADIATION ONCOLOGY RESEARCH AND TREATMENT CENTER
AT THE UNIVERSITY OF MINNESOTA

B/C Building

Basement Level:

Radiation Therapy

Treatment Areas	5,454 GSF @ \$250/SF	=	\$1,363,500
Clinical Areas	15,837 GSF @ \$ 60/SF	=	950,220
Physics Support	<u>2,846 GSF @ \$ 70/SF</u>	=	<u>199,220</u>
Subtotal Radiation Therapy	24,137		\$2,512,940

Research Area

Animal Areas	2,830 GSF @ \$125/SF	=	\$ 353,750
Offices	1,377 GSF @ \$ 50/SF	=	68,850
Labs/Central Services	2,835 GSF @ \$ 75/SF	=	212,625
Corridors/Stairs/Elevators	<u>3,602 GSF @ \$ 40/SF</u>	=	<u>144,080</u>
Subtotal Research Area	10,644		\$ 799,305
Total Basement Level	34,781		\$3,292,245

THE ARCHITECTS COLLABORATIVE Inc.

UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION

UNIT D FEASIBILITY STUDY

RECEIVED

APR 9 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

25 MARCH 1976

A. DEVELOP A DETAILED FUNCTIONAL PROGRAM

1. Evaluate current and future use of Masonic Memorial Hospital
 - a. Assist in determining the remodeling program required in Masonic due to the integration of Unit D program elements.
2. Unit D program elements:
Masonic Clinic
Therapeutic Radiology Research Center
Therapeutic Radiology Clinic and Treatment Center.
 - a. Identify number, type and area required for each program element including supporting functions.
 - b. Establish operational and staffing patterns for each program element.
 - c. Develop design criteria for visitor control, general supervision, patient monitoring, record management and materials handling.
 - d. Determine adjacency patterns of element functions and related adjunct services.
 - e. Analyze functions to determine dimensional characteristics, environmental standards, equipment and utility requirements.
 - f. Derive optimal plan configurations for each of the program elements.
 - g. Consider future expansion potential for each of the program elements.
 - h. Develop preliminary equipment lists for each of the program elements.

B. ANALYZE PHYSICAL AND FUNCTIONAL ACCESS OF PROGRAM ELEMENTS WITH OTHER UNITS

6. Evaluate distribution patterns of electro/mechanical systems.
7. Determine options for construction staging and future expansion.

E. CODE REVIEW

1. Identify applicable building and zoning codes and regulations.
2. Review codes and identify the implications for egress and fire separation of locating facilities in Unit D.

F. DESIGN AND CONSTRUCTION

1. Develop schematic design drawings which accommodate the Unit D program elements as defined in the functional program: Item A and other related design criteria, Items B, C, D, and E.
2. Develop schedules for management design and construction which will provide for completion of the project at the earliest possible time.
3. Develop a preliminary analysis of building methods and sequence to provide continuous electro/mechanical service, protected physical access and elevator accommodations to maintain existing Masonic operations during construction.

G. COST ANALYSIS

1. Prepare construction cost estimates based on the "elemental" building system format for the Unit D program elements, Masonic remodeling program and the connecting links to the Mayo complex.

H. FEDERAL CONSTRUCTION GRANT APPLICATION

1. Assist in preparing the data, drawings and documentation required by the Federal Construction Grant Guidelines. We assume that space tabulations by program element, construction schedule and assumptions; construction cost estimate and assumptions; and schematic plans and building sections will be required.

1. Diagram the present circulation patterns for patients, visitors, staff, students and materials handling operations in the Mayo Complex and Masonic Memorial Hospital at all levels which contain departments directly related to the Unit D program--elements such as Laboratory Medicine, Central Service and Supply, Dietary, etc.
2. Indicate points of access from existing circulation patterns to the proposed facilities in Unit D and analyze the conditions of travel distances, asepsis control, patient and visitor orientation, functional separation and unit separation.

C. SITE ANALYSIS

1. Analyze existing site boundaries, access points, physical setbacks, utility locations and subsurface conditions, and determine extent of building area.
2. Analyze existing topological conditions and determine floor relationships with regard to site and to the adjacent Masonic Memorial Hospital, Diehl Hall, Unit B/C and Powell Hall tunnels and the proposed Unit J.
3. Determine height and setback restrictions or other zoning and building code limitations in developing a building volume.
4. Analyze traffic and parking conditions and identify suitable locations for public and service access.

D. DEVELOP ALTERNATIVE BUILDING ORGANIZATIONS

1. Develop alternative section and plan configurations based on the programmed adjacencies of departments and services.
2. Analyze the functional plan and building system relationships between Masonic, Unit D, Diehl and the proposed Unit J.
3. Analyze alternative building height and volume relationships.
4. Evaluate circulation patterns of patient, visitor, staff and students, and materials handling operations.
5. Identify entrance, reception and control points.

RECEIVED

APR 7 1976

**UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE**

UNIT D - BUILDING COMMITTEE

Saturday, April 3, 1976

ATTENDING: Drs. Levitt, Krivit, and Kennedy
 Lee Larson - Hospital Administration Planning Association
 Tom Kyle - University Planning
 David Groce - JRB Associates
 Jack Peek - JRB Associates
 Donald Buchsbaum, Ph.D.
 Cheri Perlmutter

- I. The position of a Cancer Coordinator Administrator has been tentatively described. The formal description is still in the Dean's office awaiting final decision and transmission to the University for posting.
- II. The Chairman has met with the following groups relative to the feasibility study and planning for Unit D:

A. Dr. Simmons and Grage (Surgery)

The surgery tumor group will continue to utilize the surgical clinic in the OPD for follow-up patient care. Their new clinic will be in the B-C building.

They would be interested in participating in the chemotherapy clinic activities such as carried out in the Masonic Clinic now. The similarity of the chemotherapy work that Dr. Grage carries out is similar to that of the Medical and Pediatric Oncology Group. The Central Oncology Group is in a phase-out plan and the current status of this is indefinite at this time. Dr. Grage has been invited to join the Medical Oncology Service as a participating member of Cancer and Leukemia Group B. Dr. Levitt is also a member of this group.

B. Dr. Prem (Gynecology)

Gynecology offices and laboratories are in Building A. Follow-up clinic for cancer patients will be in their B-C Gynecology Clinic. Dr. Prem would be interested in activities of the Masonic Clinic as it relates to cancer chemotherapy.

Dr. Prem needs space for their gynecology registrar, her assistant and a nurse clinician and data collector. His group is involved in the Gynecology-Oncology Group.

C. Cancer Registry

The hospital is developing a data processing center for registration of all patients in the University Hospital. Special

emphasis is being made on the Cancer Registry System. The Hospital is assuming responsibility for the core of this program. The Record Room will be on the second floor of the B-C building as part of a hospital function. It has been recommended that the current Cancer Registry (1 secretary, Laura Batson) which is now in Powell Hall be transferred to the Record Room facility for improvement in registry systems. It is agreed that Cancer Registry should be part of the Record Room system and not have multiple satellite systems.

For that reason, it is concluded that in Unit D a Cancer Registry should not be planned.

D. Charles King, Director of Pharmacy

It is planned that a satellite pharmacy be established in the Masonic Memorial Hospital. This should be placed in the central part of the basement level where the current neurology lab and pediatric lab exist. A small waiting room will be necessary. This will serve not only the in patient but also the clinic patient.

E. Nurses, Social Service, Occupational Therapy

The planning for Unit D has been described to these services in a special meeting and the input of these services encouraged.

F. Department of Laboratory Medicine

Dr. Richard Brunning is acting as the representative for the department in our planning. It is agreed that the hematology services now in process should be continued in order to expedite patient care. Consideration is being made for the availability of biochemical determinations.

G. Cancer Detection Center

This was discussed with Dr. Najarian and there are no plans for changing this facility.

III. Future Discussions:

- A. Dr. Goetz regarding Clinical Research Center.
- B. Masonic Auxiliary
- C. Veterinary group: Dr. Manning is essential.

IV. Architects:

The architects currently planning the University Hospital's B-C, etc. (PAC) will begin to participate in our planning process. There will be an introductory meeting for their orientation to be followed by

planning of Unit D:

MEETING: Rom 407

April 12-13-14 in the afternoons.

The first day will be orientation and Masonic Clinic planning. The latter part of the day and the 13th will be spent with therapeutic radiology. The third day both these groups will meet. This will be a crash program.

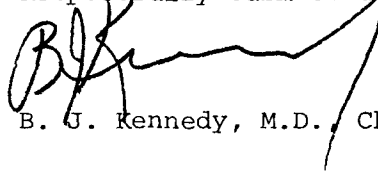
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- B. Therapeutic Radiology: Dr. Levitt will provide a report on the radiation research activities. JRB already has most of this information. Up-to-date data on patient load must be provided.
- C. Dr. Kennedy will prepare the Medical Oncology-Pediatric Oncology Report of research activities in the Masonic Clinic.

Respectfully submitted,



B. J. Kennedy, M.D., Chairman

Copies to: Cheri Perlmutter
Tom Jones
Sy Levitt
William Krivit
B. J. Kennedy
Lee Larson
Tom Kyle ✓
John Scott
David Groce
Jack Peek

Unit D - Planning Notes



UNIVERSITY OF MINNESOTA
TWIN CITIES

Research Animal Resources
Unit of Comparative Medicine
Box 351 Mayo Memorial Building
Minneapolis, Minnesota 55455
(612) 376-5097

RECEIVED

April 6, 1976

APR 7 1976

Dr. B. J. Kennedy
Director of Medical Oncology
Box 286 Mayo

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Dear Dr. Kennedy:

I received your letter of April 3rd requesting my consultation on Unit D. I intend to discuss the matter also with Dr. Seymour Levitt and Dr. Donald Buchsbaum.

A number of standards and guidelines issued by the National Institutes of Health and our own institutional policy form a useful basis for the design of animal holding facilities. Your communication mentions that the small animals will be housed in the Diehl Hall animal laboratories, but that it will be necessary to bring those animals to the research laboratories in Unit D. With that in mind, it appears that some small animal holding rooms will be necessary in Unit D, and I will be pleased to assist in the design of such rooms. I have enclosed a document issued through my offices to the Health Sciences Planning Office that lists the general characteristics of animal holding rooms. You may find this informative, and I would be happy to discuss the matter with you or your staff and the architects at your convenience.

Sincerely,

Patrick J. Manning, D.V.M.
Associate Professor of Laboratory
Medicine and Pathology
Director of Research Animal Resources

cc: Dr. Levitt
Dr. Buchsbaum
Mr. Paul Maupin

Enclosure

PJM/la



THE ARCHITECTS COLLABORATIVE INC.

7 April 1976

JEAN B. FLETCHER 1945 1965
WALTER GROPIUS 1945 1969
NORMAN FLETCHER
JOHN C. HARKNESS
SARAH P. HARKNESS
LOUIS A. McMILLEN

RICHARD BROOKER
ALEX CVIJANOVIĆ
HERBERT GALLAGHER
WILLIAM J. GEDDIS
ROLAND KLUVER
PETER W. MORTON
H. MORSE PAYNE
ERNEST L. BIRDSALL
TREASURER

ROBERT F. CRANE
HOWARD ELKUS
ALLISON GOODWIN
BASIL HASSAN
JOHN HAYES
JOSEPH HOSKINS
LEONARD NOTKIN
RICHARD SABIN
DAVID SHEFFIELD

GAZI B. AHMED
ROBERT BARNES
KENDALL P. BATES
SERGIO BERIZZI
SERGE CVIJANOVIĆ
ROYSTON DALEY
ROBERT DEWOLFE
GREGORY DOWNES
GAIL FLYNN
THOMAS LARSON
RALPH MONTGOMERY
PERRY NEUBAUER
MICHAEL PRODANOU
RICHARD PUFFER
WALTER ROSENFELD
JOHN J. SCOTT
EDMUND SUMMERSBY
KENNETH TAYLOR
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ROBERT TURNER
ROBERT WILSON
LAURENCE ZUELKE

RECEIVED

APR 9 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Mr. Paul Maupin
Health Sciences Planning Coordinator
Health Sciences Planning Office
University of Minnesota
4104 Powell Hall
Minneapolis, MN 55455

Re: University of Minnesota
Health Sciences Expansion
Unit D Feasibility Study
TAC Job No. 76004

Dear Paul:

In late January we discussed with you and Mr. Tom Jones the University's request for a proposal of architectural services to be rendered in conjunction with the development of a feasibility study and Federal Construction Grant for Unit D.

At that meeting we agreed to develop an outline which would define the scope of work envisioned under the feasibility study. The attached document dated 25 March 1976 and entitled Unit D Feasibility Study was subsequently developed. The document identifies the areas of study associated with Unit D, Masonic Memorial Hospital, Diehl Hall and Unit J and outlines of interrelationships which must be considered.

In developing the feasibility study outline we have assumed, as discussed in our meeting, that the construction cost will approximate 5 million dollars and that the Federal Construction Grant submission will be due on 1 June 1976 with a subsequent Council review in October 1976. In addition, we have assumed substantial input by the user groups in the development of a functional program, Item A, by providing us an existing data base and policy direction regarding the program elements. We understand the appropriate user groups have already begun preparing patient load statistics and projections and are evaluating the current use of Masonic Memorial Hospital together with other pertinent program data.

The feasibility study, based on the indicated time frame and outlined scope could extend over a two to three month period. Utilizing a three month duration, we estimate that the cost of the feasibility study would be approximately \$27,500 with additional reimbursable expenses of \$6,500.

THE ARCHITECTS COLLABORATIVE INC.

Mr. Paul Maupin

7 April 1976

Page 2

At this time we would like to formalize a letter agreement based upon the above discussion and documents. We propose to provide architectural services requested by the University of Minnesota Hospitals as an Extra Service in accordance with our basic agreement of 15 January 1968 as amended 19 January 1971 and incorporating the following adjustments:

The Architect, as requested by the University, will perform under his Scope of Services (Article 2) any or all of the architectural and engineering work required by the Unit D Feasibility Study, 25 March 1976 (Attached). Before commencing such work, the Architect will consult the University to mutually determine the specific scope, requirements, and costs of the study or any portion thereof.

Compensation for Extra Services (Article 4) shall be computed on the basis of Employee's time at a multiple of 2.75 times the employee's Direct Personnel Expense.

Under Reimbursable Costs (Article 5) the University shall reimburse the Architect for the following:

The cost of any special consultants when the employment of such special consultants has been approved in advance by the University. The Architect will be compensated at a multiple of 1.1 times the amount billed to the Architect for such services. (Cost estimating services will be considered as a special consultant.)

The cost of the Architect for living and travel expenses in connection with the project when approved in advance by the University.

Payment (Article 6) for Extra Services of the Architect and for Reimbursable Expenses shall be made monthly upon presentation of the Architect's statement of services rendered.

We also agree in principle that should this feasibility study and agreement result in a physical project requiring architectural and engineering design and construction services that we would give the University a credit for portions of work performed under this agreement which could be retained. When the scope and terms of agreement of the resulting physical project have been developed the appropriate credit could be determined and applied.

THE ARCHITECTS COLLABORATIVE INC.

Mr. Paul Maupin
7 April 1976
Page 3

If this method of proceeding is satisfactory to you, please sign one copy of this letter and return it to us with the appropriate purchase order for billing purposes.

Very truly yours,

THE ARCHITECTS COLLABORATIVE Inc.


John J. Scott *KVB*

JJS:KVB

cc: T. Jones
C. Hewitt

Approved:

Date _____

THE ARCHITECTS COLLABORATIVE Inc.

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UNIVERSITY OF MINNESOTA
HEALTH SCIENCES EXPANSION

APR 9 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

UNIT D FEASIBILITY STUDY

25 MARCH 1976

A. DEVELOP A DETAILED FUNCTIONAL PROGRAM

1. Evaluate current and future use of Masonic Memorial Hospital
 - a. Assist in determining the remodeling program required in Masonic due to the integration of Unit D program elements.
2. Unit D program elements:
Masonic Clinic
Therapeutic Radiology Research Center
Therapeutic Radiology Clinic and Treatment Center.
 - a. Identify number, type and area required for each program element including supporting functions.
 - b. Establish operational and staffing patterns for each program element.
 - c. Develop design criteria for visitor control, general supervision, patient monitoring, record management and materials handling.
 - d. Determine adjacency patterns of element functions and related adjunct services.
 - e. Analyze functions to determine dimensional characteristics, environmental standards, equipment and utility requirements.
 - f. Derive optimal plan configurations for each of the program elements.
 - g. Consider future expansion potential for each of the program elements.
 - h. Develop preliminary equipment lists for each of the program elements.

B. ANALYZE PHYSICAL AND FUNCTIONAL ACCESS OF PROGRAM ELEMENTS WITH OTHER UNITS

6. Evaluate distribution patterns of electro/mechanical systems.
7. Determine options for construction staging and future expansion.

E. CODE REVIEW

1. Identify applicable building and zoning codes and regulations.
2. Review codes and identify the implications for egress and fire separation of locating facilities in Unit D.

F. DESIGN AND CONSTRUCTION

1. Develop schematic design drawings which accommodate the Unit D program elements as defined in the functional program: Item A and other related design criteria, Items B, C, D, and E.
2. Develop schedules for management design and construction which will provide for completion of the project at the earliest possible time.
3. Develop a preliminary analysis of building methods and sequence to provide continuous electro/mechanical service, protected physical access and elevator accommodations to maintain existing Masonic operations during construction.

G. COST ANALYSIS

1. Prepare construction cost estimates based on the "elemental" building system format for the Unit D program elements, Masonic remodeling program and the connecting links to the Mayo complex.

H. FEDERAL CONSTRUCTION GRANT APPLICATION

1. Assist in preparing the data, drawings and documentation required by the Federal Construction Grant Guidelines. We assume that space tabulations by program element, construction schedule and assumptions; construction cost estimate and assumptions; and schematic plans and building sections will be required.

1. Diagram the present circulation patterns for patients, visitors, staff, students and materials handling operations in the Mayo Complex and Masonic Memorial Hospital at all levels which contain departments directly related to the Unit D program--elements such as Laboratory Medicine, Central Service and Supply, Dietary, etc.
2. Indicate points of access from existing circulation patterns to the proposed facilities in Unit D and analyze the conditions of travel distances, asepsis control, patient and visitor orientation, functional separation and unit separation.

C. SITE ANALYSIS

1. Analyze existing site boundaries, access points, physical setbacks, utility locations and subsurface conditions, and determine extent of building area.
2. Analyze existing topological conditions and determine floor relationships with regard to site and to the adjacent Masonic Memorial Hospital, Diehl Hall, Unit B/C and Powell Hall tunnels and the proposed Unit J.
3. Determine height and setback restrictions or other zoning and building code limitations in developing a building volume.
4. Analyze traffic and parking conditions and identify suitable locations for public and service access.

D. DEVELOP ALTERNATIVE BUILDING ORGANIZATIONS

1. Develop alternative section and plan configurations based on the programmed adjacencies of departments and services.
2. Analyze the functional plan and building system relationships between Masonic, Unit D, Diehl and the proposed Unit J.
3. Analyze alternative building height and volume relationships.
4. Evaluate circulation patterns of patient, visitor, staff and students, and materials handling operations.
5. Identify entrance, reception and control points.

THERAPEUTIC RADIOLOGY
SPACE UTILIZATION IN UNIT D
March 19, 1976

A. Clinical 9,380

1. Ten exam rooms if self-contained (at least 50 patients/10 exam rooms/day). One should be for litter patients, also. 120 sq. ft. x 5, 100 sq. ft. x 5.
2. Four treatment rooms and a control area to house 4 MV LINAC, medium energy LINAC, high energy LINAC and Cobalt-60 (Super-voltage X-ray machine to be housed with 4 MV LINAC or Cobalt-60). 4MV-400 sq. ft.; Medium Energy-560 sq. ft. treatment room, 240 sq. ft. for equipment; High Energy-600 sq. ft. treatment room, 300 sq. ft. modulator room; Co-60-200 sq. ft.; Control area-350 sq. ft.
3. One treatment room to house fast neutron generator and a radioisotope laboratory for counting and handling equipment, ~~unless a commitment can be obtained from the Hospital to include these in Unit J.~~ A hood with proper venting will be required for the laboratory. 1,000 sq. ft.
- ? ✓ 4. Waiting room for 16 patients treated/hour plus family. 300 sq. ft.
5. Gowned waiting room for adults. 180 sq. ft.
6. Gowned waiting room for children. 180 sq. ft.
7. Litter waiting area. 120 sq. ft.
8. Sick patient waiting room. 100 sq. ft.
- ? ✓ 9. Simulator-tomograph room for simulating patient set-ups for the Co-60, 4 MV LINAC and medium energy LINAC. 350 sq. ft.
- ? ✓ 10. Simulator room for simulating patient set-ups for the high energy LINAC and fast neutron generator. 200 sq. ft.
- ? ✓ 11. Mold room for making shields, compensators, patient immobilizers, etc. 120 sq. ft.
12. Hot lab for radium and radionuclide storage. 100 sq. ft.
13. Clinical dosimetry room to house calibration instruments, TLD reader, dosimetry phantoms, survey meter, etc. 150 sq. ft.
- ✓ 14. Treatment planning room with light boxes and tables for planning and preparing patient treatment charts. 200 sq. ft.
- ✓ 15. Computer room to house treatment planning computers and peripherals. 200 sq. ft.

add one room to anesthetize children & recovery - 110 ~~sq~~

Clinical (continued)

- ✓ 16. Resident work room for 8 residents with desks. 200 sq. ft.
- ? ✓ 17. Darkroom and adjoining room for film processing unit. 100 sq. ft.
- ✓ 18. Record and file room. 300 sq. ft.
- ? ~~✓~~ 19. Office for head nurse-technologist. 110 sq. ft.
- ✓ 20. Office for 2 clinical research nurses. 110 sq. ft.
- ? 21. Receptionist office. 130 sq. ft.
- 22. Nurses station. 60 sq. ft.
- 23. Dressing cubicles. 20 sq. ft. each x 15 *fewer rooms w/ lockers!*
- ✓ 24. Machine shop for lathe, mill, band saw, jog saw, etc. 200 sq. ft.
- ✓ 25. Electronics shop for support of LINAC's. 200 sq. ft.
- ✓ 26. Staff lounge. 200 sq. ft. *lockers room*
- $\frac{1}{2}$ ✓ 27. Toilets. 50 sq. ft. each x 6.
- $\frac{1}{2}$ ✓ 28. Storage rooms. 100, 50, 50, 30 sq. ft.
- 29. Janitor's room. 50 sq. ft.
- ✓ 30. Office for 3 medical secretaries. 140 sq. ft.

B. Administrative

- 31. Chairman's office. 250 sq. ft.
- 32. Chairman's secretary. 150 sq. ft.
- 33. Six staff physician offices. 110 sq. ft. each x 6.
- 34. Center administrator's office. 110 sq. ft.
- 35. Conference-class room-library for 25 people. 250 sq. ft.
- 36. Teaching laboratory for residents and graduate students in radiation physics and radiation biology. 150 sq. ft.
- 37. Office for Center secretary. 130 sq. ft.
- 38. Office for account clerk. 130 sq. ft.
- 39. Office for Department assistant administrator. 110 sq. ft.
- 40. Room for Xerox machine. 60 sq. ft.

Administrative (continued)

- 41. Storage room. 75 sq. ft.
- 42. Toilets. 50 sq. ft. each x 3.

C. Physics *possibly on top floor.*

- 43. Office for Radiation Physics Director. 140 sq. ft.
- 44. Offices for 5 staff physicists. 110 sq. ft. *each*
- 45. Office for physics secretary. 130 sq. ft.
- 46. Radiation biophysics laboratory for research on phantom materials, development of phantoms for electron and neutron dosimetry, and high LET therapy research. 200 sq. ft.
- 47. Study-office room for 8 physics graduate students. 200 sq. ft.
- 48. Radiation dosimetry laboratory for solid state dosimetry research on TLD and TCD. Room will house annealing furnaces and ovens. 200 sq. ft.

D. Radiation Biology

- 49. Office for Radiation Biology Director. 140 sq. ft.
- 50. Office for secretary. 130 sq. ft.
- 51. Offices for 4 staff radiobiologists. 110 sq. ft. *each*
- 52. Office for 3 postdoctoral fellows. 140 sq. ft.
- 53. Isotope laboratory for injecting animals, killing animals, and sampling isotope from animals. 180 sq. ft.
- 54. Instrument room for counting equipment and calculators. 150 sq. ft.
- 55. Three tissue culture laboratories to contain 4 tissue culture hoods, sinks, water and gas. 200 sq. ft. each x 3.
- 56. Histopathology laboratory with a chemical hood, gas, and water. 200 sq. ft.
- 57. Biochemistry laboratory with chemical hood, gas and water. 200 sq. ft.
- 58. Cold room. 120 sq. ft.
- 59. Glassware washing room with autoclave. 150 sq. ft.
- 60. Storage room. 120 sq. ft.
- 61. Animal operating room with water and gas. 150 sq. ft.

Radiation Biology (continued)

- 62. Animal temporary storage room for daily use. 120 sq. ft.
- 63. Locker room and lounge for a minimum of 12 people. 180 sq. ft.
- 64. General laboratory to contain centrifuges, refrigerators, freezers, etc. 200 sq. ft.
- 65. Radiochemical/immunology laboratory with hood that is properly vented, gas and water. 200 sq. ft.
- 66. Toilets. 50 sq. ft. each x 2.

$$B+C+D = 7,365$$

$$\begin{array}{r} \text{Total } 9,380 \\ 7,365 \\ \hline 16,745 \end{array}$$

RECEIVED

APR 14 1976

UNIT D - BUILDING COMMITTEE

Saturday, April 3, 1976

**UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE**

ATTENDING: Drs. Levitt, Krivit, and Kennedy
Lee Larson - Hospital Administration Planning Association
Tom Kyle - University Planning
David Groce - JRB Associates
Jack Peek - JRB Associates
Donald Buchsbaum, Ph.D.
Cheri Perlmutter

- I. The position of a Cancer Coordinator Administrator has been tentatively described. The formal description is still in the Dean's office awaiting final decision and transmission to the University for posting.
- II. The Chairman has met with the following groups relative to the feasibility study and planning for Unit D:
 - A. Dr. Simmons and Grage (Surgery)

The surgery tumor group will continue to utilize the surgical clinic in the OPD for follow-up patient care. Their new clinic will be in the B-C building.

They would be interested in participating in the chemotherapy clinic activities such as carried out in the Masonic Clinic now. The similarity of the chemotherapy work that Dr. Grage carries out is similar to that of the Medical and Pediatric Oncology Group. The Central Oncology Group is in a phase-out plan and the current status of this is indefinite at this time. Dr. Grage has been invited to join the Medical Oncology Service as a participating member of Cancer and Leukemia Group B. Dr. Levitt is also a member of this group.

- B. Dr. Prem (Gynecology)

Gynecology offices and laboratories are in Building A. Follow-up clinic for cancer patients will be in their B-C Gynecology Clinic. Dr. Prem would be interested in activities of the Masonic Clinic as it relates to cancer chemotherapy.

Dr. Prem needs space for their gynecology registrar, her assistant and a nurse clinician and data collector. His group is involved in the Gynecology-Oncology Group.

- C. Cancer Registry

The hospital is developing a data processing center for registration of all patients in the University Hospital. Special

emphasis is being made on the Cancer Registry System. The Hospital is assuming responsibility for the core of this program. The Record Room will be on the second floor of the B-C building as part of a hospital function. It has been recommended that the current Cancer Registry (1 secretary, Laura Batson) which is now in Powell Hall be transferred to the Record Room facility for improvement in registry systems. It is agreed that Cancer Registry should be part of the Record Room system and not have multiple satellite systems.

For that reason, it is concluded that in Unit D a Cancer Registry should not be planned.

D. Charles King, Director of Pharmacy

It is planned that a satellite pharmacy be established in the Masonic Memorial Hospital. This should be placed in the central part of the basement level where the current neurology lab and pediatric lab exist. A small waiting room will be necessary. This will serve not only the in patient but also the clinic patient.

E. Nurses, Social Service, Occupational Therapy

The planning for Unit D has been described to these services in a special meeting and the input of these services encouraged.

F. Department of Laboratory Medicine

Dr. Richard Brunning is acting as the representative for the department in our planning. It is agreed that the hematology services now in process should be continued in order to expedite patient care. Consideration is being made for the availability of biochemical determinations.

G. Cancer Detection Center

This was discussed with Dr. Najarian and there are no plans for changing this facility.

III. Future Discussions:

- A. Dr. Goetz regarding Clinical Research Center.
- B. Masonic Auxiliary
- C. Veterinary group: Dr. Manning is essential.

IV. Architects:

The architects currently planning the University Hospital's B-C, etc. (PAC) will begin to participate in our planning process. There will be an introductory meeting for their orientation to be followed by

planning of Unit D:

MEETING: Rom 407

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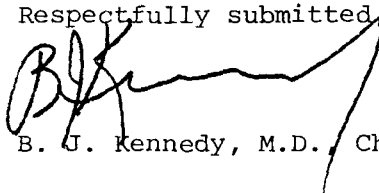
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Respectfully submitted



B. J. Kennedy, M.D., Chairman

Copies to: Cheri Perlmutter
Tom Jones
Sy Levitt
William Krivit
B. J. Kennedy
Lee Larson
Tom Kyle
John Scott
David Groce
Jack Peek

THE ARCHITECTS COLLABORATIVE Inc.

MEETING NOTES

PROJECT: University of Minnesota Health Sciences
Unit D, Masonic Cancer Center

DATE: 12 April 1976, 1:00 pm

PLACE: Room 407, Masonic Memorial Hospital

PRESENT: U. Minn: Dr. Kennedy, Dr. Levitt, Dr. Manning, Messrs, Tom Jones,
Lee Larson, Dan Buchsbaum, Tom Kyle
J.R.B. Associates: Mr. Jack Peek
TAC: Messrs. John Scott, Qazi Ahmed, Ed Summersby

1. This meeting was intended as an introductory briefing for the architects, to discuss the program for the Masonic Cancer Center, and to initiate the planning process, aimed at filing a National Cancer Institute grant application by 1 June 1976.
2. Dr. Kennedy described the present Masonic Memorial Hospital, and the present Oncology program. The Masonic Hospital was built in 1959 as a 2 story facility for the care of terminal cancer patients, the 3rd and 4th floors being added in 1968. In 1970 the X-ray therapy unit was established as the Department of Therapeutic Radiology still operating in archaic space. In 1972 the Department of Oncology was established. Dr. Kennedy described Oncology as "the Internists approach to the cancer problem."
3. The 1968 Health Sciences Master Plan envisioned a small "Unit D" strictly for radiation therapy, but since then the Oncology Clinic has increased dramatically in scope, now handling 6,000 out-patient visits per year (in 4 small exam rooms) plus 1,000 in-patients. Thus the new Unit D is envisioned as the "Masonic Cancer Center", providing radiation therapy, cancer teaching and research space, and a super cancer clinic, (medical oncology). Other disciplines of oncology will be treated in their respective areas of the hospital: Gynecology, Surgery, Neurology, Pediatrics.
4. Dr. Kennedy described the present uses of the Masonic Hospital:
 - 4th Floor: Offices
 - 3rd Floor: 37 beds for critically ill patients. Very busy unit, always full, overtaxed, inadequate support space.
 - 2nd Floor: 50 beds (20 Gynecology, 15 Surgery, 15 Clinical Research Center beds)
 - 1st Floor: 19 beds now; to be converted to a low-intensity nursing unit, for self-care patients in for diagnosis, or overnight chemotherapy.

MEETING NOTES
PAGE 2

Basement: Cancer Detection Center, Computer Center, Oncology Clinic, Leukapheresis Unit (moving to Unit B-C), Charting Research Area (for Gyn, pediatrics, etc.)

5. Dr. Kennedy described the proposal for Unit D as a 3 floor underground building connected to Masonic, with the following functions:
Bottom Level: Radiation Therapy
Middle Level: Radiation Therapy Offices and Research
Upper Level: Oncology Clinic

Dr. Kennedy described a newly created position of Cancer Care Coordinator, who will be the senior administrator of the Unit D, along with a hospital administrator, who will provide liaison with the university hospitals. Operating funds currently are provided by an Advanced Malignant Disease Grant.

6. Dr. Levitt then described the planning work already performed by Enviro-Med, and JRB Associates. The latter have been retained to assist in the grant application. The filing deadline is 1 June 1976, with a decision on award not expected until January 1977, and funding not until May 1977. However, it is important to meet the 1 June deadline, and not to delay until 1 October. The NCI grant will provide up to 75% of the cost of all cancer related space, with the Masons and private funding providing the balance.

7. Jack Peek described the immediate requirements of submitting a preliminary "letter of intent" to the A-95 Regional Clearinghouse by Friday, 30 April 1976.

8. The preliminary net area requirements were stated as follows:
- | | |
|------------------------|---------------------------|
| Therapeutic Radiology: | 16,000 net sq. ft. |
| Oncology Clinic: | 6,000 net sq. ft. |
| TOTAL | <u>22,000 net sq. ft.</u> |

9. The area assumed to be the "site" (138 feet east-west from Diehl Hall basement to the Harvard Street property line, and 72 feet north-south from Masonic to the projected north face of Unit J) provides 9,936 sq. ft., or 28,300 gross sq. ft. total on 3 floors (deducting for a 10 foot wide corridor on 2 levels to replace the existing tunnel from Masonic to Powell Hall.) Thus it was evident that the site must be made larger, either by extending further west under Essex Street south of Diehl Hall, or extending into the Unit J site, up to the present Apartment Building property line, or both.

10. The Neutron Generator was discussed. Dr. Levitt feels such a unit will be developed in 6 months and must be included in the present program, not delayed for future expansion into the Unit J basement. Limestone aggregate (calcium) is the best material for neutron shielding.

MEETING NOTES
PAGE 3

11. TAC pointed out that the present grade of Essex Street will prevent the top floor of Unit D from being level with the Masonic basement, as previously expected. In fact, it will be 8 feet lower. Dr. Kennedy, though he would prefer the two to be at the same level, understood it was not possible, and said it would not be a problem, particularly if all the patient functions are in Unit D, and the Masonic basement is used only for administrative staff functions.
12. Dr. Levitt briefly described the functional aspects of the Radiation Therapy program.
 - a) It is very important to provide a separation for first time patients and the less ill (outpatients) from the very ill (inpatients). These patients are extremely sick, and they look it. Their appearance can be alarming to others in earlier stages of cancer.
 - b) Provide a separate elevator for inpatients with a discrete receiving point on the therapy floor.
 - c) There must be a litter holding area, and a "sick patient room" for those patients who suddenly become too ill to be moved, or who are to be held prior to admission.
 - d) Nurse's control area must be able to observe the litter holding area, the sick patient room and the gowned waiting areas.
 - e) Some of the Exam Rooms (2 or 3) should be adjacent to the radiation treatment rooms. The others can be removed.
 - f) Provide a direct connection (ramped) from the Research Labs to the animal holding area in Diehl Hall basement.
13. Dr. Levitt described the patient flow in Radiation Therapy: A patient is referred to the department by another physician. The new patient is registered, examined by the Resident Staff, and a decision is made whether the patient should be given radiation treatments, or referred to the Masonic Clinic for chemotherapy, or surgery. If radiation treatments are indicated, the patient is scheduled for simulation, wherein the treatment program is set up and calculated, the dosage and position determined, etc. Then he is scheduled for the appropriate treatment machine, and a scheduled course of treatment is established, say once a week or 2 or 3 times a week for 20 weeks. Following that, the patient is seen once a month for follow up after treatment. The treatments require the patient to undress and gown.
14. Dr. Kennedy described the functioning of the Masonic Clinic as an outpatient clinic for ambulatory patients receiving chemotherapy. Inpatients receiving chemotherapy do so in their bedrooms. It is only recently that advances in medicine (chemotherapy)

MEETING NOTES
PAGE 4

have enabled cancer patients to be ambulatory. The clinic really functions as a separate private practice, but using hospital support. The key feature are the "supernurses", who are really are really highly trained physicians' assistants who are able to make many decisions about patient care and treatment.

- a) Patients are given a blood test, and then are seen in an exam room, with an average stay of about 20 minutes per exam room. Patients will dress in the exam room.

Dr. Kennedy feels it is important to avoid rushing the patients. He wants to give them plenty of time, in a relaxed atmosphere. The program allows 2 exam rooms per doctor, so he can go between 2 patients.

- b) Patients requiring diagnostic X-rays would get them in Mayo or in Unit B-C.
- c) Infusion/Transfusion Room: provide 3 booths, each for 2 patients, with curtains. Social contact and visibility among patients in this case is desirable. Presently all transfusions are done in the Emergency Room.
- d) Minor OR: for biopsies and bone marrows.
- e) Provide a holding room for patients who become ill, or have a reaction to the drugs (rare) or who must be admitted. Perhaps one exam room could double for this purpose.

- 15. Dr. Kennedy described the New Patient Clinic, as providing a teaching function for students. All new patients are seen here initially by medical students, with lots of time allowed, about 1 hour per exam. This functions essentially as an initial screening clinic, providing entree into the system, rather than as a cancer treatment clinic, as does the rest of the Masonic Clinic. The treatment clinic is not good for teaching. Patients records are too complex, etc. Hence they run a very efficient operation. But the New Patient Clinic is different, providing a separate area for the students to make the initial diagnosis and treatment plan, and then to present it to the Doctor. Case write-up areas are provided; also for presentation of a case to the Doctor. Provide corridor connections (separate) for students' use to Unit B-C, and to Powell Hall, and future Unit J.
- 16. Hematology Lab, now in Masonic Basement, should be included in Unit D, upper level. Also the Satellite Pharmacy should be there, as it is equipped to provide all the specialized oncology drugs.
- 17. TAC is to consider development of a new main entrance to Masonic, and closing the present one.

MEETING NOTES
PAGE 5

18. The problem of exhaust vents from the labs was mentioned, relative to the open sundeck on 5th floor of Masonic (not used now). Also, the Neutron Generator will require 100% exhaust air.
19. Consider possible bridge links from Masonic to Unit J.

E.K. Summersby

UNIT 'D' PLANNING SESSION

4-12-76

oncology →

research & cancer teaching -

1st floor - DIAGNOSTIC (all temporary)
: to be changed to low intensity cancer care.
1st ← Front lobby to be social service center
with new door (entrance on South side)

BASE-
MENT

to be renovated - nursing, pharmacy,
research charting, dietitian,
computer center, ~~about~~ 1/4 avail. to new
plans in assoc. w/ new structure

6,000 # for Clinic & Clinical Teaching activities

June 1, 1976 - Deadline for Grant (could go to Oct. 1, 1976)
no decision until May 1977.

* Neutron Generator - 7' concrete shield all around -
(1,000 #) should or should not be in program.

John Scott - Explains site & problems

~~to~~ with the loss of Unit 'F', Unit 'D'
could assume mech serv. (chilled water)
from R/C & A plants ???

definite need for more space -

What is the funding ceiling →

$\frac{3}{4}$ Gov. participation (NCI)

the rest from the Masons & Private
Donation

→ Grant application must be filled 30 Days
& prior to the Deadline.

* meaning April 30

Get Space Utilization Charts -
March 19, 1975 from
Don Buchsbaum -

Therapeutic Radiology

10 exam rooms -
4 treatment rooms

separate w/d. and ill patients totally from
clinic level on -

patients average 20 treatments.
once a month visits after the first
three weeks.

Clinic (Masonic) ped & med.
oncology (chemo-therapy)

Some space in existing basement
of Masonic is avail ~~for~~ for renovation.

Unit 'D' - 407 MASONIC

4-13-76

must file with NCI in two weeks.

originally 28,000 \$ - must increase to
47,500 below grade w/
9,000 on roof per program
much too high.

SCHEME A - across into 's' site
B - in front of Dehl
C - no tunnel & a portion front of Dehl

Do We Get Apartment -

Scheme C is best in my opinion

4th week of January is probable
award time - funds would follow
may of '77.

What is a reasonable const. cost
Seems that program has escalated
by approx. 40% - how about that

who is to pull the project into
perspective - arch. obviously wait.

John Scott believes 'the bigger the better!
He never questions program req.

reference sheet.
~~4. ~~finally used~~~~

moved some spaces to diff. floors.

operating costs (personnel) must be included in program - people won't come here if it's too expensive - 10% above mayo clinic now - must not go higher.

— managed to move 2,500 # from basement to 2nd level.

THE ARCHITECTS COLLABORATIVE Inc.

MEETING NOTES

PROJECT: Univ. of Minn, Health Sciences
Unit D, Masonic Cancer Center

DATE: 13 April 1976, 1:00 p.m.

PLACE: Room 407, Masonic Memorial Hospital

PRESENT: U. Minn.: Dr. Levitt, Messrs. Tom Jones, Lee Larson, Tom Kyle,
Dan Buchsbaum, PhD.
JRB Assoc.: Mr. Jack Peek
TAC: Messrs. John Scott, Qazi Ahmed, Ed Summersby

1. John Scott reviewed TAC's analysis of the net program areas we received the day before. Applying net to gross area factors, the gross area appears to be roughly 48,000 sq.ft., plus 4,000 sq.ft. for the above ground entrance and elevator addition to Masonic.
2. It appears that the largest single area on one floor will be about 18,000 sq.ft. on the Radiation Therapy floor.
3. Three (3) possible alternative site configurations were shown in order to provide 18,000 sq.ft.
 - a) Rectangle, extending all the way to the back of the Apartment Building. This was rejected as not feasible, due to non-ownership of the Apartment, delays to the Grant Application, and major encroachment onto the Unit J site.
 - b) A long narrow extension under Essex Street along Diehl Hall. This was rejected as being too narrow for efficient utilization.
 - c) A compromise, extending south to the Apartment property line, and along Diehl Hall for 114'.
4. Dr. Levitt stated that design should allow future expansion into Unit J.
5. Schedule:
 - 30 April 1976: Submit letter of intent to A-95 clearinghouse
 - 1 June 1976: File Grant Application with NCI
 - Fall 1976: Site Visit
 - Late Jan. 1977: Council Meets, and announces awarding of grants
 - May 1977: Funds are released

MEETING NOTES
PAGE 2

6. For the cost estimate and schedule in the grant we should assume construction will start immediately after the grant is awarded, although we know that funds won't be released until May 1977. This indicates the university is ready to move fast, and that is a positive position to have when seeking a grant.
7. Discussed which areas of the Radiation Therapy clinical unit program could be removed to the Middle Floor. The Radiation Physics Labs could go to the Upper Floor, but Radiation Biology and Administration should not be more than 1 floor above the clinical unit.

E.K. Summersby

cc: Ahmed
Scott
Mawha
Despic

THE ARCHITECTS COLLABORATIVE Inc.

MEETING NOTES

PROJECT: Univ. of Minnesota, Health Sciences
Unit D, Masonic Cancer Center

DATE: 14 April 1976, 1:00 p.m.

PLACE: Room 407, Masonic Hospital

PRESENT: U. Minn.: Dr. Kennedy, Dr. Levitt, Messrs. Dan Buchsbaum,
Tom Kyle, Tom Jones, Lee Larson
JRB Assoc.: Jack Peek
TAC: John Scott, Qazi Ahmed, Ed. Summersby

1. Jack Peek discussed the mechanics of the grant application procedure. The letter to the A-95 regional clearinghouse is due Friday, 30 April 1976. A list of tasks and responsibilities in this effort was reviewed.
2. The A-95 letter will contain the following:
A brief description of the project (functional); site plan, approximate cost; net and gross areas; construction schedule; relation of the project to the State health plan, etc.; plus the Environmental Assessment form completed to the extent possible.
3. We should check the Unit F Grant Application for the Environmental Assessment.
4. TAC discussed our planning efforts to date, which were too preliminary for presentation.
5. JRB will be the consultants on the radiation equipment, and shielding. TAC to consult Jack Peek, or David Gross (physicist). Gross is with JRB at 714/459-2601., and is especially familiar with shielding requirements.

E.K. Summersby

cc: Q. Ahmed
J. Scott
D. Mawha
S. Despic

THE ARCHITECTS COLLABORATIVE Inc.

UNIVERSITY OF MINNESOTA, HEALTH SCIENCES
 UNIT D, MASONIC CANCER CENTER
 TAC JOB NO. 76004

19 APRIL 1976 (Rev. 26 April 1976)

PRELIMINARY PROGRAM TABULATION

SUMMARY: PROGRAM AREAS BY LEVELS

- NOTES:
1. Ratio of Net Usable Area to Departmental Gross Area = 1:1.6
 2. Ratio of Dept. Gross to Building Gross = 1:1.15
 3. Thus, Ratio of Net Usable to Building Gross = $1:1.6 \times 1.15 = 1.84$
 4. In addition, Mechanical Equipment Space is estimated at 10% of prior gross.

1. <u>TOP LEVEL</u>	Net Usable Area	Gross Area
1.1 Oncology Treatment Clinic	6,925	12,740
1.2 Mechanical Equipment Space		4,800
Total, Top Level:	6,925	17,540
2. <u>MIDDLE LEVEL</u>		
2.1 Therapeutic Radiology, Clinical Support	2,050	3,800
2.2 Therapeutic Radiology, Administration	2,225	4,100
2.3 Radiation Physics	1,420	2,600
2.4 Radiation Biology	3,520	6,480
Total, Middle Level:	9,215	16,980
3. <u>LOWEST LEVEL</u>		
3.1 Therapeutic Radiology, Clinical Unit	9,000	16,560
Total, Bottom Level:	9,000	16,560
4. <u>MASONIC MEMORIAL HOSPITAL</u>		
4.1 Entrance and Elevator Core (Ground Floor, thru 4th Floor at 1000 GSF)		4,000
5. <u>TOTAL AREA, NEW CONSTRUCTION</u>	25,140 NSF	55,080 GSF

		<u>Net Usable Area (s.f.)</u>	<u>Gross Area (s.f.)</u>
1.	<u>TOP LEVEL</u>		
1.1	<u>Oncology Treatment Clinic</u>		
	Waiting	1,000	
	Toilets (2 @ 50 s.f.)	100	
	Reception/Scheduling/Appointments	100	
	Records Storage	50	
	14 Exam Rooms (14 @ 120 s.f.)	1,680	
	Doctors' Work Room (Film Viewing)	120	
	Doctors' Conference Room	200	
	Treatment Rooms:		
	4 Injection & Blood Drawing Booths (4 @ 50)	200	
	3 Infusions, Transfusions (3 @ 100)	300	
	1 Medication Prep Room	200	
	1 Supervisor's Office	50	
	Procedures Room (Biopsies, Bone Marrow)	100	
	Hematology Lab	120	
	Supply Storage	75	
	Patient Holding (Emergencies, Sick patients pre-admission)	100	
	Nurses' Office/Conference	100	
	Soiled Utility	50	
	Staff Toilets (2 @ 80)	160	
	Patient Toilets (wheelchair) (2 @ 80)	160	
	New Patient Clinic:		
	5 Exam Rooms (5 @ 120)	600	
	3 Student Write-up/ Study Rooms (3 @ 80)	240	
	Auxiliary Room (with Storage)	300	
	Conference Room	300	
	Cancer Educ. Coordinator's Office	140	
	Secretary	100	
	Wheelchair & Litter Storage (dispersed)	200	
	Pharmacy Dispensary	180	
	SUBTOTAL	<u>6,925</u>	
			12,740 GSF
1.2	<u>Mechanical Equipment Room</u>		4,800 GSF

	<u>Net Usable Area (s.f.)</u>	<u>Gross Area (s.f.)</u>
2. <u>MIDDLE LEVEL</u>		
2.1 <u>Therapeutic Radiology, Clinical Support</u>		
Clinical Dosimetry	150	
Treatment Planning	200	
Computer Room (Adjacent to above)	200	
Patient Records and Files	300	
Office, 2 Clinical Research Nurses	110	
Office, 3 Medical Secretaries	140	
Staff Lounge	200	
Lockers (2 @ 75 s.f.)	150	
Toilets (2 @ 50 s.f.)	100	
2 Storage Rooms (2 @ 50 s.f.)	100	
Machine Shop	200	
Electronics Shop	200	
	<hr/>	
SUBTOTAL	2,050 NSF	3,800 GSF
2.2 <u>Therapeutic Radiology, Administration</u>		
Office, Dept. Chairman	250	
Chairman's Secretary	150	
6 Offices for Staff Doctors (6 @ 110)	660	
Administrator's Office	150	
Assistant Administrator	110	
Center Secretary	130	
Account's Clerk Office	130	
Photocopy Room	60	
Teaching Laboratory	150	
Conference/Library (25 people)	250	
Toilets (2 @ 50)	100	
Storage	85	
	<hr/>	
SUBTOTAL	2,225 NSF	4,100 GSF
2.3 <u>Radiation Physics</u>		
Office, Radiation Physics Director	140	
Secretary	130	
5 Offices for Staff Physicists (5 @ 110)	550	
Radiation Biophysics Lab	200	
Radiation Dosimetry Lab	200	
Study-Office (8 graduate students)	200	
	<hr/>	
SUBTOTAL	1,420 NSF	2,600 GSF

	<u>Net Usable Area (s.f.)</u>	<u>Gross Area (s.f.)</u>
2.4 <u>Radiation Biology</u>		
Office, Radiation Biology Director	140	
Secretary	130	
4 Offices for Staff Radiologists (4 @ 110)	440	
Office (for 3 postdoctoral fellows)	140	
Isotope Lab	180	
Instrument Room (counting equipment)	150	
3 Tissue Culture Labs (3 @ 200)	600	
Histopathology Lab	200	
Biochemistry Lab	200	
General Lab	200	
Radiochemical/Immunology Lab	200	
Cold Room	120	
Glass Washing Room	150	
Storage	120	
Animal Operating Room	150	
Animal Holding Room (short-term)	120	
Staff Lounge and Lockers	180	
Toilets (2 @ 50)	100	
	<hr/>	
SUBTOTAL	3,520 NSF	6,480 GSF

3. BOTTOM LEVEL

3.1 <u>Therapeutic Radiology, Clinical Unit</u>		
Waiting (16 patients/hour plus family)	300	
Reception/Appointments/ Switchboard	130	
Patient Toilets (2 @ 50)	100	
15 Dressing Cubicles, with lockers (15 @ 20)	300	
Adult Gowned Waiting	180	
Children Gowned Waiting	180	
10 Exam Rooms (5 @ 120; 5 @ 100)	1,100	
Litter Holding (Inpatients)	120	
Sick Patient Holding Room	100	
Anesthesia Room (children)	100	
Nurses' Station (Adj. to above 6 items)	60	
Office for head nurse-technologist	110	
4 MV LINAC (400 s.f. plus Maze)	680	
12 MV LINAC (560 s.f. plus Maze)	760	
Equipment Room (for above)	240	
25 MV LINAC (625 s.f. plus Maze)	800	
Modulator Room (for above)	300	

	<u>Net Usable Area (s.f.)</u>	<u>Gross Area (s.f.)</u>
Cobalt-60 (incl. Maze)	520	
Control Area	350	
Neutron Generator (625 s.f. plus Maze)	900	
Generator Room (adj. to above)	150	
Radioisotope Lab & Hot Lab	170	
Simulator-Tomograph Room (for 4 MV, 12 MV LINACs and Cobalt-60)	480	
Simulator Room (for 25 MV LINAC and Neutron Generator)	200	
Mold Room	120	
Residents' Work Room (8 Residents)	200	
Darkroom	50	
Storage	50	
Storage	100	
Janitor	50	
Staff Toilets (2 @ 50)	- 100	
	<hr/>	
TOTAL:	9,000 NSF	16,560 GSF

THE ARCHITECTS COLLABORATIVE Inc.

MEETING NOTES (Combined)

PROJECT: Univ. of Minnesota Health Sciences
Unit D, Masonic Cancer Center

DATES: 27 April 1976, 1:00 p.m.
28 April 1976, 1:00 p.m.

PLACE: Room 407, Masonic Memorial Hospital

PRESENT: U. of M.: Dr. Kennedy, Dr. Levitt, Dr. Buchsbaum, PhD., Messrs. Tom Jones, Lee Larson, Tom Kyle, plus Ms. Sheri Perlmütter (27 April meeting only), and Jim Nelson (28 April meeting only)

JRB: Jack Peek

TAC: John Scott, Ed Summersby

PART I: DISCUSSION

These notes, combining the discussions at the two meetings noted above, deal first with the matters concerning the grant application, and then turn to specific comments on the program and preliminary plans developed by TAC and presented at the meetings.

- 1.1 Opening the first meeting, Jack Peek reviewed the inputs required from TAC and U. of M. for the A-95 letter (deadline 30 April) and the Environmental Assessment.
- 1.2 It was suggested that TAC should see Gus Schaeffler about zoning, air pollution, waste treatment, and solid waste handling.
- 1.3 The question of site ownership was discussed in view of the fact that it consists principally of a public right of way, Essex Street. The University must obtain a legal title opinion. It was suggested that the Unit B-C roadway could serve as a precedent. Note that the cost of any site acquisition is an allowable cost, for funding purposes, if it is not acquired prior to the grant application.
- 1.4 In the first meeting, it was anticipated that Tom Kyle would obtain as many of the necessary supporting letters and permits as possible now, for inclusion with the A-95 letter. However, by the second meeting it was decided that it was not possible to obtain letters from the Utilities at this time, since it is too soon for the HSAE engineers to make reasonable assessments of consumption.

MEETING NOTES

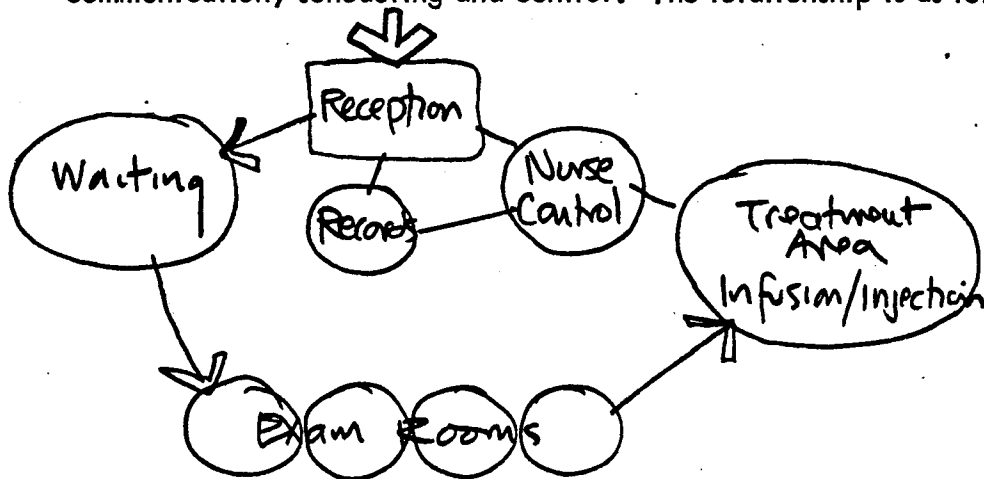
PAGE 2

- 1.5 It was noted that the instructions for the grant application require that all space now devoted to cancer research must be maintained or replaced by equivalent space elsewhere. The present space occupied by Therapeutic Radiology must be assigned a function that qualifies as "cancer research space." Possible uses suggested were the Tumor Localization Unit, or Nuclear Medicine. Plans must be submitted with the grant application that show all space presently devoted to cancer research. These can be isolated plans. It was not resolved who will prepare these.
- 1.6 The U. of M. must be prepared to describe their "facilities planning process", for inclusion in the grant application.
- 1.7 Jack Peek reminded those at the second meeting that for grant purposes, the National Cancer Institute is not interested in patient care, only research. Thus, all patient care areas will be designated "clinical research."
- 1.8 It was decided that for the project description in the A-95 letter, a breakdown of net and gross areas would not be included. Only net areas will be included at this time. The gross area of the project as presently drawn is 62,200 sq. ft., including the new elevator core extending the full height of Masonic, and the new tunnels to Powell Hall and Masonic.
- 1.9 At the second meeting, it was decided not to include an estimate of project cost with the A-95 letter. However, this decision was later reversed. John Scott noted that probable total project costs will be in the area of \$10 to \$12 million.
- 1.10 Assuming 75% funding by NCI, the 25% matching funds will be in the range from \$2.5 to \$3 million. Dr. Kennedy felt confident that the Masons now had \$1 million presently available from their previous fund drive (\$10,000 maximum individual gift), and that probably another fund drive aimed at large gifts from individual Masons could raise another \$1 million. Beyond that, he was uncertain of the funding raising potential.

PART 2: REVIEW OF PLANS

- 2.1 The plans were presented, with arrows indicating traffic patterns for inpatients, outpatients, staff and service.
- 2.2 Ground Floor: The concept of a common entrance for Unit D, Masonic Hospital and the VFW Building is desirable. Dr. Kennedy felt the arrangement shown left the lobby too cut up.
- 2.3 Elevators: The conclusion was that there should be a third elevator provided, to allow two outpatient elevators plus one dedicated for inpatients and service use. The latter will serve the full height of Masonic down to the bottom level of Unit D, with key control only at the ground floor. The outpatient elevators will primarily be limited to serving the ground floor down to the bottom level, but will extend full height of Masonic, with key control only above the ground floor.
- 2.4 Upper Floor:
- a) The patient flow process in the Masonic Clinic was described:
An outpatient arrives for chemotherapy, checks in at the reception desk, goes to waiting room, then gets blood sample taken, waits again while blood test is done, then goes to Exam Room, (undressing in the Exam Room, as required), then goes to the Treatment Area for an injection, or an infusion.
 - b) The blood samples should be taken in a small booth directly adjacent to the Hematology Lab, not necessarily in the injection booths, which would not be close enough. Most likely, the same lab technician who does the blood test will also take the sample.
 - c) The Hematology Lab and the blood drawing booths must be out front, near waiting and reception. Possibly also should provide a small sub-waiting area outside the lab. It is hard to schedule blood drawing, since the time it takes to get a sample varies considerably between people. After blood sample is taken, the patient may have to wait 30 minutes or so for results of the blood test. Blood samples are taken on each visit, before the chemotherapy treatment (shot or infusion) is given.
 - d) Hematology Lab should be larger, to accommodate 4 lab technicians (for chemotherapy patients) plus possible a fifth lab tech for blood samples from patients receiving radiation treatment on the Bottom Level. At present, Radiotherapy patients have their blood samples taken in Mayo, but in Unit D, they will presumably be sent up to the Upper Level for this function.

- e) The Pharmacy should be located in the Masonic Basement, since it is primarily for inpatients. Those outpatients who need to obtain medication at this Pharmacy (not a majority) can go to the Masonic Basement location, since the Unit D elevators will stop at that level.
- f) The Utility Room should have a toilet adjacent, for enemas.
- g) The Medication Prep Room should be more central to the Infusion/Injection Treatment area, rather than the Nurse Control desk.
- h) The Nurse-Control should be adjacent to the Receptionist for close communication, scheduling and control. The relationship is as follows:



- i) Provide a route for the Doctor to pick up the record of the next patient without going through Waiting area. He should also be able to discuss things discreetly with the Nurse-Control at the same time.
- j) The Doctors' Conference Room should be more central to the group of exam rooms. This will be much used for film viewing and treatment discussions of particular cases, and it is important for the Nurses to participate in this process also.
- k) Tom Jones stressed the need to be able to justify the number of exam rooms. The average utilization is 5 patients/hour.
- l) It was noted that although the Upper Level is predominantly for outpatients, occasionally there will be litter patients on that floor. Inpatients coming from Mayo through Powell (or Unit J in future) going to Radiotherapy will pass through this floor, going to the inpatient elevator. Occasionally also an ambulatory patient on the upper level may become sick, and may be admitted as an inpatient.

2.5

Middle Floor:

- a) The biology and chemistry labs and support and animal facilities should be isolated. The two physics labs are "clean" and are more related to the computer, treatment planning, dosimetry functions, and the shops.
- b) The desired order of the bio-labs is as follows, starting with the nearest proximity to the Animal Holding and O.R.:
 - Histopathology Lab
 - Immunotherapy (Radio-Chemical) Lab
 - Isotope Lab
 - 3 Tissue Culture Labs (The first of these is bio-hazard area, and will require an air-lock vestibule, with pass-thru sterilizer)
 - Bio-Chemical Lab
 - General Lab
- c) Provide 6 foot chemical hoods in the following labs: Immunotherapy (Radio-Chemical); Isotope Lab; Bio-Chemical Lab.
- d) Provide 2 separate 4 foot biology hoods for the three Tissue Culture Labs.
- e) Assuming a 10 ft. x 20 ft. lab, provide lab benches along one long wall and the end, with the hood on the other long wall. Leave open space to allow free-standing refrigerators, freezers, etc.
- f) The Animal O.R. needs a counter with sink. The Holding Room needs a smaller counter and sink. This room will house a day's supply of lab mice, or rats, etc., in cages, on carts.
- g) It was noted that the basement of Diehl Hall presently contains at least two electron microscopes in the area adjacent to Unit D: One, belonging to the Neurology Dept., occupies precisely the location shown for the connection from Unit D to Diehl. The other a more powerful one belonging to the Pediatrics Dept., is located in the extreme southeast corner of Diehl. (Subsequently Ed Summersby inspected these two installations and spoke to Dr. C. Clawson). The principal problem, other than the vibrations during the construction period, are the possible electro-magnetic interference caused by the radiation treatment machines, or the electrical or mechanical building equipment, or both. Dr. Clawson said a fluctuating magnetic field would be intolerable.
- h) It was decided to eliminate the long ramp up to the Diehl Hall basement, and substitute an hydraulic elevator. The connection to Diehl will be moved 2 bays east.

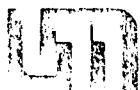
- i) The Instrument Room should be near the Isotope Lab. The Glass Washing Room will have 1 large and 1 small sterilizer, plus a glass washing machine.
- j) The Conference/Library and the Teaching Lab, being student functions, should be moved closer to the elevators and stairs.
- k) There is need for only one set of lockers on this floor, which will be principally used by the lab personnel. Provide coat space in the Doctor's offices.
- l) Staff population: about 30 to 33 per floor. The Lounge is where many of them will eat lunch.
- m) Provide the following new spaces: another small Conference Room near the Chairman's office; a photocopy room, linen storage, and soiled utility space.
- n) The Record Storage Room must accommodate a 10 year backlog of patients. To determine room size, assume the following: 1,000 patients per year; 4 records per lineal inch of shelving. In addition, provide space for X-ray film files, a desk for the clerk, plus a work table and space for two other people.
- o) The Administrative Offices were explained:
 - Dept. Chairman (Dr. Levitt), with personal secretary
 - Administrative Assistant is the chief secretary to the whole department of Therapeutic Radiology. Should be adjacent to Chairman.
 - Administrator (Don Buchsbaum). He is the administrator of the Radiation Oncology Center, which is the research function.
 - Center Secretary. Assistant to the Administrator of the Radiation Oncology Center. Should be adjacent.
 - Accounts Clerk. Adjacent to the Administrator's Office.

2.6

Bottom Floor :

- a) Dr. Levitt likes the concept of a common Control area for the Radiation Treatment Rooms, but recognizes the problem of distance (and travel time) from the patient. Perhaps controls could be grouped for 2 or 3 rooms. The Neutron room, being quite special, could have its own control area.
- b) Jack Peek provided some plan studies of possible Neutron room layouts.
- c) The desired separation from the outpatients of inpatients arriving on litters or wheelchairs was achieved, but the arrival point should be close to the Reception desk, so that person will be aware when a patient arrives. The litter holding area should be closer to the elevators.

- d) Reception desk should control both outpatient and in patient arrival.
- e) Dr. Levitt said that approximately 20% of present patient load are inpatients from Masonic Hospital. There are also other inpatients coming from Mayo: Gynecology, and Pediatrics, particularly.
- f) It was decided to eliminate dressing booths in the Exam Room area. Patients can undress and gown in the Exam Room.
- g) In the treatment area, assume there will be 16 patients gowned and waiting at one time. Provide at least 16 lockers in dressing booths.
- h) Provide staff lockers and lounge on Bottom Floor also, adjacent to Staff toilets.
- i) The Resident's Work Room really belongs in the center of the treatment core, as it is used to discuss particular cases, or review treatment plans, etc., with the Doctors, Nurses, and Residents.
- j) Provide vertical access route for installing and removing the treatment machines from this level.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Office of the Assistant Vice President

Physical Planning
340 Morrill Hall
Minneapolis, Minnesota 55455
(612) 373-2250

April 28, 1976

JRB Associates, Inc.
P.O. Box 1393
LaJolla, California 92037

Dear Sirs:

This letter agreement authorizes you to proceed with consultant services relative to the preparation of the NCI Construction Grant Application for Health Sciences Unit D for the University of Minnesota. The grant application is to be submitted June 1, 1976. In the preparation of this grant application, JRB Associates will work in collaboration with The Architects Collaborative. The scope of the services to be provided would be as outlined in your letter of April 6, 1976.

For the above services, the University agrees to compensate the Consultant on a time and materials basis, not to exceed \$15,000.

Payment for such services shall be made on the basis of a billing submitted by the Consultant upon completion of the services to be rendered under this agreement.

If this agreement meets with your approval, please sign three copies and return to this office.

Sincerely,

Clinton N. Hewitt
Assistant Vice President
Physical Planning

CNH/sf

APPROVED:

JRB ASSOCIATES, INC.

By David E. Ince

Title Vice President

MEMORANDUM

Date: May 8, 1976

To: Jack Peek, Dave Groce, Bob Walcher

From: Fred Laughter

Subject: Answers to your questions I received at University of Minnesota

- Was the A-95 Clearinghouse notification submitted?

Yes, hand carried on Friday, April 30th in an abbreviated form (Fig. 1, 3 pages). Tom Jones (Univ. Hosps. Assoc. Director: Planning) explained it was a V.P. "political" decision to submit a simple notification, and not submit an Environmental Assessment so as not to "stir up trouble!"

- Is the Environmental Analysis form completed?

* No, but Tom Kyle (Planning, 4th fl. of Powell) says they've answered everything they can. Figure 2 is the nearly completed Environmental Analysis form Kyle gave me; the three questions that are unanswered on pp. 10 and 11 (of the 13-page form) should be answered by TAC, according to Kyle. These questions deal with electricity, water, and sewage and are best covered by the letters of support generated by the University of Minnesota, in my opinion.

- Do we have copies of the letters of support?

Kyle will mail

* Historical Preservation letter. Yes, original provided by Kyle, Figure 3. Kyle explained the University of Minnesota is legally a municipality, the third largest municipality in the state. He explained the University of Minnesota can rezone itself.

Zoning. It will be in the mail by May 10th from Vernon Ausen (University of Minnesota Planning: Head of Zoning) addressed to Jack Peek, JRB/La Jolla. Mr. Ausen explained the area is R-6 (General Residence), but he is sending us a letter saying Unit D's construction is in accordance with zoning regulations. He pointed out Unit B/C was built in the same R-6 zone.

Electricity. Dave Kerkow (Head of University of Minnesota's Electrical Engineering Section) says it will only take a day or two to generate the letter after he knows exactly what we need. Said he'd been to a meeting about Unit D and that he is responsible for generating the support letter. I don't know who, but somebody needs to tell him what we need.

Water and Sewage. Jerry Nelson (Head of University of Minnesota's Civil Engineering Section) says he will generate water/sewage letters and submit them to Paul Maupin by May 13th. Nelson said he is also responsible for writing the letter of property certification showing ownership of land. Nelson will turn this letter over to University of Minnesota attorney Joel Tierney who will give the title opinion.

- Have the CV's been selected and compiled?

No. Don Buchsbaum (Assist. Prof. of Radiobiology and Levitt's specialist on grants) assumed responsibility of Levitt's CV's and will have them by May 14th. I don't know who will handle Kennedy's CV's.

- Has the data necessary for Appendices A and B been provided so we can write them?

No. But Buchsbaum agreed to provide information on Levitt's operation about number of people and net square footage for six job categories, now and within 2 years after Unit D opens. He agreed to use the chart requested by NCI on page 23 of their Applicant's Guide. Kennedy's information on this part of Appendix B can not be adapted to the NCI-requested format, they must redo it. Buchsbaum further agreed to provide a listing of all Levitt's research projects in the NCI-requested format. I can adapt Kennedy's data on research projects to the desired format. Dr. Chang Song (Assoc. Professor and Director of Labs) agreed to write the answers to the questions NCI raises about which of Levitt's research programs will be in Unit D; what use will be made of the existing space after these programs relocate; etc. Figure 4 shows the specific questions and required tabular formats I asked Drs. Buchsbaum and Song to take care of. Buchsbaum's answers will be available on-site by May 13th; Song's answers will be mailed to JRB/La Jolla by May 10th.

- Has the "organization chart" for Unit D been redrawn?

No, but definite progress is being made. On Thursday, I talked to Levitt about the cosmetic desirability of having an "umbrella supervisory committee" between the upper echelons of Hospital/Medical School/University administration and the lousy organizational chart prepared by Kennedy. On Friday, Levitt and Buchsbaum said they'd talked to the Dean about an "umbrella" committee which will probably be set up to advise the Dean of the activities of Unit D with representatives from the major programs housed in Unit D, from the Dean's office, and from the Hospital Administrator's office. Levitt suggested I fashion the organization chart after the organizational structure of the K-E building. Accordingly, I called the offices of Mede Cavert (Assoc. Dean of Med. School), Dr. Drehmal, and Jim Nelson. I couldn't get their organization chart but will try again next week. Levitt and I agreed the umbrella committee will strengthen the case that complementary projects can be more efficiently inter-related when housed together in Unit D.

- Will the final assemblage and production of the grant application be done by us in La Jolla?

Levitt said: "Ask Kennedy". (But I think Levitt expects us to do it.)

- Have all lay-out and spatial requirements been sent from Dr. Kahn to TAC? If not, get name and model numbers of all treatment machines.

Dr. Faiz Kahn (Assoc. Professor, Director of Radiation Physics) said he delegated this responsibility to Howard Larson (Levitt's Equipment Service Specialist). On May 3rd, Larson mailed letters to the various manufacturers requesting information; the same day he mailed building drawings to the architects. Larson doubted he would even hear from the companies by June, so he gave me the following information:

4 MeV model T-400
 write: SHM Nuclear Corporation
 570 Del Rey
 Sunnyvale, California 94086
 phone: (408) 245-3136

13 MeV Toshiba model LMR-13 - Serial No. 60792014
 write: Stewart M. Reiner
 Profexray
 775 Nicholas Blvd.
 Elk Grove Village, Illinois 60007
 phone: (312) 439-6425

} distributor, part of Litton

or
 write: Mr. Uhata
 Toshiba International Corporation
 1708 S. Wolf Rd., Unit E
 Wheeling, Illinois 60090
 phone: (312) 537-8560
 current location of machine: B146, Mayo

} middleman between Profexray and Japanese home office

Simulator Tomography Toshiba Simulator LXS-4 - Serial No. 60192002
 Tomography Control - 500 MA, 125 KV
 same addresses as for 13 MeV
 current location: B139, Mayo

25 MeV Therac 20/Saturne
 write: Fred G. Harrie
 Atomic Energy of Canada Limited (AECL)
 P.O. Box 6300
 Ottawa, Canada
 phone: (613) 592-2790

Cobalt Eldorado 8, serial No. 8, 1.33 MeV
 same address as for 25 MeV
 note: GE is AECL's representative
 current location: B148-2B, Mayo



UNIVERSITY OF MINNESOTA
TWIN CITIES

Engineering and Construction Division
Physical Planning Office
26 Folwell Hall
Minneapolis, Minnesota 55455

RECEIVED

MAY 13 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

May 10, 1976

Mr. Paul J. Maupin
Health Sciences Coordinator
Health Sciences
4104 Powell Hall
Minneapolis Campus

Re: The Health Sciences Building
Unit D

Dear Mr. Maupin:

It is my understanding that Unit D Building for Health Sciences is being submitted for a fund request. It is my responsibility to give a statement as to the capability of the University distribution system to provide adequate services for this building. The storm and sanitary sewers have a capacity to accommodate Unit D Building. The water distribution system is also adequate to provide water services for the Unit D Building. Dave Kerkow will be giving you the statement in regard to electrical capacity.

Yours truly,

O. J. Nelson, P.E.
Assistant Supervising Engineer

OJN:mn

cc: Paul E. Kopietz
Howard W. Heck



UNIVERSITY OF MINNESOTA
TWIN CITIES

Engineering and Construction Division
Physical Planning Office
26 Folwell Hall
Minneapolis, Minnesota 55455

May 19, 1976

Mr. Paul Maupin
Health Sciences Coordinator
University of Minnesota
Room 4104, Powell Hall
Minneapolis Campus

Subject: Availability of Electric Service for
Unit "D": Masonic Cancer Center
Health Sciences
Minneapolis Campus

Dear Paul:

The proposed location for Unit D has been reviewed by this office and we affirm that primary electric service at a voltage of 13,800 volts is available from the University of Minnesota Campus Distribution Center in the vicinity of the proposed facility. This is a three-phase, four-wire, grounded system.

If you have any further questions regarding this service, please contact me.

Very truly yours,

A handwritten signature in cursive script that reads "David B. Kerkow".

David B. Kerkow
Assistant Supervising Engineer

DBK:IEJ

cc: Paul Kopietz
O. J. Nelson
Ken Erpelding

5.13.76

Planning Meeting!

preliminary costs: const. cost -

non. blq. cost -

spec. equip. cost - 700,000.00

10.4 → project cost - ~~7,500,000.00~~

grant request - £,500,000.00

serious money shortage -

N.C.I. covers 75% of project cost
Masonic can't pick-up the difference.

project has escalated to the point (£150.00 per ft)
where it is not affordable - should be £100 per ft

The underpinning is too costly.

- must do away with some tunnels.

scale down 'D' by moving
clinic into Masonic Basement

5-13-76

committee meeting - Unit 'D'

feasibility study conducted by } Dr. French's office
feasibility committee } Paul Maupin's office
committee approved facility } Lovitt
Kriest
Kennedy

worked with Hosp. planning comm. to
arrive at need. Unit D proposed expansion.

|| J.R.B. funded by Masonic Hosp.
|| I.A.C. funded with above ↑

level 1. amputatory Oncology & chemotherapy
level 2. research & offices for radiation therapy
level 3. radiation therapy

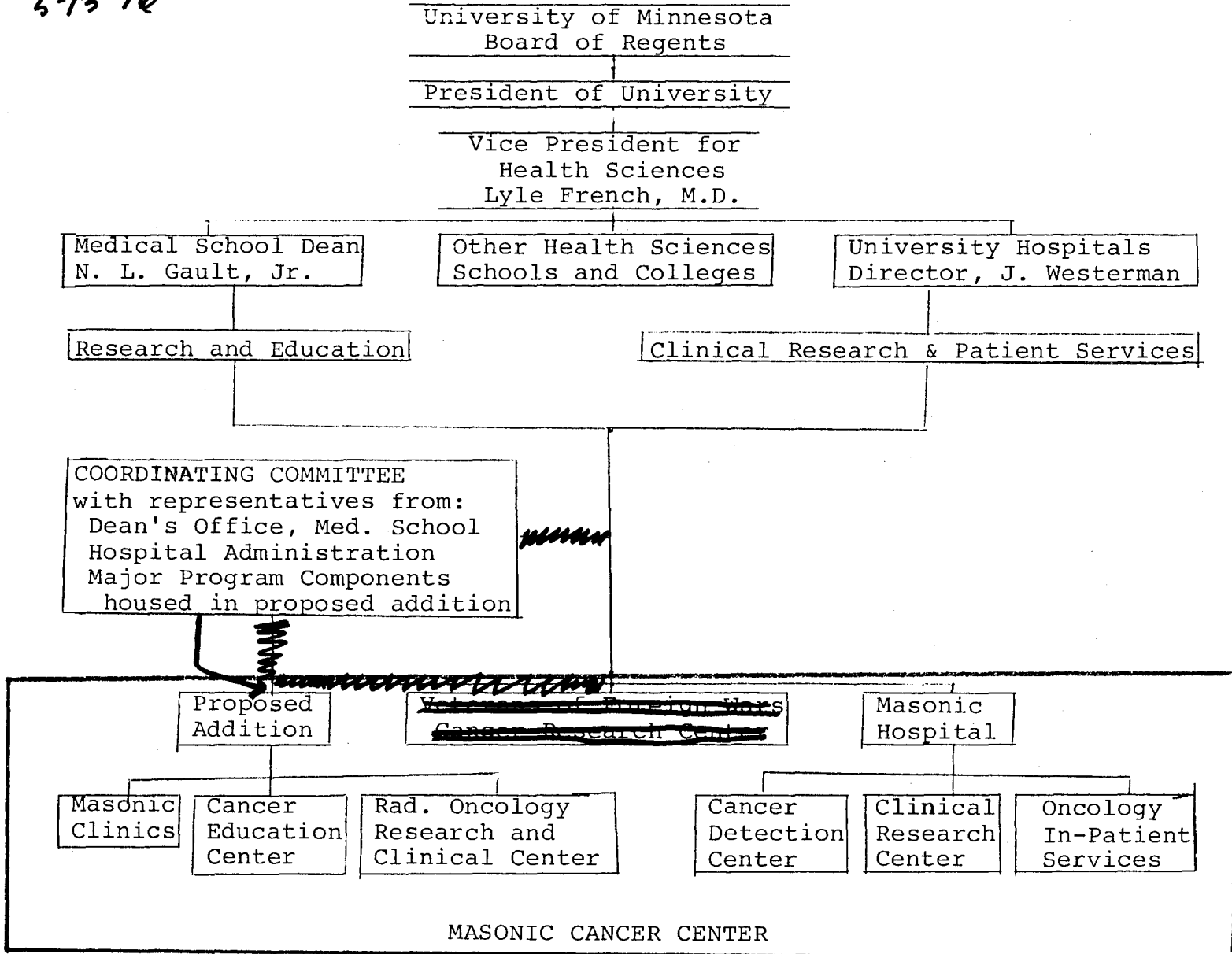
9,810 visits per year now! in chemotherapy

"Masonic Cancer Center"

Coordinating Committee must be formed
w/ administrator for proposed
'cancer center'

DRAFT

5-13-76



UNIVERSITY OF MINNESOTA
TWIN CITIES

348

Space Programming and Management Division
Physical Planning
~~XXXX~~ Elliott Hall
Minneapolis, Minnesota 55455
(612) 373-~~2196~~ 7540

May 14, 1976

RECEIVED

MAY 18 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Mr. Jack Peek
JRB Associates
P. O. Box 1393
1200 Prospect Street
La Jolla, California 92038

Dear Mr. Peek:

Mr. Fred H. Laughter of your firm visited me last week about Unit D of the University's Health Sciences complex, which is proposed to be constructed underground westerly of the intersection of Harvard and Essex Streets Southeast.

This is to inform you that the above area is located in a portion of the campus included in an R6 zoning district under the Minneapolis Zoning Ordinance.

Mr. Jerome Fitzgerald, an attorney for the City of Minneapolis, advises me, however, that the City's zoning ordinance does not apply to property owned by the State of Minnesota or by the University of Minnesota. The University has constructed many academic buildings in the R6 zoning district.

Very truly yours,

Vernon L. Ausen
Coordinator, Property Acquisition
Physical Planning

VLA/MEO

CC: R. Joel Tierney
Paul Maupin

Date; May 19, 1976

To: Jack Peek
JRB Associates, Inc.
P.O. Box 1393
1200 Prospect St. La Jolla, Cal. 92038

From: Tom Kyle
Health Science Planning Office
University of Minnesota Planning Office
4107 Powell Hall
Minneapolis, Minnesota 55455

Subject: Letters of approval for sewer, water, electrical capacities
for the Masonic Cancer Center.

Dear Jack,

Attached are the letters that you requested for the sewer, water, and electrical capacities from the appropriate departments within the University. If there is anything more that you need please call me at 612-276-5571. It has been a pleasure to work with you, Jack, and your associates.

Yours Truly,

Thomas W. Kyle
Project Coordinator
Health Science Planning Office
University of Minnesota



UNIVERSITY OF MINNESOTA
TWIN CITIES

Engineering and Construction Division
Physical Planning Office
26 Folwell Hall
Minneapolis, Minnesota 55455

May 19, 1976

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University of Minnesota
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Very truly yours,

A handwritten signature in cursive script that reads "David B. Kerkow".

David B. Kerkow
Assistant Supervising Engineer

DBK:IEJ

cc: Paul Kopietz
O. J. Nelson
Ken Erpelding

INTER - OFFICE MEMO



RECEIVED

JUN 3 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

DATE: May 27, 1976

TO: Tom Kyle

FROM: Jack Peek

SUBJECT: ENVIRONMENTAL ANALYSIS

I have prepared these comments in answer to questions noted on the Environmental Analysis forms. Please have this reviewed by the appropriate people and notify of any questions.

ENVIRONMENTAL ANALYSIS ATTACHMENT

SECTION II Pollution Criteria 23 & 26

SECTION IV Human Services Criteria 14

The University of Minnesota has an active resource recovery program, spearheaded by the Physical Plant Department. First emphasis is on reuse of items, where medically and economically feasible, and secondly, on reclaiming materials for use in the production of raw products. These efforts currently include reclaiming of glass, waste chemicals, and corrugated paper. Corrugated materials from the project will be collected along with corrugated materials from other parts of the campus.

Where it is not feasible to recycle because of character of the waste, difficulty in separation or lack of market in the community, other waste treatment and disposal practices will be followed.

It is the policy of the University to incinerate the bulk of solid wastes from medical care and research facilities. The more popular and economical method of solid waste disposal would be to deliver it all to a sanitary landfill, and operate only a pathological incinerator, however, it is realized that disposing of unnecessarily large amounts of material by landfill will in the long run have a greater adverse effect on the environment. Also, if the wastes were deposited directly in a landfill, the heat capacity of the wastes used to aid in the destruction of animal carcasses, would be lost. Presently, hot gases from the primary chamber of the incinerator pass over the animal hearth, the heat being used to incinerate the carcasses.

The present incinerator does not incorporate heat recovery. However, the University is currently involved in the planning of a community thermal processing and heat recovery plant. This project, which is being coordinated by the Hennepin County Department of Public Works, is in the design stage. The University and other area institutions with medical care facility wastes are actively involved in the planning of this project to assure that adequate facilities are provided for handling the special wastes from medical care and research facilities. This will include all wastes from the University Health Sciences Complex. Eventually a portion of the steam used to heat University buildings will be supplied by the thermal energy recovery plant.

The present University incineration plant consists of two nominally rated 50 ton per day movable grate incinerators. The incinerators are equipped with over-fire and under-fire air,

primary and secondary combustion chambers, and temperature sensors located in the secondary combustion chamber. A smoke indicator is located at the top of the 200 ft. stack. Presently, one of the two incinerators is operated six hours per day, five days per week, alternating units to allow for cool-down and clean-out of the unit. The incinerators are currently receiving 18 cubic yards per day from the Health Sciences Complex and 20 cubic yards per day of waste from campus buildings. Some of the solid waste from other campus buildings is now going directly to the transfer station, and from the transfer station to a Minnesota Pollution Control Agency licensed sanitary landfill.

There is a sufficient capacity for burning all animal carcasses during the period of time the incinerator is in operation. Since there will be no increase in capacity of animal quarters in the Health Sciences Complex resulting from this construction, there will be no change in the need for burning capacity of animal carcasses. If the present schedule of burning is maintained, shifting from burning of general campus waste to burning of medical facility waste will be helpful for the destruction of animal carcasses because medical/research facility wastes have a higher heat (BTU) content.

Wastes that are considered infectious or physically hazardous are separately collected in appropriately marked containers.

The University of Minnesota has a policy of preventing discharge of flammable and toxic waste to the sewers, including radioactive waste. A convenient service is provided within the Health Sciences Complex for routine collection of these wastes. The purpose of this collection system is to minimize impact on the water environment by preventing discharge directly to the sanitary sewer system.

Solvents and toxic wastes are disposed of using the best technology presently available. The procedures for collection, storage, transport, and disposal are critically reviewed on a frequent basis because of recent changes in procedures for management at the national, state, and local levels. For example, at the local level the University's Department of Environmental Health and Safety and Physical Plant have been actively involved with the development of a recent report on "Hazardous Waste Generation, Twin Cities Metropolitan Area" which was prepared for the Metropolitan Inter-County Council for Minnesota Pollution Control Agency. The University provided input for the study, both in terms of the University's experience with the problem of hazardous waste management, and to assure that community systems be developed to accommodate the types of wastes generated at academic institutions, research facilities, and health care facilities throughout the Twin Cities Metropolitan Area.

Waste chemicals are placed in special vessels provided by the Department of Environmental Health and Safety (DEHS) for holding until pick-up. Waste chemicals are collected by DEHS and stored in specially designed rooms within the Health Sciences Complex (rooms designed with special ventilation, waste holding tanks to prevent discharge or spills to sewer, and fire-proof construction) before being removed from the building for transport to the site of ultimate disposal. Waste solvents and chemicals (where feasible) will be disposed of in a Minnesota Pollution Control Agency licensed incinerator operated by Pollution Controls, Incorporated. Some of the waste chemicals and shock sensitive materials (after being detonated) are buried at a carefully monitored burial site at the University's Rosemount Research Center at Rosemount, Minnesota. Seven wells and several section lysimeters have been installed at the site to routinely monitor ground water quality. To date, there has been no indication of contamination of ground water (water table at approximately 60 feet) resulting from the analysis of water samples taken from water table wells. Future plans for management of toxic wastes to further minimize the impact on the soil environment, include storage and reprocessing of chemicals for recycling either within the University or a larger community system. Materials from this new facility will enter this recycling system.

Radioactive waste is collected by Department of Physical Plant Maintenance and Operations under the supervision of the Radiation Protection Program, DEHS, to provide assistance and to insure uniformity in the safe handling and disposal of potentially hazardous radioactive materials. Special metal containers which are painted yellow and are appropriately marked with the universal three-bladed radiation caution symbol, are provided for persons who have been approved by the University to possess and use radioactive materials.

Radioactive waste containers are stored as close to the work area as possible to allow for convenient disposal of radioactive waste, and to minimize the possibility for spillage in transfer of waste to the containers. These containers must be stored in the laboratory and never in halls, corridors, stairwells, or other uncontrolled areas.

Upon notification to the health physicist, waste is collected as soon as possible for temporary storage and ultimate disposal by an Atomic Energy Commission (AEC) approved contractor. Radioactive wastes are frequently removed from the University Health Sciences area to a temporary storage facility in an isolated area at the University of Minnesota Rosemount Research Center. This facility is a brick building, 36 feet long by 19 feet wide, by 50 feet high, protected by a cyclone fence, and posted in accordance with Title 10, Part 21, Section 20.203 of the Federal Regulations. All procedures for storage, transport and disposal of radioactive waste are reviewed and monitored by the Department of Environmental Health and Safety health physicists.

Some radioactive waste enters the environment through normal washing procedures and from incineration of low level radioactive materials. In terms of impact on the environment from the release of radioactive waste, the Health Sciences Complex presently uses a fraction of a percent of available dillution capacity in sewage based on discharge limits established by the Atomic Energy Commission. The air-borne release from the University incinerator is between 10% and 20% of the Maximum Permissible Concentration for Air, using the conservative assumption that all radioactive material incinerated goes out with the stack effluent. The ash from the University incinerator contains between 20% and 80% of the Maximum Permissible Concentration for Water, using the conservative assumption that all radioactive material incinerated remains in the ash. The ash is buried at a Minnesota Pollution Control Agency licensed sanitary landfill in compliance with Atomic Energy Commission Regulations for Burial of Solid Radioactive Waste. The University Health Physicists carefully monitor for change in quantities of radioactive waste, to determine that concentrations of radioisotopes are not allowed to exceed the level as specified by "AEC Regulations for Control of Radiation Exposure to Individuals in the General Public."

The other possible impact of the discharge of radioactive materials would be by air exhausted from radioisotope hoods. University policy is to separate air intakes from air exhausts by a distance of 100 feet. In radioisotope laboratories there is also a policy to provide for filtration of air from radioisotope hoods where necessary, and disposal of filters in accordance with radioactive waste disposal procedures.

APPENDIX II
 ENVIRONMENTAL ANALYSIS
 INVENTORY OF ENVIRONMENTAL IMPACTS
 PROPOSED CONSTRUCTION GRANT FOR
Masonic Cancer Center
 vs. DHEW INITIAL CRITERIA

I. USE OF NATURAL RESOURCES

This set of criteria is concerned with the use and accessibility of non-renewable natural resources such as land, minerals, and fuels. The criteria is also concerned with flow resources (water and air) which are constantly renewed but in which short-term or local shortages might occur.

CRITERIA

IMPACT
 YES NO

DESCRIPTION OF ENVIRONMENTAL IMPACT

(1) Requires a change in the traditional use of the land parcel (by rezoning, etc.)?

Present Zoning: R-6, see attached letter
 Present Use of Site: Side yards and street
 Proposed Zoning: R-6

(2) Causes a change in the use of other land by related development of stores, roads or site changes?

	YES	NO
Project will generate new stores?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Project will cause new roads?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Project will cause new parking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

YES NO

(3) Requires the use of the land for purposes which are unsuitable to its physical characteristics?

Soil borings ~~have~~/have not been completed. Proposed facility will/will not have foundations similar to other facilities in the area. The facility is/is not in a flood plain.

(4) Includes the use of wetlands (swamps, marches, etc.)?

(5) Blocks access to known mineral deposits?

(Sand, gravel, clay, stone or other common building materials aren't considered mineral deposits.)

(6) Causes more than a 1% increase in fuel or mineral consumed annually within the state?

Estimated annual fuel requirements: Not determined at this time

_____ gallons of fuel
 _____ cubic feet of natural gas
 _____ tons of coal
 _____ KWIRS of electricity

Expected source of these fuels:

(7) Causes an identifiable decrease in the volume of water in a lake, river, water table, reservoir, etc.?

If yes, describe.

YES NO

(8) Causes a change in the traditional use of a body of water?

If yes, describe

(9) Will be in compliance with local and state land use planning?

II. POLLUTION

This set of criteria is concerned with the processes which generate pollution. These include the introduction of pollutants into the environment, changes in the flow of energy through the environment, and changes in the composition of environments through the augmentation or deletion of substances which are naturally present. The criteria are also directly concerned with the production and one-time use of materials and the proper disposal of wastes.

CRITERIA

IMPACT

DESCRIPTION OF ENVIRONMENTAL IMPACT

YES NO

(1) Creates an identifiable increase in ambient air pollution levels from a new emission source?
From increased use of existing sources?

* Annual emissions (to be calculated by NCI Staff)

Particulates = tons/year
Sulfur Oxides = tons/year
Carbon Monoxides = tons/year
Hydro-carbons = tons/year
Aldehydes = tons/year

- | | YES | NO | |
|--|--------------------------|-------------------------------------|---|
| (2) Creates an identifiable increase in ambient air pollution levels through a major increase in the number of or use of automobiles, trucks, etc. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Number of new employees? 47 |
| (3) Will exhausts from fume hoods exceed City or State Health Standards? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (4) Involves dredging or swamp drainage? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (5) Involves the construction of a waste treatment plant? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe capacity and location. |
| (6) Involves the discharge of untreated human waste directly into a lake, river, etc.? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (7) Involves the discharge of laboratory wastes or biohazard wastes directly into a lake, river, etc.? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (8) Overloads an existing waste treatment plant due to new loads (volume, chemicals, toxicity, etc.)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Please obtain a connection permit or other approval from local sewer authority. |

- | | YES | NO | |
|--|--------------------------|-------------------------------------|--|
| (9) Causes soil erosion (after completion of construction phase)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (10) Allows seepage of contaminants into the water table? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (11) Allows foreign substances (such as salt) to leach into the soil? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (12) Increases the stress placed upon an identified earthquake fault? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, please include a statement from a structural engineer. |
| (13) Decreases the percolation on over one acre of land? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (14) Causes storm water runoff onto land owned by others? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (15) Creates an identifiable change in aquatic life by discharge of hot water? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (16) Creates noises considered offensive to a human population? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Facility will /will not emit noises in excess of local noise standards. |

- | | YES | NO | |
|--|--------------------------|-------------------------------------|---|
| (17) Creates sounds which cause changes in behavior patterns of animals? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Is facility near wildlife sanctuary? No.
Are outdoor animal facilities included? N/A |
| (18) Introduces major new unshielded radiation sources? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Facility <u>will/will not</u> contain x-ray machines.
Facility <u>will/will not</u> meet AEC Standards.
(Explain) All areas in which radiation is produced shall be protected in accordance with the standards of the National Council on Radiation Protection and Measurement. |
| (19) Causes shock waves and/or vibration (after construction phase)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (20) Changes the direction and velocity of wind so as to affect the local population (i.e., high-rise building)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (21) Causes a new, large volume of production of non-recycled items? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (22) Involves the non-recycling of recyclable items such as laboratory glassware, animal cages and office paper? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe.
If no, project includes:
<u> X </u> glassware washing machines, and
<u> </u> cage washing machines. |

- | | YES | NO | |
|---|-------------------------------------|-------------------------------------|---|
| (23) Generates solid wastes which cannot be properly disposed of by existing facilities? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe.
If no, describe proposed methods and disposal sites. See attachment. |
| (24) Disposes of solid wastes in polluting landfills, wells, caves, etc.? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (25) Requires storage of wastes pending technology for safe disposal? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (26) Waste handling, transportation, or disposal methods are in compliance with federal, state or local requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Describe proposed methods.
See attachment. |

III. POPULATIONS

This section of the initial criteria addresses changes in human, animal, and plant populations.

* NOTE: In this part of the criteria, the effected area is defined as being greater than 160 acres in size.

CRITERIA

IMPACT
YES NO

DESCRIPTION OF ENVIRONMENTAL IMPACT

- (1) Will bring about a 5% change in the density of the local population?

YES NO

Estimated local population: 2,000,000
Number of new employees: 47

- | | YES | NO | |
|---|-------------------------------------|-------------------------------------|---|
| (2) Will population shifts cause transportation, health, education and/or welfare service to be altered? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (3) Will cause a change to social service needs due to a change in population's age pattern (new schools, etc.)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (4) Will bring about a 5% change to the transient population? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. (Include estimated number of visitors, patients, and students). |
| (5) Will involve genetic engineering directed at the human population? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (6) Is in compliance with local, state or federal standards pertaining to population densities or conservation of plants and animals? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | If no, describe.
Also, describe any approvals needed or already obtained. |

IV. HUMAN SERVICES

As society has evolved, traditional self-sufficient human communities have given way to dense populations which are dependent upon the development and application of technology. Man's highly complex, technological environments are maintained by a variety of services, ranging from the provision of the basic necessities of food and water to a complex system of economic exchange. Those services are largely interdependent and form a web almost as complex as that of nature.

* NOTE: In this section, the human environment being impacted upon is defined as less than 160 acres in size.

<u>CRITERIA</u>	<u>IMPACT</u>		<u>DESCRIPTION OF ENVIRONMENTAL IMPACT</u>
	YES	NO	
(1) Disrupts the food supply for 48 hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, explain.
(2) Disrupts the water supply for over 48 hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, explain.
(3) Disrupts the electrical power for 48 hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, explain.
(4) Disrupts the heating supply (natural gas, heating oil) for over 48 hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, explain.

- | | YES | NO | |
|---|--------------------------|-------------------------------------|--|
| (5) Deprives the population of housing for over 48 hours? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (6) Disrupts the removal of sewage for more than 12 hours? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (7) Disrupts the removal of solid waste (trash) for more than seven (7) days? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (8) Renders the existing health services inadequate to respond in case of a disaster? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (9) Disrupts the telephone, telegraph, radio or mail service for over two (2) weeks? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (10) Deprives the population of transit service for more than two (2) weeks? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (11) Uses more than 5% of remaining electrical capacity? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Estimated daily usage is _____ KWHRS. Please obtain an approval letter from local utility or plant engineer. |

- | | YES | NO | |
|--|--------------------------|-------------------------------------|---|
| (12) Uses more than 5% of remaining water? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Estimated daily usage is _____ gallons. Please obtain an approval letter from local utility or plant engineer. |
| (13) Uses more than 5% of the available capacity of the sewage treatment system (branch lines, mains, plants)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Estimated daily flow is _____ gallons. Please obtain approval letter from local authority. |
| (14) Uses more than 5% of the available capacity of trash disposal system (collection, incinerator plant, landfill)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Also, clearly explain proposed handling and disposal of chemical wastes, biohazardous wastes, syringes and other special wastes.

See attachment. |
| (15) Uses more than 5% of the available heating fuel (gas, coal or heating oil)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | (Annual quantities are already described). Explain which of these fuels, if any, are in short supply. System can use any common fuel. |
| (16) Creates a 5% decrease in the food delivery system by removal of retail food stores, etc.? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (17) Creates a 5% decrease in the area's domestic housing by demolition, closing, etc.? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain.

Will <u>any</u> housing be demolished, closed, etc.? No. |

- | | YES | NO | |
|---|--------------------------|-------------------------------------|---|
| (18) Reduces accessibility to the area's routine health services by altering point of service delivery? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (19) Increases the patient load of the area's routine health care services by more than 5%? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (20) Changes the availability of social services by opening or closing facilities? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (21) Increases the number of social services recipients by more than 5% (by unemployment)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (22) Creates a change of more than 5% in the use of existing transit systems (bus, train, etc.)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. (Relate to extent of new employment). |
| (23) Closes existing bus stops or train stations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. |
| (24) Increase the annual volume of telephone, telegraph, or mail by more than 5%? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, explain. (Relate to new employment or change in location of employees). |

- | | YES | NO | |
|---|--------------------------|-------------------------------------|-------------------|
| (25) Dissolves sources of employment for 10% of the population? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |
| (26) Changes school enrollment by more than 5%? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | If yes, describe. |

V. HUMAN VALUES

The fifth set of criteria is directed towards human values concerning the quality of the environment which are generally agreed upon to the extent that they are stated in statutes, standards or regulations.

<u>CRITERIA</u>	<u>IMPACT</u>		<u>DESCRIPTION OF ENVIRONMENTAL IMPACT</u>
	YES	NO	
(1) Historic Places: Affects any historical, architectural, or archeological cultural property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(1) Historical Preservation: Obtain clearance letter from State Office. Attached. (2) Architectural, Archeological and Cultural: Obtain clearance from local government or local society. Attached.
(2) Endangered Species: Affects any endangered species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, describe.
(3) Visual, Odors, Noise: Would violate local, state or Federal standards on these items?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, describe.

Saturday
10-12-76 - Unit 'D'

A) must diminish scope of project
from approx 13,000,000 to 8,000,000 or
9,000,000 - TAL goes way
over on their design efforts -

B) Some things must be eliminated.
or reduced in size †

cut Lounges

cut size of gown rooms

cut conference room sizes

Library may be luxury

Very dissatisfied with Arch. Design.
to much square foot.

Attempts will be made to only
design for two levels below grade -

thus diminishing the underpinning
of Trill & Masonic.

all
→

John Scott - 2 levels - 8 million
eliminate ramp to B/C

please come in about 2 weeks - to re-design

TAC

Unit D - Feasibility Study

THE ARCHITECTS COLLABORATIVE INC.

JEAN B. FLETCHER
1945 1965
WALTER GROPIUS
1945 1969
NORMAN FLETCHER
JOHN C. HARKNESS
SARAH P. HARKNESS
LOUIS A. McMILLEN

RICHARD BROOKER
ALEX CVIJANOVIĆ
HERBERT GALLAGHER
WILLIAM J. GEDDIS
ROLAND KLUVER
PETER W. MORTON
H. MORSE PAYNE
ERNEST L. BIRDSALL
TREASURER

ROBERT F. CRANE
HOWARD ELKUS
ALLISON GOODWIN
BASIL HASSAN
JOHN HAYES
JOSEPH HOSKINS
LEONARD NOTKIN
RICHARD SABIN
DAVID SHEFFIELD

QAZI B. AHMED
ROBERT BARNES
KENDALL P. BATES
SERGIO BERIZZI
SERGE CVIJANOVIĆ
ROYSTON DALEY
ROBERT DEWOLFE
GREGORY DOWNES
GAIL FLYNN
THOMAS LARSON
RALPH MONTGOMERY
PERRY NEUBAUER
MICHAEL PRODANOU
RICHARD PUFFER
WALTER ROSENFELD
JOHN J. SCOTT
EDMUND SUMMERSBY
KENNETH TAYLOR
MALCOLM TICKNOR
ROBERT TURNER
ROBERT WILSON
LAURENCE ZUELKE

18 June 1976

Mr. Paul Maupin
Health Sciences Planning Coordinator
Health Sciences Planning Office
University of Minnesota
4104 Powell Hall
Minneapolis, MN 55455

Re: University of Minnesota
Unit D
TAC Job No. 76004

RECEIVED

AUG 2 1976

**UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE**

Dear Paul:

We suspended work on the above referenced feasibility study on 19 May 1976 after discussing the status of the NCI Construction Grant application with Cheri Perlmutter. Cheri advised us that the grant submission would not be made until October 1976 to facilitate a reduction in project scope to coincide with a total project cost of \$8,000,000.

At our meeting of 24 May, we transmitted to you four sets of Unit D schematic drawings for distribution to Drs. Levitt and Kennedy and Mr. Tom Jones and your office. These drawings have incorporated the changes requested in meetings held on the 12-13 of May and represent our work to 19 May 1976.

We have informed Tom Jones and Clint Hewitt of our suspension of work on this project. We will also be writing Clint in reference to our contractual agreement.

We await your direction regarding reactivation of this project and look forward to resuming our planning activities.

Very truly yours,


John Scott

JS:kvb

cc: Levitt, Kennedy, Jones, Permuter, Hewitt, HSAE

RECEIVED

JUL 26 1976

**UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE**

23 July 1976

STATUS REPORT

**Construction Grant Application
Masonic Cancer Center
University of Minnesota**

In May 1976, a decision was made to delay submission of the grant application from June 1, 1976, until October 1, 1976. This action was prompted by the development of a preliminary program for the new facility which resulted in a preliminary cost estimate of \$11.5 million. The general concern was that matching funds could not be obtained for a project of this magnitude. Therefore, it was decided that Dr. Kennedy and Dr. Levitt would determine if the program requirements could be reduced substantially, such as putting the Oncology Clinic in the Masonic Hospital basement, thus allowing the new construction to be only 2 floors rather than 3.

A scheme was developed which could utilize a 2-story structure and discussions with the Vice President's office indicated they would support a grant application of \$8 million. The basis for the \$8 million limit was the anticipated funding from the Masons of \$2 million. No funds can be expected from the University nor the University Hospitals. Based on the architect's estimates, a total project cost of \$8 million would not construct the 2-story facility needed as a minimum. Consequently, it was suggested that the \$1.5 million required for equipment be taken out of the package and applied to the construction costs. Additional donors would be sought for the \$1.5 million equipment costs.

In response to a letter from Dr. Kennedy outlining the above plan, Dr. Levitt pointed out that what was actually being suggested was a \$9.5 million project with \$3.5 million coming from private sources. Dr. Levitt suggested that, since the equipment required was totally research orientated, it would be eligible for matching funds and proposed the grant be developed for a \$9.5 million project with \$2.5 million coming from private sources.

On July 7, 1976, a meeting was held in Minneapolis to resume work on the grant proposal. John Scott, representing the architects, indicated that they could not proceed until a resolution was achieved on the question of whether or not the University would in fact support a \$9.5 million project. All parties agreed that this was the lowest acceptable cost for the project. Dr. Kennedy discussed this figure by phone with the Vice President who indicated they would support the project if Dr. Kennedy prepared an outline of the project and determined how to secure the \$2.5 million matching funds without any monies coming from the University or the University Hospitals.

Discussions were held relative to the merits of utilizing the apartment site across from the Masonic Hospital. Mr. Scott indicated that this might be acceptable to the University and that money was set aside to make this purchase. I pointed out that the purchase of the site would be an allowable cost under the grant and that this could help solve the problem of matching funds. Dr. Kennedy was to address this question in his letter to the Vice President.

The architects stressed that they could do no work until authorized by the Vice President. Dr. Kennedy indicated that JRB should proceed with developing the application as far as possible given the unresolved questions.

JRB has proceeded with their work, having developed drafts of a large portion of the text material and tables, etc. representing the technical information available. There is, however, a considerable amount of information which must be supplied by the University. A detailed list of this material is being prepared and will be circulated upon completion.

J. H. P.
Jack H. Peek
Director Architectural Planning