

file

UNIVERSITY OF MINNESOTA University Hospitals
TWIN CITIES Minneapolis, Minnesota 55455

December 18, 1974

TO: Paul Maupin

FROM: Greg Kujawa

SUBJECT: Radiology Facility in B/C

Action recap of meeting on 12/17 of Tom Stone, Daryl Reynolds, Howard Beam, Bob Swanson and Greg Kujawa

A. Request that the following information be forwarded to the architect for action and response to me:

- 1) Room Cl-225 (toilet) should have an additional door to corridor Cl-89. (Similar to Cl-223).
- 2) Sufficient floor bracing should be planned for the following rooms:
 - a) Cl-219, Film Filing
*200 pounds per square foot
 - b) Cl-222 and Cl-226
*X582 (radiographic table) weighs 2800 pounds.
*X577 (transformer) area will have to support 2000 pounds.
- 3) The ceiling height in Cl-222 and Cl-226 should accommodate 10 foot X-ray unit height.
- 4) Cl-215 (Employee Lounge) is planned to become a X-ray room in the future. Are the walls of this room currently scheduled to be lead-lined? This would greatly facilitate future remodeling of the room for its eventual intended function.

B. Utilization and room layout of Bl-104 (Urology) and Bl-105 (Urology support) must be further reviewed by Radiology and Urology. A meeting will be scheduled in the near future for this discussion.

C. Equipment lists will be reviewed with Radiology on January 10, 1975, 9:00 a.m., Room 4112 Powell Hall.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

January 21, 1975

TO: Paul Maupin
FROM: Robert Swanson *RS*
SUBJECT: Building B/C
X-Ray Equipment Costs
Department

Since the first floor Radiology x-ray equipment is now considered Group II Movable Equipment, I have asked the Health Sciences Architects & Engineers to identify the estimated cost of this equipment based on its original Group I status. Mr. Duane Blanchard has met his obligation via a memorandum dated November 19, 1974 (Unit B/C Cost & Design Review). Enclosed is a copy of page 2 of the above memorandum; please note item #7.

a. HJSA: X-Ray Equipment	\$200,000	<i>= Total = 245,000</i>
b. CPMI: X-Ray Equipment	\$290,000	

RMS:rm

- ✓6. The method of specifying Environmental Rooms was discussed. No conclusions were reached.
- ⑦ The Planning Office indicated that it is their intention to have the X-Ray Equipment omitted as Group I Equipment and therefore not included in the project contract documents. Paul Maupin indicated that if the X-Ray Equipment is omitted, some Architect fee adjustment will be required to account for the construction value of this equipment omitted from the contract. Paul Maupin requested that TAC/HSAE identify the estimated cost of this equipment. Our review of the cost estimates indicates the following:

a. HJSA - X-Ray Equipment	\$200,000
b. CPMI - X-Ray Equipment	\$290,988

- ✓8. Mechanical Subsystem C, Central Cooling, was discussed with the following recommendation:
 - a. Provide in contract as listed.
 - b. Provide deduct alternate omitting one chiller, cooling tower cell, and associated pumps and equipment.
- ✓9. Fire hose cabinets are not required since the building will be sprinklered.
- ✓10. Mechanical Subsystem H, Plumbing Systems, was discussed with all items accepted except the central drinking water chiller provision. The meeting group recommended that this provision be omitted and that individual electric drinking fountains be provided.

✓B. Section II - Construction Cost Estimate

The cost estimates prepared by HJSA and IMPACT (Formerly CPMI) were reviewed and explained as required. We cautioned that individual line items are not always comparable since the two consultants vary in their methods of accounting for subsystems.

The IMPACT COST MODEL ADJUSTMENT (DEDUCT) factor in effect reduces in varying amounts the line item subsystem costs.

It is TAC/HSAE understanding that the Total Estimated Cost given by each Cost Consultant is based upon the same project scope and these two figures are therefore comparable.

C. Section III - Potential Cost Variation

This section of the report was reviewed and the following comments were made.

- ✓1. The 1971 expansion provisions should remain per the B/C Outline Specification.
- ✓2. It remains the University's intent to comply with all current applicable Codes including all changes made since 1971.
- ✓3. Reductions in quantity and quality will occur later in the project development as more accurate and complete data is available.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

January 6, 1975

Mr. Duane Blanchard
Health Sciences Architects & Engineers
113 Hubbard Building
2675 University Avenue
St. Paul, Minnesota 55114

SUBJECT: Radiology Facility in Building B/C

Dear Duane:

The attached correspondence relates some logical concerns that should be incorporated in the Building B/C planning.

Sincerely,

Paul J. Maupin
Health Sciences Planning Coordinator
Health Sciences Planning Office

PJM:rm

Attachment



UNIVERSITY OF MINNESOTA
TWIN CITIES

University Hospitals
Minneapolis, Minnesota 55455

December 18, 1974

TO: Paul Maupin

FROM: Greg Kujawa

SUBJECT: Radiology Facility in B/C

Action recap of meeting on 12/17 of Tom Stone, Daryl Reynolds, Howard Beam, Bob Swanson and Greg Kujawa

A. Request that the following information be forwarded to the architect for action and response to ~~the~~:

- 1) Room C1-225 (toilet) should have an additional door to corridor C1-89. (Similar to C1-223).
- 2) Sufficient floor bracing should be planned for the following rooms:
 - a) C1-219, Film Filing
*200 pounds per square foot
 - b) C1-222 and C1-226
*X582 (radiographic table) weighs 2800 pounds.

*X577 (transformer) area will have to support 2000 pounds.
- 3) The ceiling height in C1-222 and C1-226 should accommodate 10 foot X-ray unit height.
- 4) C1-215 (Employee Lounge) is planned to become a X-ray room in the future. Are the walls of this room currently scheduled to be lead-lined? This would greatly facilitate future remodeling of the room for its eventual intended function.

B. Utilization and room layout of B1-104 (Urology) and B1-105 (Urology support) must be further reviewed by Radiology and Urology. A meeting will be scheduled in the near future for this discussion.

C. Equipment lists will be reviewed with Radiology on January 10, 1975, 9:00 a.m., Room 4112 Powell Hall.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

January 27, 1975

TO: Greg Kujawa
FROM: Robert Swanson *RS.*
SUBJECT: Department 14.3 - Radiology
Room C1-215, X-Ray Shielding

As you well know, the Department of Radiology intends to use the employee lounge C1-215 as a future Radiology Room.

Mr. Tom Stone from the Department of Radiology requested information regarding whether or not this room would be constructed with lead shielding under the Phase I Building B/C contract. I have reviewed this problem with Mr. Paul Maupin,† the Health Sciences Architects & Engineers, and both parties agree that lead shielding can only be provided under the Phase I contract only if the Hospital is willing to provide the B/C construction budget with the necessary funds to cover this cost. Would you please pass this information on to Mr. Stone as soon as possible for his reaction and suggestions.

RMS:rm

health sciences architects & engineers

THE CERNY ASSOCIATES INC.
HAMMEL GREEN & ABRAHAMSON INC.
SETTER LEACH & LINDSTROM INC.

113 HUBBARD BUILDING, 2675 UNIVERSITY AVENUE
SAINT PAUL, MINNESOTA 55114

612/646-8875

R.
RECEIVED

JUN 12 1975

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

6 June 1975

Mr. Paul J. Maupin
Health Sciences Expansion
University of Minnesota
4104 Powell Hall
Minneapolis, Minnesota

Regarding: Unit B/C - Health Sciences Expansion
Existing Linear Accelerator
Room 1004 - Radiation Therapy Department

Dear Mr. Maupin:

The purpose of this letter is to review the provisions which we are including in the Unit B/C Contract Documents for the removal of the Linear Accelerator referenced above.

Our field investigation of the Linear Accelerator indicated that it has overall dimensions of 13'-0" long x 5'-9" wide x 7'-11" high. Enclosed is a diagrammatic sketch of this machine. We understand that most new accelerators can be brought through a 4'-0" wide opening and that special access provisions are not generally needed. The above field information was secured from Mr. Howard Larson of the Radiation Therapy Department.

It is our intent to structure the B/C tunnel connections in this area such that the existing Linear Accelerator can be removed through the existing wall knock-out panel and then moved through tunnel floor and plaza roof knock-out panels. The additional cost to accommodate these knock-out slabs and walls should be minimal.

If in the future the Linear Accelerator is removed through this series of knock-out panels we expect the cost to remove and replace them to be substantial. This cost, however, may be low in comparison to the value of the Accelerator. If the Accelerator has no value we assume it could be dismantled and removed through the doors and corridors.

Please advise if our design assumptions are not correct or should be modified.

Sincerely,

HEALTH SCIENCES ARCHITECTS & ENGINEERS

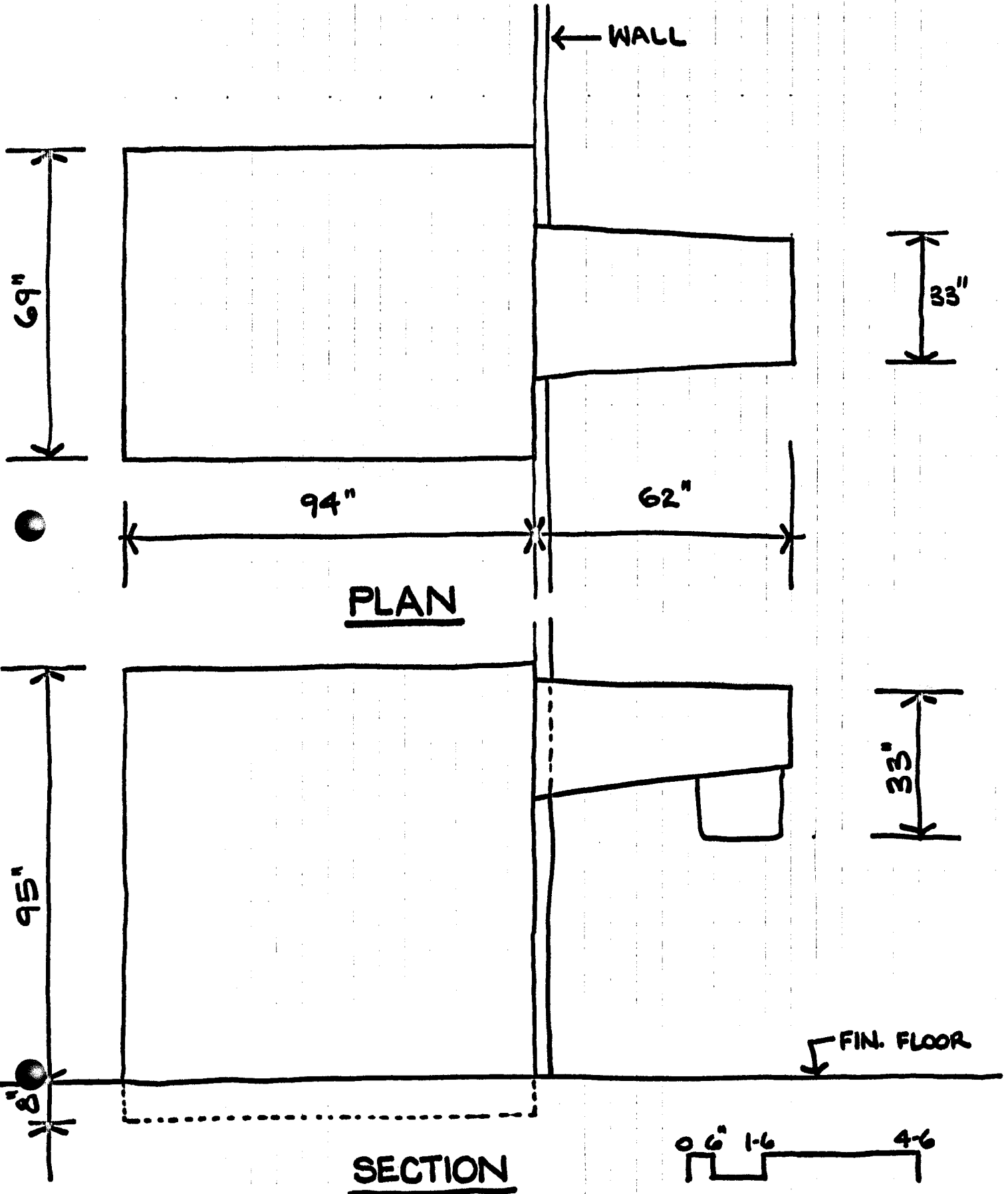
Duane E. Blanchard

Duane E. Blanchard
cc: Eugene Kogl -w/enclosure
Greg Kujawa -w/enclosure
John Scott -w/enclosure

TOSHIBA

U. OF M.

13 MEV. LINAC LINEAR ACCELERATOR



← WALL

69"

94" 62"

PLAN

33"

95"

33"

FIN. FLOOR

SECTION

0-6 1-6 4-6

12'-0" ± x 16'-0" ±

DOTTED AREA INDICATES MAX SIZE OF FUTURE ACCESS PANELS (OR KNOCK-OUT PANELS) THRU FLOOR 2 CORRIDOR ROOF AND FLOOR TO A PIT WHICH HAS A FLOOR AT THE RADIATION FLOOR LINE SHEET PILING

DOTTED LINE INDICATES AREA MAY ABOVE

MAX SIZE OF CONCRETE PAD FOR TOWER CRANE FOR USE IN THE SOUTH EAST COURT REMODELING PROJECT PAD MAY BE LEFT IN PLACE IF TOP OF PAD IS KEPT BELOW ELEV 830 WHICH IS BELOW FLOOR LINE OF FUTURE FLOOR 2 CORRIDOR TO MAINTAIN

MAX WIDTH OF FUTURE FLOOR 2 CORRIDOR TO MAINTAIN ACTUAL WIDTH TO BE REDUCED AS DETERMINED IN UNIT BC PROJECT

STAIR AND ELEVATOR ENCLOSURE UNDER UNIT K/E CONTRACT

FLOOR ELEV. 813.9
RADIATION FLOOR LINE
NOISES

NO. 6 ELEVATOR

ELEVATOR MACHINE RM.

DN.

8 A34

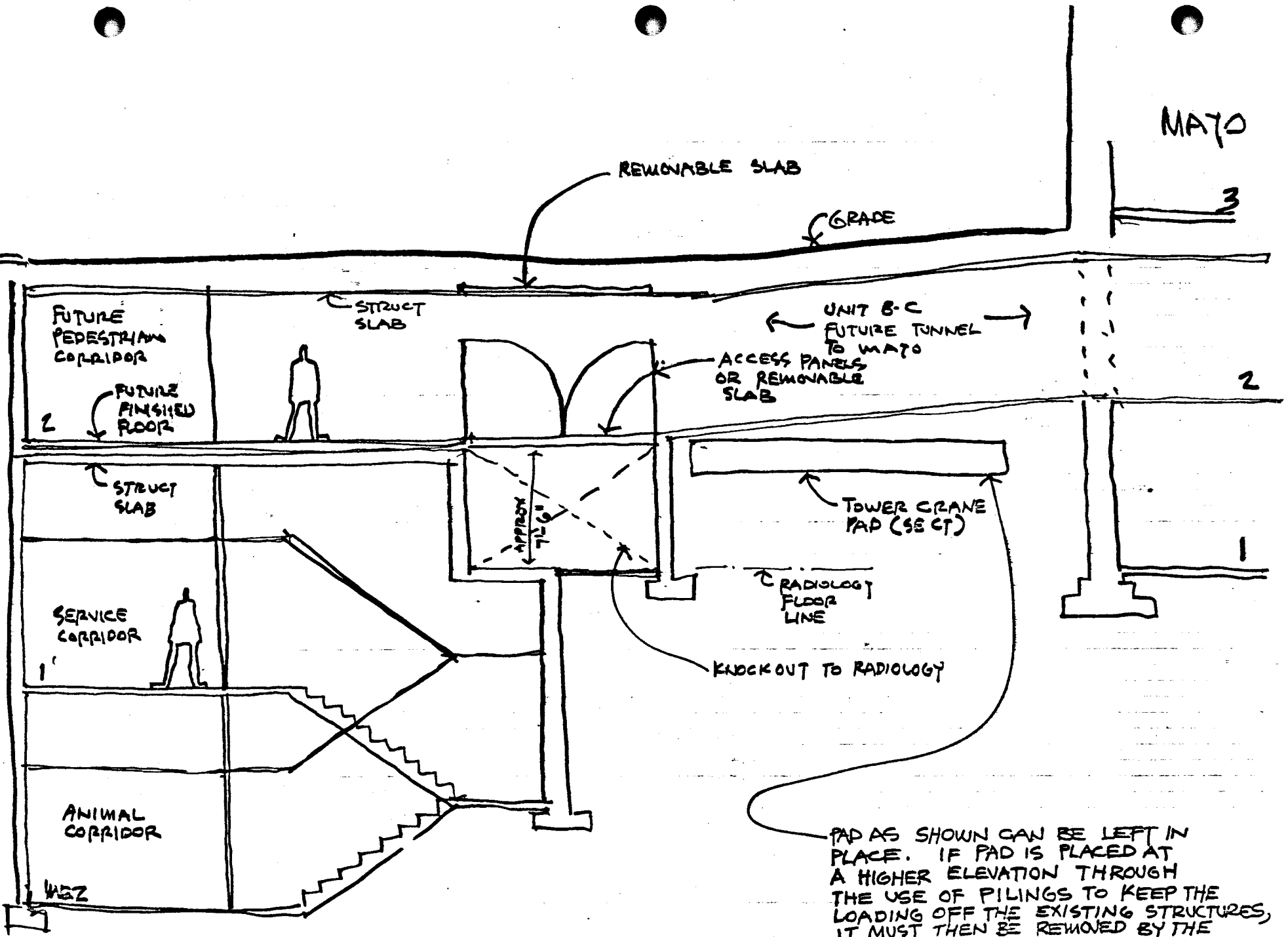
12'-0" ± WIDTH EQUALS MAX SIZE OF FUTURE KNOCK-OUT FOR USE IN REPLACEMENT OF LARGE RADIOLOGY EQUIPMENT

830
821

6 A34

RAMP DOWN

HSAS
10 MAY 72
JBC



PAD AS SHOWN CAN BE LEFT IN PLACE. IF PAD IS PLACED AT A HIGHER ELEVATION THROUGH THE USE OF PILING TO KEEP THE LOADING OFF THE EXISTING STRUCTURES, IT MUST THEN BE REMOVED BY THE SE CT CONTRACTOR.

HSAS
10 MAY 72
JBO



UNIVERSITY OF MINNESOTA
TWIN CITIES

B/C - Radiology

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 9, 1975

TO: Greg Kujawa
FROM: Robert Swanson *RS*
SUBJECT: Unit B/C - Contract Allowance
Radiology Area

Enclosed is a copy of Duane Blanchard's August 25, 1975 letter indicating the following:

1. Total cash allowance of \$45,000 set aside to complete the general, mechanical and electrical portions of the Phase I B/C contract documents.
2. The specific date at which the U of M Hospitals must have approved shop drawings to the Unit B/C contractors so that any items that may require adjustments in the structure, floor slabs or building systems can be incorporated with a minimal cost and construction time delay.

Please see that the requested information in Item #2 is forwarded to this office prior to January 31, 1976. I feel that this is more than sufficient time to accomplish this task.

If you have any further questions regarding this matter, please contact me as soon as possible.

RMS:rm

cc: Tom Stone

Enclosure

health sciences architects & engineers

THE CERNY ASSOCIATES INC.
HAMMEL GREEN & ABRAHAMSON INC.
SETTER LEACH & LINDSTROM INC.

113 HUBBARD BUILDING, 2675 UNIVERSITY AVENUE
SAINT PAUL, MINNESOTA 55114

612/646-8875

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AUG 26 1975

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

25 August 1975

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

Regarding: Unit B/C - Health Sciences Expansion
Contract Allowance - Radiology Area

Dear Mr. Maupin:

The purpose of this letter is to advise you that we have incorporated into the contract documents the following Cash Allowances related to the Radiology Area. See Specification Section 01800.

- A. General Contract - \$10,000.00
- B. Mechanical Contract - \$10,000.00
- C. Electrical Contract - \$25,000.00

These cash allowances are in accordance with University direction given to us at a meeting held at HSP0 1 May 1975 and our letter dated 16 June 1975. The intent of these allowances is to account for additional coordination and equipment costs associated with the final selection of the X-Ray Equipment to be provided by the University.

The majority of the radiology facilities are located on Floor 1 which has a 6 inch thick reinforced concrete floor slab. Your Schedule Manager (B.S.C.) has indicated an Early Start Date of 31 March 1976 and 28 April 1976 for the forming of the floor slabs associated with this equipment. These dates are taken from their schedule dated 1 July 1975. Shop drawings of the University purchased X-Ray equipment must be submitted, reviewed, and approved by the University prior to the scheduled dates to insure that the subject floor slabs are constructed correctly. The final shop drawings should be approved at least two months before the scheduled slab pourings so that Contract Modifications can be developed and issued on or before the subject date.

Page 2
Paul Maupin
25 August 1975

It is very important that the X-Ray equipment be purchased as soon as possible so that this item does not become a construction schedule constraint.

Sincerely yours,

HEALTH SCIENCES ARCHITECTS & ENGINEERS

A handwritten signature in cursive script that reads "Duane E. Blanchard". The signature is written in black ink and is positioned below the typed name.

Duane E. Blanchard
jkw

cc: Eugene Kogl
Tom Stone
Greg Kujawa
John Scott

UNIVERSITY OF MINNESOTA
TWIN CITIES

University Hospitals
Minneapolis, Minnesota 55455

RECEIVED

November 17, 1975

NOV 18 1975

Mr. Paul Maupin
Health Sciences Planning Coordinator
404 Powell Hall

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Dear Mr. Maupin:

I am writing to inform you that the University of Minnesota Hospitals has decided to delay the final bid process for radiology equipment for the BC radiology suite until early Spring 1976. The Radiology Department, in attempting to meet the established time schedule, determined that a number of significant technological advances were in the process of development and potentially available prior to BC opening. As a result, the Department requested time to investigate these development activities to assure that the equipment reflects the latest technological capability when BC opens.

The universal layouts which have previously been provided to your office adequately specify site development so that additional modifications, once the equipment brand has been determined, should be minimal and within economic reason. The Hospitals are prepared to accept the cost of future change orders, and therefore, authorize you to instruct the architects to proceed according to the universal layouts previously provided.

If you have any questions, please call.

Sincerely,

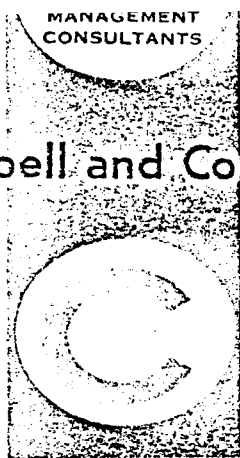


Robert J. Baker
Associate Director of Operations

RJB/bc

cc: Mr. Dickler
Mr. Jones
Dr. Gedgudas
Mr. Stone

Campbell and Company



(612) 888-4742

Unit B/C - Radiology

10800 Lyndale Avenue South ♦ Bloomington, Minnesota 55420

Minutes of the Meeting
with Radiology
Wednesday, 26 Nov 75

Attending:	P. Maupin	- H.S.P.O.
	B. Swanson	- H.S.P.O.
	C. Dahlin	- H.S.A.E.
	D. Blanchard	- H.S.A.E.
	G. Kogl	- University of Minnesota
	G. Kaujawa	- Hospital Administration
	T. Stone	- Radiology
	D. Reynolds	- Radiology
	H. Beam	- Radiology
	R. Campbell	- Campbell & Co.
	G. Hamilton	- Campbell & Co.
	T. Jones	- Hospital Administration (invited-absent)

An effort was made to note salient comments, specific quotes are not intended.

Maupin opened the meeting and introduced Kogl who expressed the interest of all to work together with construction and radiology. Meeting was then opened to questions and answers.

Kaujawa - Please explain impact of construction to radiology and how it will be affected.

Kogl - We attempted to check and see what jack hammer, headache ball, underpinning and compaction will do to your equipment. The two biggest concerns are jack hammering and/or headache ball. We are still not absolutely clear on the sensitivity of your equipment and at this point we really do not know what your problems will be.

Maupin - One other factor is a scheduling of the job and delays which may raise costs.

Kogl - If you could give us some input on the sensitivity of your equipment we could determine cost to help you and us.

Dahlin - Addendum was sent out 25 Nov 75 of restrictive works areas which extends from area _____ to area _____. We cannot work in that area during the day. Work will only be able to be from 1600 hours to 2000 hours. By doing this we have hurt the schedule and also costs. We were at a point of decision so John Scott and I felt something had to be done.

Blanchard - This is the basis we are now working.

Campbell - Have you restricted use of frost ball?

Dahlin - None whatsoever.

Kogl - Let us now have department response on the radiation factor.

Stone - If only a radiation hazard we could hang lead rubber blankets on the windows to stop the radiation.

Campbell - Then men could work on the exterior?

Stone - By use of this, they could work on the exterior and the cost for the windows would be approximately \$400 per blanket.

Campbell - Then to cover the whole wall the cost would be approximately \$2,000 to \$3,000 and it would be a very inexpensive way to keep construction moving.

Stone - We would have to be careful of not breaking a window because a sudden change in temperature would shatter the crystals on the equipment.

Blanchard - Construction scheduling should work out the best time to do this.

Campbell - It is scheduled in nice weather which should avoid possibility of possible cold shock to crystals on equipment if a window were broken.

Stone - Rooms B249 and B250 have x-ray radiation tubes. Rooms 239 and 220 are rooms most bothered by shock. Will this shock be mainly vertical?

Kogl - Shock will be coming from all directions but on slabs it will be mostly vertical. Headache hall is the best way to get demolition out of the way in the shortest possible time.

Stone - Room B239 with the x-ray tubes are very susceptible to shock and of great concern.

Kogl - During equipment usage they can have no vibrations. What would the cost be if something happened to this equipment?

~~Stone~~ - It is more time than money. It takes a long and tedious operation to realign this equipment.

Dahlin - Reynolds, what is your work schedule?

Reynolds - We work from 4:00 p.m. to 10:00 p.m.

Kogl - Is this the schedule for next summer?

Reynolds - Last year this was our busiest time.

Campbell to Dahlin - Have you restricted work in this area other than vibrations from demolition.

Dahlin - There can be no work of any type except from 1600 to 2000 hours as of right now.

Blanchard - Of course, this could be changed with the change order after the contractors aboard.

Campbell - Contractors are then going to consider demolition work and the rebuilding as a second shift.

Blanchard - This was the best way to go for now.

Maupin - Can we check cost after the bid?

Blanchard - Yes.

Kogl - Probably use jack hammers for cutting the walls to cut down vibration and then the headache ball for the rest of it.

Dahlin - Protection of existing structure will more than likely dictate the contractor going that way.

Stone - Could give you us some data on the shock by headache ball during demolition work?

Kogl - Possibly.

Blanchard - It is better to be more restrictive now than after the contract has been let. It will all go back to who is the general contractor and what he wants to do. He will probably want to do the work as fast as possible to get it out of the way.

Kogl - How long will demolition work go on for animal quarters?

Campbell - At present it is scheduled for three months, completion from top to bottom.

Blanchard - Could there be a schedule on the use of the frost ball?

Campbell - Yes we could. We should be able to give you parameters to work around in the three months period. Have we overrestricted the general contractor on a cost factor?

Dahlin - At this point we have.

Maupin - If an emergency comes in before 4 to 8, what do we do?

Kogl - In the event of an emergency we shut down but this must have some sort of procedure as there could be a back charge by the contractor.

Blanchard - The owner may shut down a job or project at any time but it costs money.

Kogl - We must establish just what is a real emergency and have it channeled through the right parties.

Dahlin - By restricting work in this area, it will benefit the surgeons and surgical at the same time.

Kogl - Again cost must be looked at and also the work schedule.

Kaujawa - This would also benefit EEG.

Kogl - We want the hospital to establish proper channels and personnel to advise of emergency shutdowns. If we allow an 8 hour shift it would cut costs and expedite the work.

Stone - What is the Saturday and Sunday schedule or could we do a full schedule then?

Campbell - Contractor may possibly consider demolition work on weekends to get things out of the way in a hurry.

Dahlin - Weekends are still restricted to work activities between the hours that are set.

Blanchard - This is something to discuss when the general contractors aboard.

Reynolds - If they would shut down on weekends, we would work Saturday to do our scheduling and work.

Campbell - Could we possibly shut down radiology for two weeks and really go at the job to complete demolition work quickly?

Kogl - More than radiology is involved.

Kaujawa - Who will furnish rubber lead blankets?

Blanchard - Radiology, then you will have them for other uses at a later date.

Blanchard to Stone - If you could give us a survey of your equipment and what is critical equipment to either Kogl or Campbell, we would have a better idea of what it was.

Kogl - We would then give the list to the general contractor to put on his insurance policy and he could possibly collect easier if there is any damage. We would like to survey very quickly so we can have it for a meeting with the general contractor after bids are let.

Maupin - It would also be advisable to have a list of the vendors, their names, address, and age of equipment.

Kaujawa - Is any other construction going to affect this area?

Campbell - This only impact would be the floor of Diehl underpinning which would be soft and small vibrations. Will have some demolition on second floor of Mayo for interface of tunnel.

Kaujawa - Is radiology satisfied with what is going to happen?

Stone - Did not know at this point.

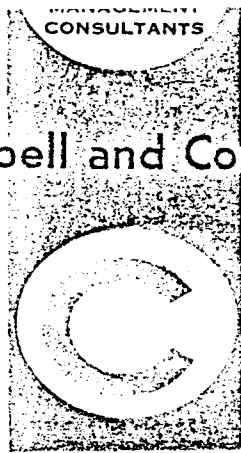
Blanchard - Until general contractors aboard we still have not resolved all points.

Campbell to Stone - It will take a lot of cooperation on Radiology's part to make this work for the best of both parties.

Kogl - It is advisable to get your list in so it can get to the general contractor's insurance company early so they may come out and look at the equipment and if they have this on their schedule to be insured they will keep an eye on the general contractor to make sure he does his work right and follow the right procedures.

Maupin - If there are no further questions, meeting is closed.

Campbell and Company



(612) 888-4742

RECEIVED

NOV 26 1975

UNIV. OF MINN.
HEALTH SCIENCE
- PLANNING OFFICE

10800 Lyndale Avenue South ♦ Bloomington, Minnesota 55420

Minutes of the Meeting
Health Sciences Unit B/C 0700
Wednesday, 19 Nov 75

Attending:	Howard Beam	- Administration Office - Radiology
	Tom Stone	- Radiology
	Darrell Reynolds	- Radiology
	Donna Wieb	- Medical Technician
	Marilyn Lande	- Director Operating Room
	Bev Dorsey	- Director Out-Patient Clinic
	Dr. Seymour Levitt	- Prof. & Head of Therapeutic Radiology
	Dr. Faiz Kahn	- Assoc. Prof. of Therapeutic Radiology
	Greg Kujawa	- Hospital Administration
	Tom Jones	- Hospital Administration
	Bob Swanson	- H.S.P.O.
	Paul Maupin	- H.S.P.O.
	Bob Dickler	- Asst. Director Health Serv. Administration
	John Scott	- T.A.C.
	Wally Petrykowski	- Hospital Maintenance
	Dick Campbell	- Campbell & Company
	Gene Hamilton	- Campbell & Company

Maupin opened the meeting introducing Campbell which at that time Campbell ran through the sequence of construction of Unit B/C and then went on to explain the difference between a headache ball and noise that comes from them versus the use of jack hammers. The meeting was then opened to questions and comments.

Wieb was wondering how far through Mayo would noise be transmitted. Campbell replied all the way through. Dr. Levitt was concerned about compressor noise up until midnight. Scott replied that this was covered in documents. Jones wondered if we could check into day work. Dr. Levitt, due to patient treatment, said no day time work. If equipment of patient is moved, it would be disasterous. Dr. Kahn wondered when the tunnel over the linear accelerator will be constructed. Campbell replied any time during the time between February 77 to August 77.

Lande asked what a headache ball would do to the calibration of equipment. Maupin answered that it may or may not bother the equipment. We will have to play it by ear on a day to day basis on the uses of the headache ball and when the equipment is in use. She then stated 7 a.m. to 2:30 p.m. the operating room would have microscopes in use continuously which Maupin felt would be no problem. Lande stated that some extraordinary circumstances come up with early short notice at most within 8 hours. Maupin then suggested that they get to him immediately and he would take care of the matter with the contractors. Dorsey is concerned about the noise level in their area. Campbell said it would be minimal due to their location.

Scott was wondering about ramp parking while work was going on in that area. Petrykowski said the parking attendant should be able to handle by directing traffic. Campbell says this will be only a 2 to 3 week period that this would be of concern.

Wieb was wondering about the vibration in the EEG lab and what type of problem this would bring up. Also, they have a computer there that cannot have vibration. Campbell replied that it would be no worse than the southeast court when that was constructed so it should be okay. Lande said that they have had problems before with the EEG due to vibrations. Campbell replied that soil conditions will dictate vibrations but will work with Maupin until we have a schedule and again look at it. Wieb replied that as long as she is informed that should take care of it.

Stone was wondering what the grade change would be due to construction. Scott doesn't know without documents. Stone was concerned about the demolition work in his area which would be one of the more critical areas. Campbell stated that he had the largest problem and that this work starts July 76 and can go for 1 to 3 months. Maupin questioned Stone if he could move out of this area for this period or can this work be done at night. Scott said no that it interferes with accelerator work. Stone also wondered if there was a flush fund to replace broken equipment due to vibrations or demolition work. Maupin informed him that there is insurance that would cover it but being able to prove it and going through court would cost more than it would cost him to replace the equipment. Stone then brought up the point that if any work done in windowwell area, workers would have to be warned of radiation. Scott will get this area and rooms in specs to warn the contractor of this problem. Stone wondered if they should move during the demolition. Maupin felt that this was necessary as we cannot hold up construction.

Maupin then asked if there were any further questions or comments. Being none, the meeting was adjourned.

RECEIVED

MAR 23 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

HSAE MEMO

MEMO TO - Unit B/C File
MEMO BY - Gary Hall
SUBJECT - X-Ray Service Voltage
DATE - 15 March 1976

Near the completion of the Unit B/C Contract Documents a concern was stated by the X-Ray Users about the voltage stability within the B/C Building. The concern was raised because of an experience within the Unit A Building during the early occupancy.

The nature of the low voltage condition in Building A was a result of the main substation transformer primary tap setting adjustments from a no load condition to a full load condition after the building was fully occupied. Tap setting adjustments were made which eliminate the low voltage condition and stabilized the voltage at the design level.

The Building A voltage stability according to the U of M Electrical Maintenance Department is currently in the 2% to 3% range which is within the limits recommended by the X-Ray manufacturers.

The Unit B/C Building load will tend to improve the voltage stability and will be within the recommended 2% to 3% as well.

jkw

cc: ✓ Robert Swanson
Greg Kujawa



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

August 9, 1976

TO: Mr. Greg Kujawa
FROM: Robert Swanson *RS*
SUBJECT: Unit B/C
Radiation Shielding Review
by Environmental Services

Enclosed please find one complete copy of Mr. Staiger's letter dated July 15, 1976, which reviews the entire radiation protection system specified for use within building B/C.

Upon completing my review of the above letter, only one question remained unanswered until the August 4, 1976, Unit B/C progress meeting. (See page 3, paragraph 1, which states "1/32" lead under x-ray table and extending two feet on all sides of the table".)

I called Mr. Staiger regarding this question to seek various solutions to the problem. It seems that providing a lead rubber mat under the table and extending it two feet beyond each side is the least expensive and time consuming way to resolve the problem. Therefore, direction was given at the August 4, 1976, Unit B/C progress meeting that the hospital shall fund and include this item on the group II equipment forms prepared for room 3-141.

RS:jam

cc: Mr. Staiger
Warren Forslund
Dick Carlson



UNIVERSITY OF MINNESOTA
TWIN CITIES

Boynton Health Service
Minneapolis, Minnesota 55455

July 15, 1976

RECEIVED

JUL 19 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Mr. Bob Swanson
Health Science Planning Office
4102 Powell Hall
East Bank Campus

Dear Bob:

I have reviewed the plans you sent for the x-ray rooms located on the first and third floors of Health Sciences Unit B-C. The following is a summary of the radiation shielding recommendations for these rooms.

1. First Floor Unit B-C rooms, Department of Diagnostic Radiology, Department of Urology. All workload and use factors for these rooms were provided by Thomas Payne, Ph.D., Department of Diagnostic Radiology. Based on our June 16 meeting, no primary beam radiation is to be directed at the walls of any of the first floor x-ray rooms. Therefore, the walls are shielded as secondary radiation barriers only. Mr. Tom Stone, Department of Diagnostic Radiology, has indicated that if any wall cassette holders are to be placed in these rooms, the supplier of the cassette holder will be required to provide a primary beam barrier as part of the cassette holder, and the x-ray unit will be automatically collimated to prevent primary beam exposure beyond the boundary of the cassette holder primary barrier. If the above conditions are not met, it will be necessary to add shielding sufficient to a total of 1/16" of lead in a 4' x 4' area centered behind the cassette holder.

- OK a. Room 1-232 (R & F Room #1, Workload = 1000 mA-min/wk). The west, south and east walls require 1/32" lead shielding to a height of seven feet, and the doors in the north and east walls require 1/32" lead shielding. The control barrier requires 1/32" lead shielding to a height of seven feet, and the window should be lead glass of the size designated in the plans. The north wall requires 1/32" lead shielding, except a portion of this wall (section along toilet, behind and in back of control barrier) requires no additional shielding. I have attached a copy of the room plan, and have crossed out in red the sections which do not require shielding.
- OK b. Room 1-235 (R & F Room #2, Workload = 1000 mA-min/wk). The south and east walls of this room require 1/32" lead shielding to a height of seven feet, and the doors in the room require 1/32" lead shielding. The control barrier requires 1/32" lead shielding, and a lead glass window of the size designated in the plans. The west and north walls of this room require 1/32" lead shielding to a height of seven feet, however, the sections of the north wall along the toilet and a portion behind the control barrier, and the section of the west wall behind the control barrier, require no additional shielding. Again, the sections which do not require shielding are crossed out in red on the attached plans.

July 15, 1976

- OK c. Room 1-243 (Chest Room, Workload = 500 mA-min/wk). The west, north and east walls require 1/32" lead shielding to a height of seven feet, and the door in the north wall requires 1/32" lead shielding. The control barrier requires 1/32" lead shielding, and a lead glass window of the size designated on the plans. The south wall requires 1/32" lead shielding to a height of seven feet, however, the section of this wall and the door located behind the control barrier, requires no shielding (as indicated in the plans).
- OK d. Room 1-242 (Tomographic - Mammographic Room, Workload = 1000 mA-min/wk). The east and north walls require 1/32" lead shielding to a height of seven feet. The west wall of the room requires 1/32" lead shielding only along the section that adjoins Room 1-244 on the north section of the west wall. The remainder of the wall does not require shielding because a 1/32" thickness of lead was specified for the opposite side of this wall in Room 1-243. The control barrier requires 1/32" lead and a lead glass window of the size designated. A portion of the south wall and the door require 1/32" lead shielding to a height of seven feet (section not requiring shielding indicated on the plans).
- ✓ e. Room 1-240 (Radiographic - Rapido Room, Workload = 100 mA-min/wk). The north and east walls require 1/32" lead to a height of seven feet. The west wall (shielding by 1/32" in east wall of 1-242) requires the addition of no shielding. The control barrier requires 1/32" lead and a lead glass window of the size designated. The interior partition (forms second south wall) requires 1/32" lead to a height of seven feet. Also, because this partition may be removed at a later date, the south wall and door require the addition of 1/32" lead to a height of seven feet.
- SOUTH WALL HAS PROTECTION - HAVE ARCH. ADD PROTECTION TO DOOR 240 ONLY
- OK f. Room 1-318 (Urology X-Ray, Workload = 600 mA-min/wk). The north, east and west (portion of this wall shielded by east wall of Room 1-242) walls, as well as the doors in these walls, require 1/32" lead shielding to a height of seven feet. The south wall requires 1/32" shielding along the portion of the wall that does not join Room 1-140. The control barrier and door will require 1/32" lead shielding and a lead glass window of the size designated.
- OK Floor and Ceiling: The floor of all rooms on the first floor of Unit B-C is 6" of concrete, which is sufficient as a primary beam barrier for all of the above rooms. Also, the 3" concrete ceiling thickness is sufficient as a secondary radiation barrier for all of these rooms.

2. Third Floor Unit B-C Room

Room 3-141 (Family Practice Radiographic X-Ray Unit, Workload = 300 mA-min/wk).

This unit will be used primarily for chest radiographs (wall cassette holder on west wall) or vertical table top radiographs and Dr. Michael Daly has indicated that the workload would be approximately 250 mA-min/wk. The north, east and south walls will require 1/32" lead shielding to a height of seven feet, and the door in the south wall will require 1/32" lead. The control barrier requires 1/32" lead, and a lead glass window of the designated side. The portion of the east wall behind the control barrier does not require the addition of shielding. The west wall will require thickness of 1/16" lead added to a

July 15, 1976

4' x 4' area centered behind the wall cassette holder. Because the wall cassette is located near the door, it may be necessary to add 1/16" lead to the door. The remainder of the west wall requires 1/32" lead under the x-ray table and extending two feet on all sides of the table because the floor is equivalent to only three inches of concrete. The three inch thickness of concrete in the ceiling is sufficient as a secondary radiation barrier.

If you have any questions concerning these shielding recommendations, please call me.

Sincerely,



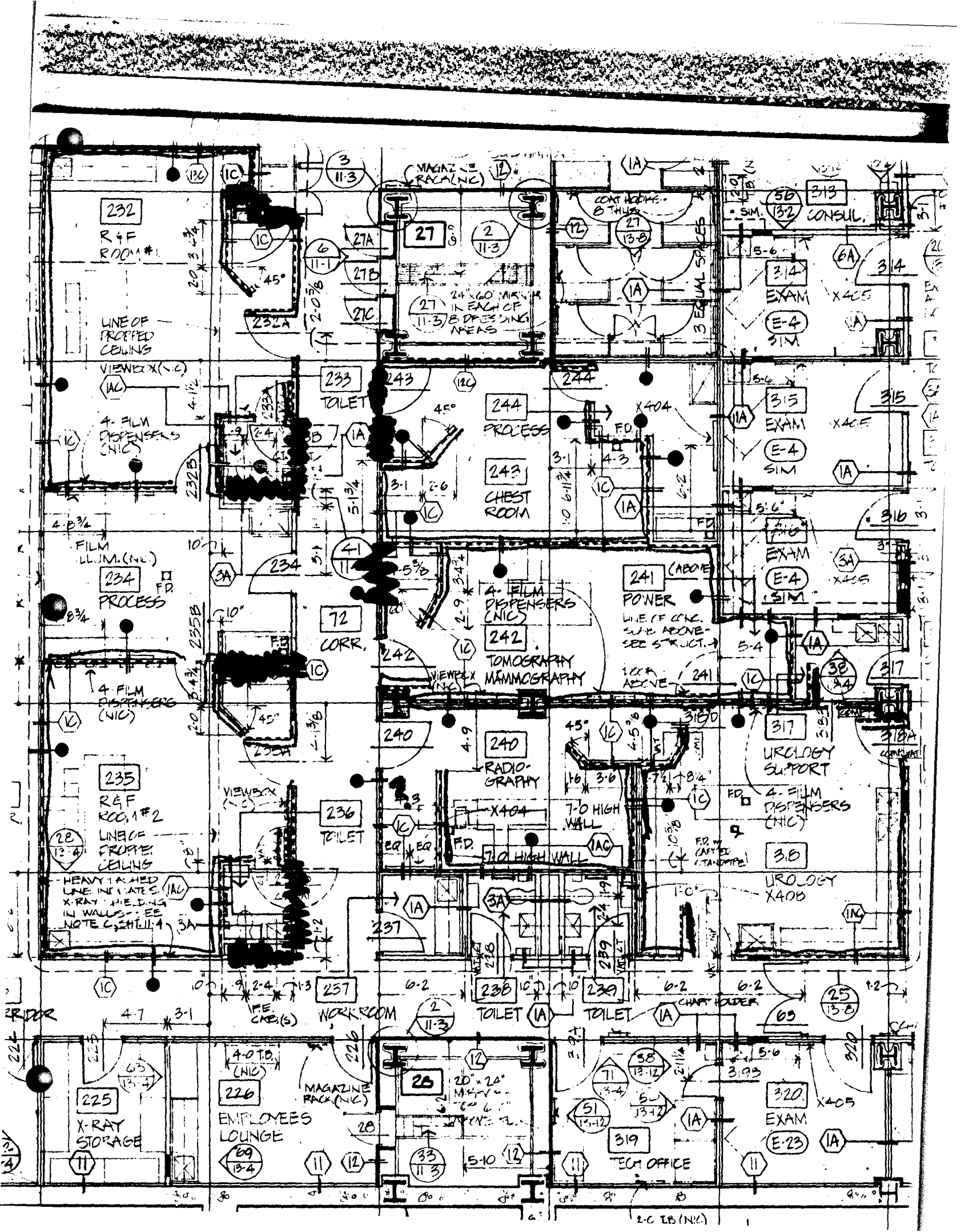
Jerome W. Staiger
Health Physicist
Department of Environmental
Health and Safety

Boynton Health Service

JWS:tg

cc: Mr. Thomas Payne

3-5937



232
R+F
ROOM #1

LINE OF
PROPPED
CEILING

VIEWBOX (NIC)

4 FILM
DISPENSERS
(NIC)

FILM
LLIM. (NIC)

PROCESS

4 FILM
DISPENSERS
(NIC)

235
REF
ROOM #2

LINE OF
PROPPED
CEILING

HEAVY HATCHED
LINE INDICATES
X-RAY HOLDING
IN WALLS - SEE
NOTE C, SHELL 4

225
X-RAY
STORAGE

226
EMPLOYEES
LOUNGE

3
11-3

27A
27B
27C

27
11-3

273A
273B
273C

27
11-3

243
TOILET

72
CORR.

234
TOILET

242
CORR.

240
CORR.

236
TOILET

237
CORR.

238
TOILET

239
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239
TOILET

MAGAZINE
RACK (NIC)

27
11-3

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11-3

27
11-3

244
PROCESS

243
CHEST
ROOM

242
TOMOGRAPHY
MAMMOGRAPHY

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2-C 18 (NIC)



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

August 11, 1976

Mr. Richard Carlson
Health Sciences Architects & Engineers
University Park Plaza - Suite 704
2829 University Avenue South East
Minneapolis, Minnesota

Subject: Unit B/C
Radiation Shielding Review
by Environmental Services

Dear Dick:

Enclosed please find one complete copy of Mr. Staiger's letter dated July 15, 1976, which reviews the entire radiation protection system specified for use within building B/C.

I have reviewed this letter against the Unit B/C contract documents and find only one item which requires a building change. (See page 2, item e, "south wall and door require the addition of 1/32" lead to a height of seven feet".)

Please provide the lead shielding protection required on door 1-240 and fund this change out of the cash allowance provided in the original construction bid for use in the Radiology department.

If you have any further questions regarding this request, please contact me at your earliest convenience.

Sincerely,

Robert M. Swanson

Robert M. Swanson
Health Sciences Planning Office

RS:jam

cc: Mr. Staiger
Tom Stone
Greg Kujawa
Linda Satorius



UNIVERSITY OF MINNESOTA
TWIN CITIES

Boynton Health Service
Minneapolis, Minnesota 55455

July 15, 1976

RECEIVED

JUL 19 1976

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Mr. Bob Swanson
Health Science Planning Office
4102 Powell Hall
East Bank Campus

Dear Bob:

I have reviewed the plans you sent for the x-ray rooms located on the first and third floors of Health Sciences Unit B-C. The following is a summary of the radiation shielding recommendations for these rooms.

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July 15, 1976

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If you have any questions concerning these shielding recommendations, please call me.

Sincerely,



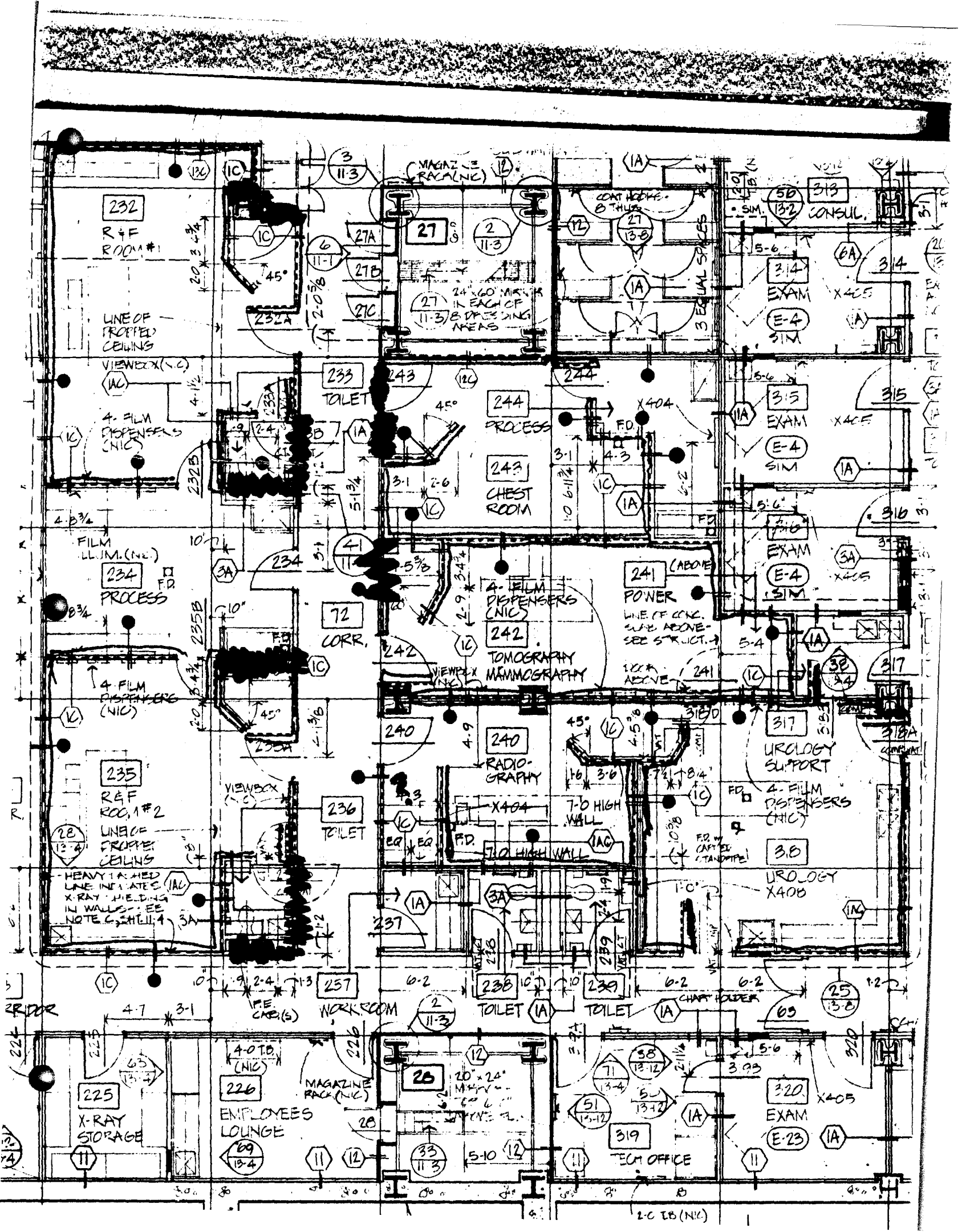
Jerome W. Staiger
Health Physicist
Department of Environmental
Health and Safety

Boynton Health Service

JWS:tg

cc: Mr. Thomas Payne

3-5937



Unit B/C - Radiology



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

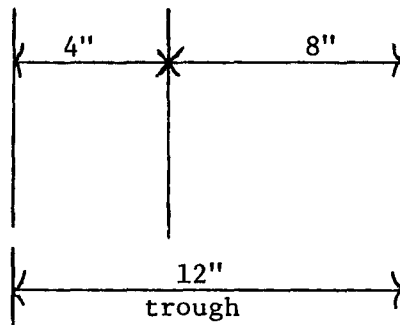
August 19, 1976

Mr. Jim Butler
Health Sciences Architects & Engineers
University Park Plaza - Suite 704
2829 University Avenue, S.E.
Minneapolis, Minnesota 55414

SUBJECT: Unit B/C
X-ray Room Details
Sheet E57

Dear Jim:

As per my discussion with Mr. Tom Stone of the Department of Radiology, the desired location for the high tension cable barrier is as follows:



Please notify the contractor of this requirement and delete the notes which relate to a barrier in the center of a trough and the 6" diameter bushed openings. Tom would rather have the bushed opening provided during the equipment installation



UNIVERSITY OF MINNESOTA
TWIN CITIES

Unit B/C - Radiology

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

August 19, 1976

Mr. Richard Carlson
Health Sciences Architects & Engineers
University Park Plaza - Suite 704
2829 University Avenue, S.E.
Minneapolis, Minnesota 55414

SUBJECT: Unit B/C
Radiation Protection
Room 3-141

Dear Dick:

Please disregard my August 9, 1976, memorandum to Mr. Greg Kujawa, which describes the use of a lead lined rubber mat as a solution to providing adequate radiation protection on the floor of room 3-141. In a recent discussion with Mr. Tom Payne, it seems that the only realistic solution to this problem is to provide a 1/32" thick layer of lead shielding over the entire floor surface of room 3-141 and should be located between the concrete floor slab and the VAT floor finish. Please prepare a cost estimate for this change which can be reviewed at the September 1, 1976 Unit B/C Progress Meeting.

If you have any further questions regarding this request, please contact me at your convenience.

Sincerely,

Robert Swanson

Robert M. Swanson, Jr.
Health Sciences Planning Office

RMS:rm

cc: Greg Kujawa
Warren Forslund
Jerry Staiger



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 9, 1976

TO: Bob Dickler

FROM: Linda Satorius

Reference: Your memo of 30 August 1976 to Paul Maupin regarding
Radiology cash allowance

The Radiology cash allowance, as specified in the contract documents, is to provide funds to make necessary modifications in the construction of the building. Federal guidelines prohibit the transfer of any construction-designated funds to movable equipment. For this reason, the credit for shelling Urology rooms 1-318 and 1-317 cannot be transferred to the Hospital's movable equipment fund, but must revert to the general contingency.

If the cost of modifying the Urology rooms to meet the Hospital's request exceeds the amount of the credit, the excess cost will be charged to the Radiology allowance.

cc: ✓ Paul Maupin
Gene Kogl



UNIVERSITY OF MINNESOTA
TWIN CITIES

University Hospitals
Minneapolis, Minnesota 55455

RECEIVED

AUG 31 1976

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

August 30, 1976

TO: Paul Maupin

FROM: Bob Dickler *RD*

SUBJECT: General Construction Allowances - Radiology area

At the present time there are allowances for modifications of the Radiology area totalling \$45,000. These allowances are reflected in the specification Section 01800 part 2.1 C, 2.2 A, 2.3 A. It is my understanding that these allowances included the Urology and Urology Support room space (Rooms 1-318, 1-317). Since these rooms are now to be shelled, I would appreciate your notifying me of the construction allowances which will not need to be utilized in light of that modification. It would be the Hospital's desire to have any residual amounts from this \$45,000 credited to the moveable equipment fund for the Hospital portion of Unit B/C.

I would appreciate your notifying me at the earliest possible date of the disposition of these funds in the exact amount they are to be credited to the Hospital equipment fund. Thank you for your cooperation.

cc: Don Van Hulzen
Greg Kujawa



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

November 10, 1976

TO: Paul Maupin

FROM: Linda Satorius *LS*

The amount of federal participation in Unit B/C equals \$30.47 per gross square foot. Greg Kujawa's figures of 11/9/76 show a possible deletion of Radiology space totalling 873 gross square feet. This figure, multiplied by \$30.47, equals \$26,600 - the amount of federal participation lost due to the deletion of Radiology space.



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 28, 1976

TO: Bob Dickler
FROM: Linda Satorius
SUBJECT: Radiology Cash Allowance

Reference: Your memo to me dated September 14, 1976

Your proposal, outlined in the referenced memo, has been approved by both Paul Maupin and Gene Kogl. The Radiology cash allowance will be transferred to the contingency fund and an equal amount of Hospital obligations will be charged to the contingency to offset the amount of the cash allowance.

It should be understood, however, that once the Radiology cash allowance has been removed from the general contract, the Hospital will be responsible for funding any future changes regarding the Radiology space.

cc: ✓ Paul Maupin
Gene Kogl
Clinton Hewitt



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 30, 1976

TO: Jim Fallon

FROM: Linda Satorius *LS*

Please prepare a Change Order to deduct the \$45,000 Radiology cash allowance from the general contract.

If you have any questions, please call me.

cc: Paul Maupin
Gene Kogl

Campbell and Company



10800 Lyndale Avenue South ♦ Bloomington, Minnesota 55420

(612) 888-4742


January 27, 1977

RECEIVED

JAN 28 1977

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

TO: O. W. Hughes

FROM: R. P. Campbell 

SUBJ: Radiology Room 1-232 and 1-235 - Unit B/C Health Sciences Expansion

In reply to your memo of 19 Jan 77, we would like to point out that the CPM schedule you were utilizing for the basis of your memo has been updated. Referring to the schedule presented to you on 26 Jan 77 with a Run Date of 26 Jan 77 and a Time Now Date of 08 Jan 77, the early start of WI 6-3810 "INTEGRATED SUSPENDED CEILING 1ST FLOOR EAST" is indicated as 19 Jan 77. Although there is 74 days of float as we have discussed previously, this is not for the individual use of any particular person; consequently, the hold should be removed as expeditiously as practical.

RPC:dak

cc: E. A. Kogl
Bob Swanson
Dick Carlson
Ken Fick
John Roettger
George Klein
Ray Anderson
John Bellair
Roger Joyce

Unit B/C - Radiology

HSAE

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC
UNIVERSITY PARK PLAZA SUITE 704 2829 UNIVERSITY AVENUE S.E. MINNEAPOLIS, MINNESOTA 55414 (612) 378-3833

RECEIVED

21 March 1977

MAR 25 1977

Mr. Eugene Kogl
Overall Construction Coordinator
Unit B/C Construction Office
611 Delaware Street S.E.
Minneapolis, Minnesota 55414

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

Regarding: Unit B/C - Health Sciences Expansion
Radiology Suite

Dear Mr. Kogl:

Pursuant to our meeting with Oliver Hughes and Wally Mellum on March 15th, we submit for your review a copy of the x-ray trough drawings provided by Premier Electric and modified as noted by Mr. Tom Stone, Wally Mellum and Gary Hall to provide for a workable x-ray trough installation.

These drawings were transmitted to Premier Electric on February 22, 1977 (see copy of transmittal attached).

The following review of the trough installations by room should clarify responsibility for the changes required. A modification should be prepared to cover cost for the changes in work determined to be the responsibility of the U of M and HSAE.

Room 1-232

Responsibility

- | | |
|---|--|
| 1. Relocate barrier to center of trough as specified by Contract Documents. Locations shown on Drawings SS76216-1 and SS76216-2. | (1) Electrical Contractor |
| 2. Provide removable covers at high voltage section of bottom trough as required by Contract Documents. Locations shown on Drawing SS76216-1. | (2) Electrical Contractor |
| 3. Rotate trough and control box 180°. Covers to be removable from control room. Adjust duct to match wall location. Refer to Drawing SS76216-1. | (3) University of Minnesota and H.S.A.E. |
| 4. Relocate Unistrut vertical supports to accommodate the correct location of the Materials Handling System pathway as indicated on Sheet M-48 and referred on Drawing Sheet No. A1-1, General Note No. 28. Coordinate this change with the Materials Handling System Contractor. | General Contractor |

Room 1-235

Responsibility

1. Relocate barrier to center of trough as specified by Contract Documents. Location shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor
2. Provide removable covers at high voltage section of bottom trough as required by Contract Documents. Location shown on Drawing SS76216-2. (2) Electrical Contractor
3. Split removable top cover. Location as shown on Drawing SS76216-1. (3) University of Minnesota and H.S.A.E.

Room 1-240

1. Relocate trough to enter Box "B". Location shown on Drawing SS76216-1. Work presently covered under preliminary Modification 122-P. (3) University of Minnesota and H.S.A.E.
2. Relocate barrier to center of trough as specified by Contract Documents. Location shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor

Room 1-242

1. Relocate trough per location shown on Contract Documents; Sheet E57. Refer to Drawing SS76216-1. (4) General Contractor,
Mechanical Contractor, &
Electrical Contractor

Installed items by the General and Mechanical Contractor, such as the Unistrut vertical supports, must be relocated to accommodate the correct location of the raceway. These potential conflicts were very specifically indicated on the Unistrut shop drawings reviewed by HSAE on 26 July 1976 and returned to Sheehy Construction Company marked "Revise and Resubmit". Since the corrections and coordination were not made at that time, the required adjustments to these items should be made at no cost to the Owner.
2. Relocate barrier to center of trough as specified by Contract Documents. Locations shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor
3. Relocate Control Box "B" per Contract Documents; Sheet E57. Refer to Drawing SS76216-1. (1) Electrical Contractor

Room 1-243

1. Relocate barrier to center of trough as specified by Contract Documents. Locations shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor

Page 3
Eugene Kogl
21 March 1977

Responsibility

2. Provide bottom access with screw cover per Drawing SS76216-1.

(3) University of Minnesota and H.S.A.E.

All Rooms

1. Cut all removable covers at horizontal trough above ceiling into 2' ± sections.

(3) University of Minnesota and H.S.A.E.

Reference Notes

- (1) Trough shipped to job and installed with barrier located with 3" and 7" high and low voltage section without approved shop drawings.
- (2) Shop drawings were not approved and does not meet Contract Document requirements.
- (3) Field conditions and/or change require revision to trough.
- (4) Required coordination among Contractors did not occur resulting in trough installation at unworkable location.

Sincerely,

HEALTH SCIENCES ARCHITECTS AND ENGINEERS, INC.

Gary A. Hall/ljg

Gary A. Hall
ljg

cc: Oliver Hughes
Wally Mellum
~~Paul Maupin~~
John Scott

Enclosures

X-RAY THROUGH HSAE

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC
UNIVERSITY PARK PLAZA SUITE 704 2829 UNIVERSITY AVENUE S.E. MINNEAPOLIS, MINNESOTA 55414 (612) 375-3833

Transmittal

To MIC JOHN BELAIR
PREMIER ELEC CONST. CORP.
MIPLS, MN.

Date 2-22-77
Project UNIT B/C HSE
Re X-RAY TROUGH

We forward:
WITH THIS FORM
UNDER SEPARATE COVER
PRINTS
SEPIAS
COPY OF LETTER

NO. COPIES	SHEET NO.	DATE	DESCRIPTION
1 SEPAR	2576216 1, 2 & 3	12-18-76	X-RAY TROUGH & DUCT

REMARKS
THE NOTES & PROPOSED REVISIONS REFLECT THE FIELD REVIEW OF TROUGH W/ U&M, PREMIER & HSAE. PLEASE REVIEW THESE DRAWINGS & INDICATE TO HSAE & U&M HOW & WHEN THE CHANGES WILL BE ACCOMPLISHED.

IF ENCLOSURE IS NOT AS LISTED ABOVE PLEASE NOTIFY US AT ONCE.

COPIES

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC.

BY

Camy A. Hae

university
of
minnesota
memo

date APRIL 5 1977

to STEVE GREEN

from Bob SWANSON

THE ATTACHED DRAWINGS INDICATE THE BACKING
REQUIREMENTS FOR ROOMS 1-232, 1-235, 1-240,
1-241, 1-242 + 1-243 LOCATED IN THE UNIT B/C
PHASE I RADIOLOGY CLINIC.

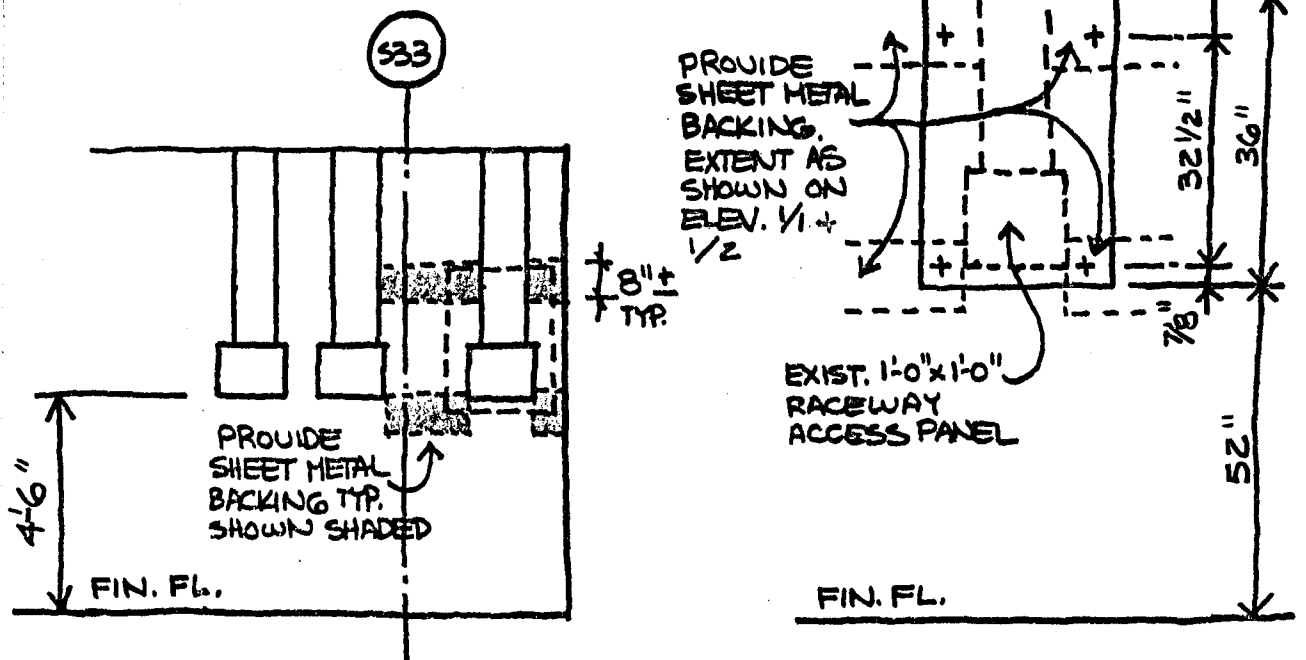
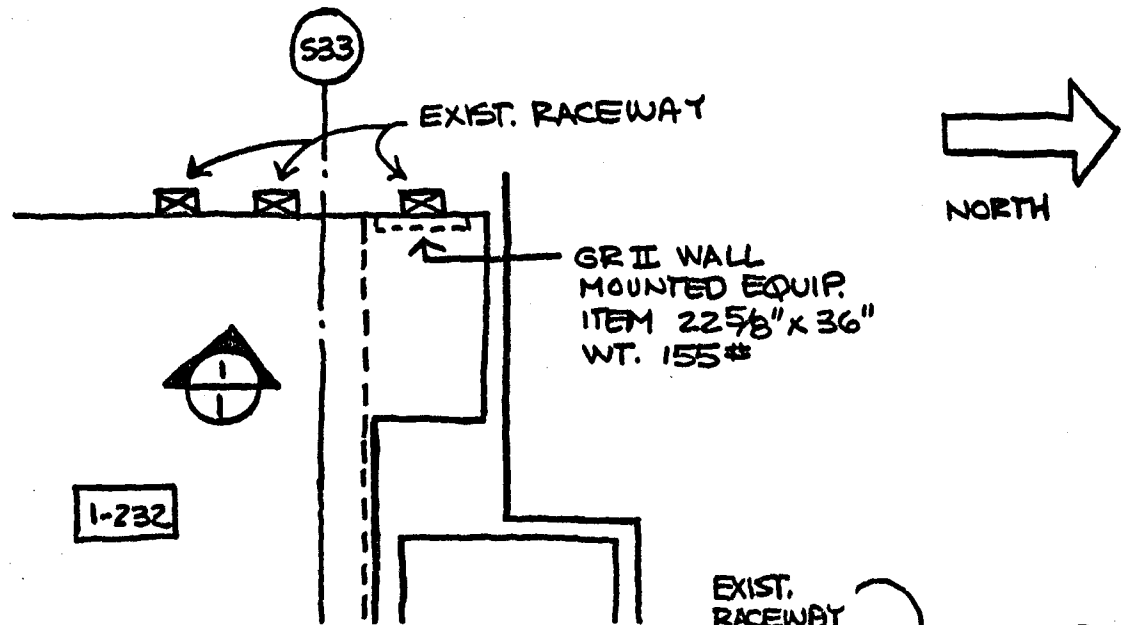
THIS INFORMATION WAS GIVEN TO ME ON FRIDAY
APRIL 1, 1977 BY THE GE + PICKER X-RAY
EQUIPMENT SUPPLIERS.

IF YOU HAVE ANY QUESTIONS REGARDING THIS
INFORMATION PLEASE CONTACT ME AT YOUR
CONVENIENCE.

BS.

CC. UNIT BK FILE ✓
WALLY MELLUM
GENE KOGL
TOM STONE

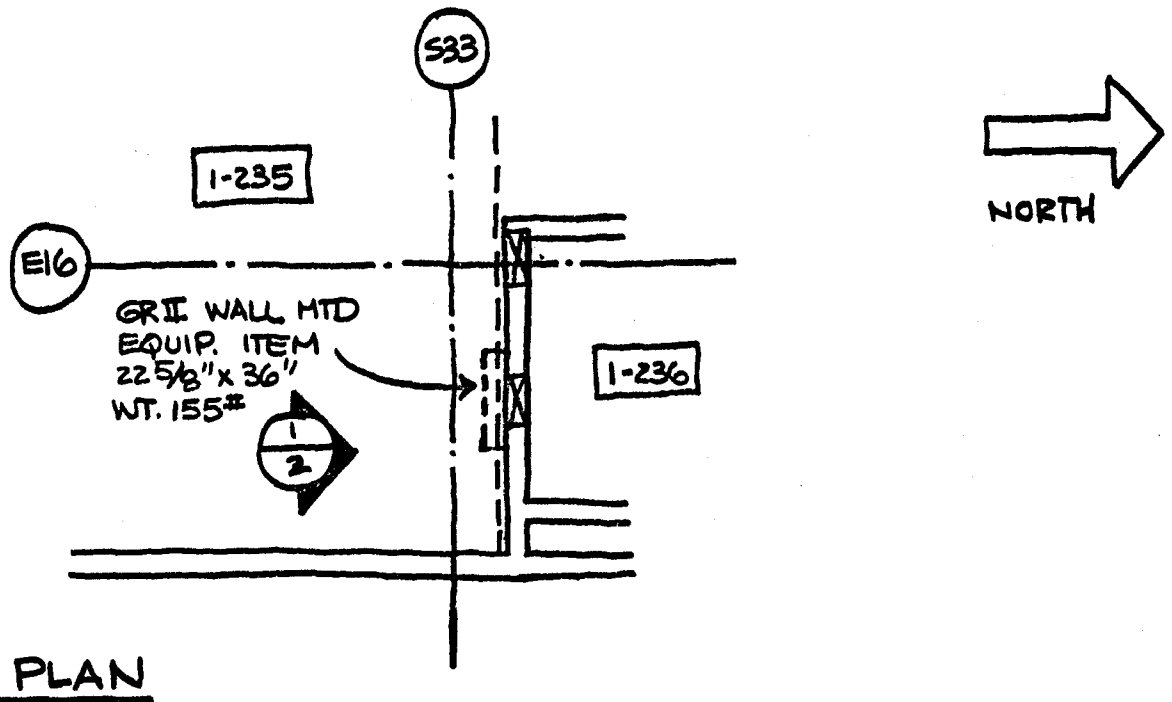
- ROOM 1-232 : R+F ROOM #1



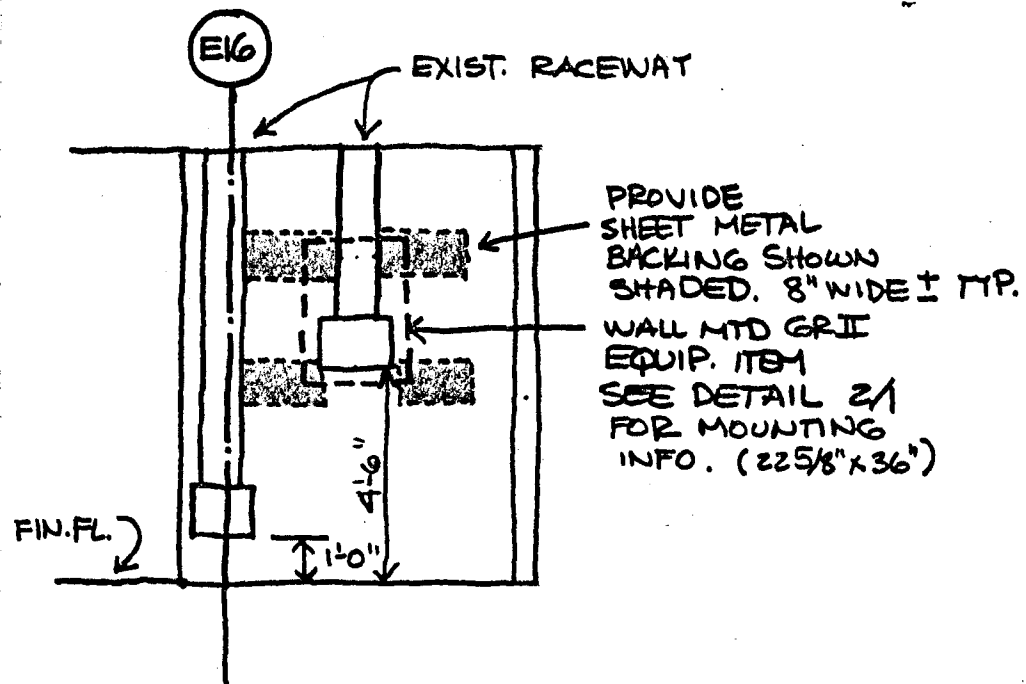
① ELEVATION
① WEST WALL

② DETAIL
①

- ROOM 1-235 : R+F ROOM #2

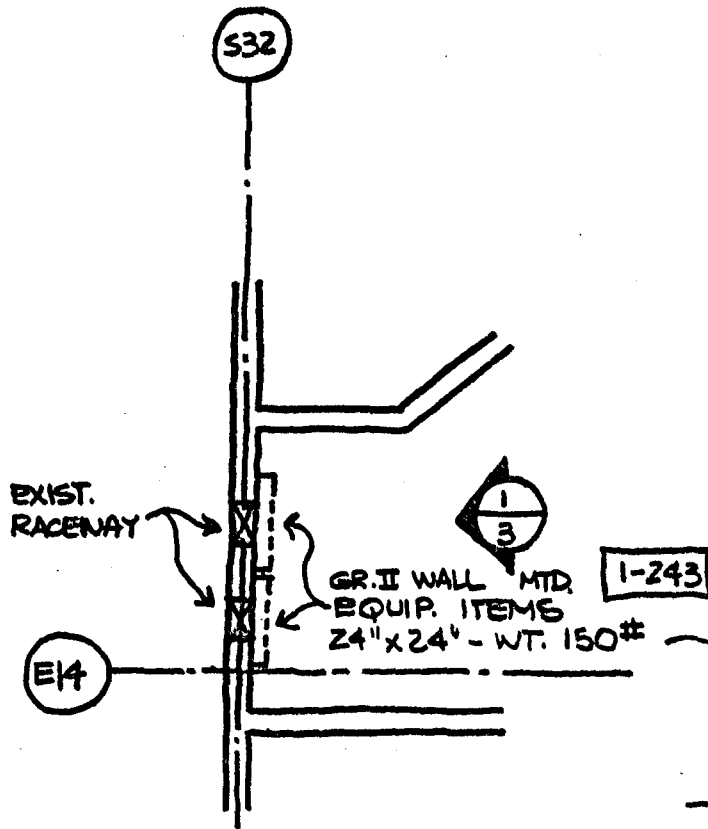
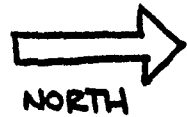


PLAN



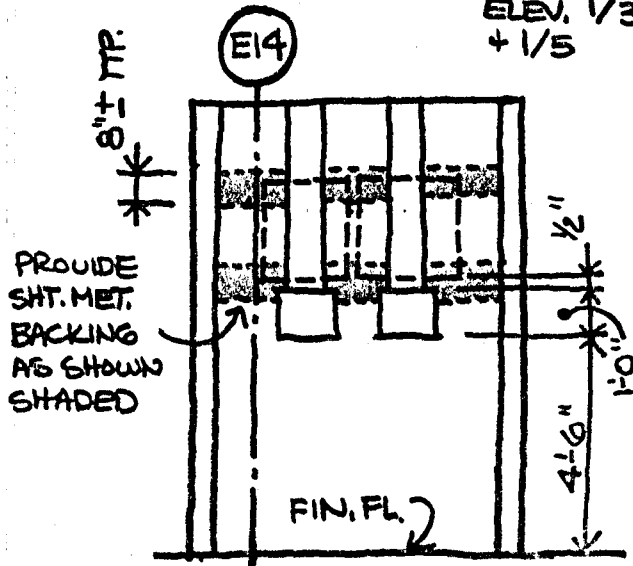
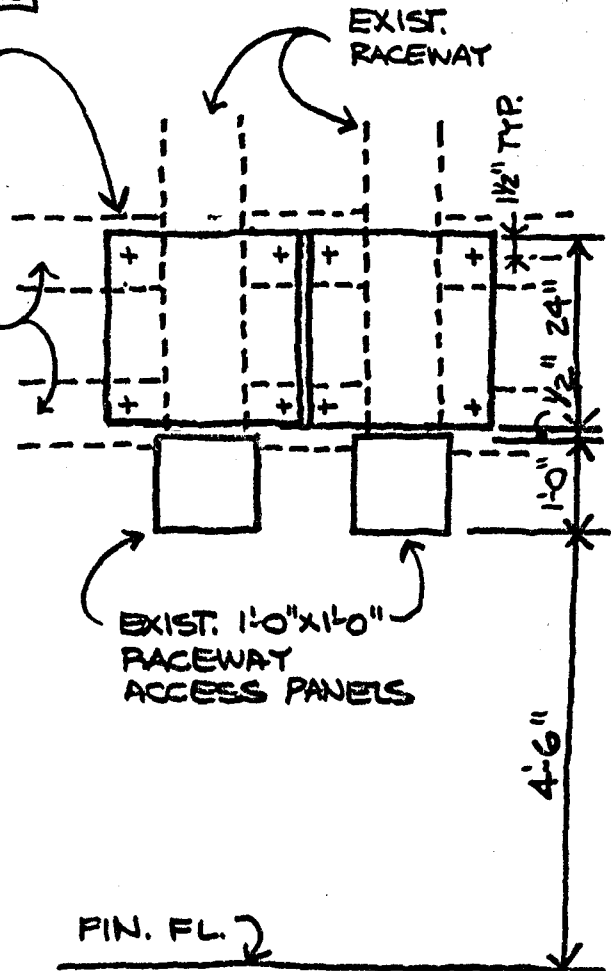
1
2 ELEVATION
NORTH WALL

ROOM 1-243: CHEST ROOM



PLAN

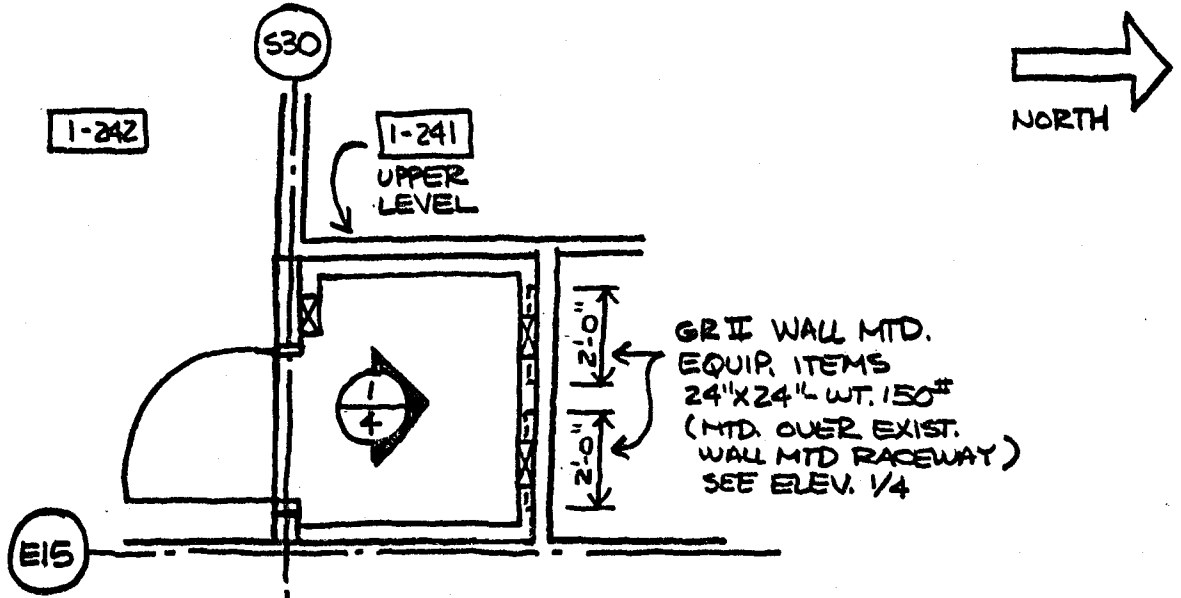
PROVIDE SHEET METAL BACKING, EXTENT AS SHOWN ON ELEV. 1/3 + 1/5



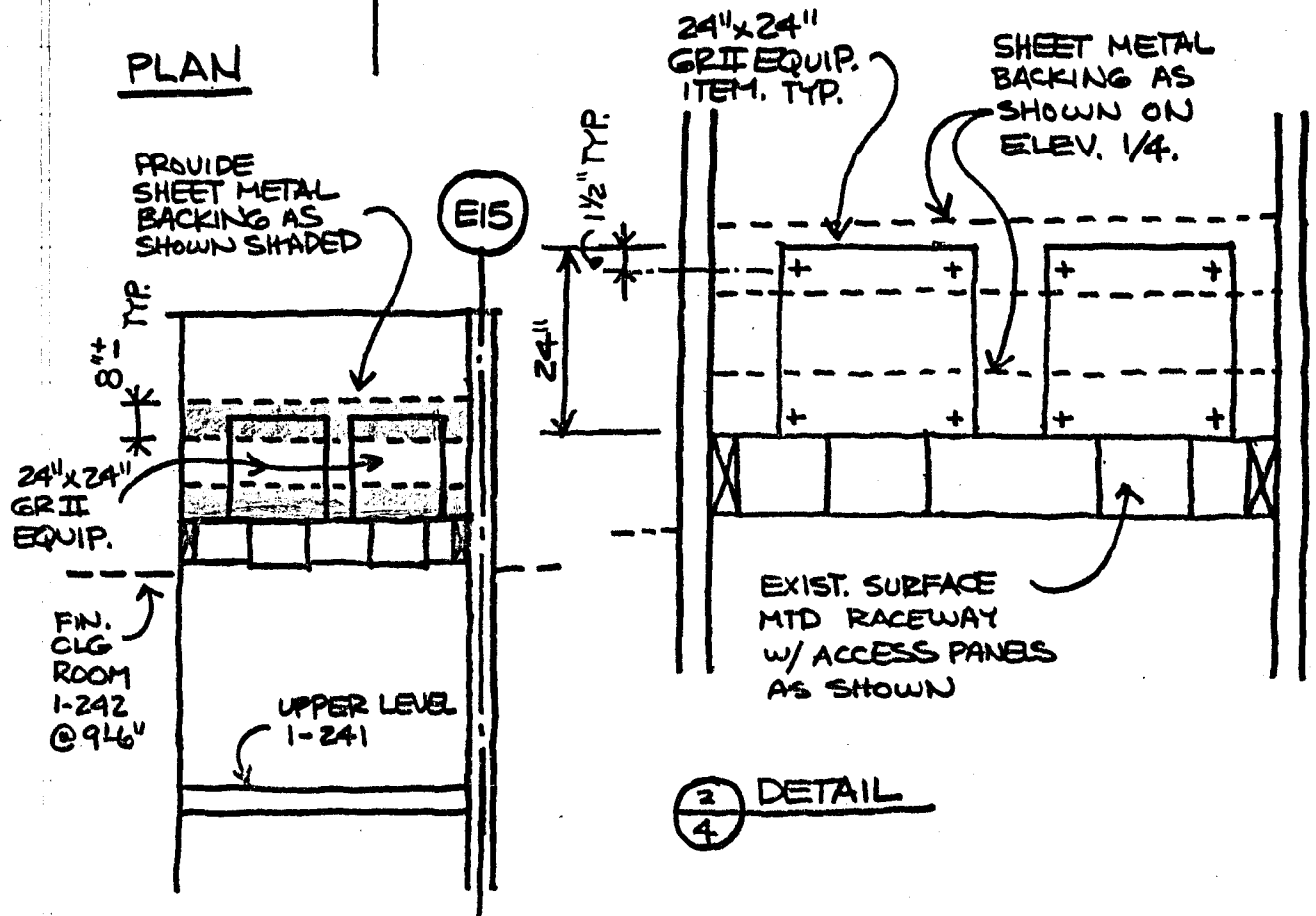
1 ELEVATION
3 SOUTH WALL

2 DETAIL
3

-ROOMS 1-241 & 1-242: TOMOGRAPHY & MOMMOGRAPHY



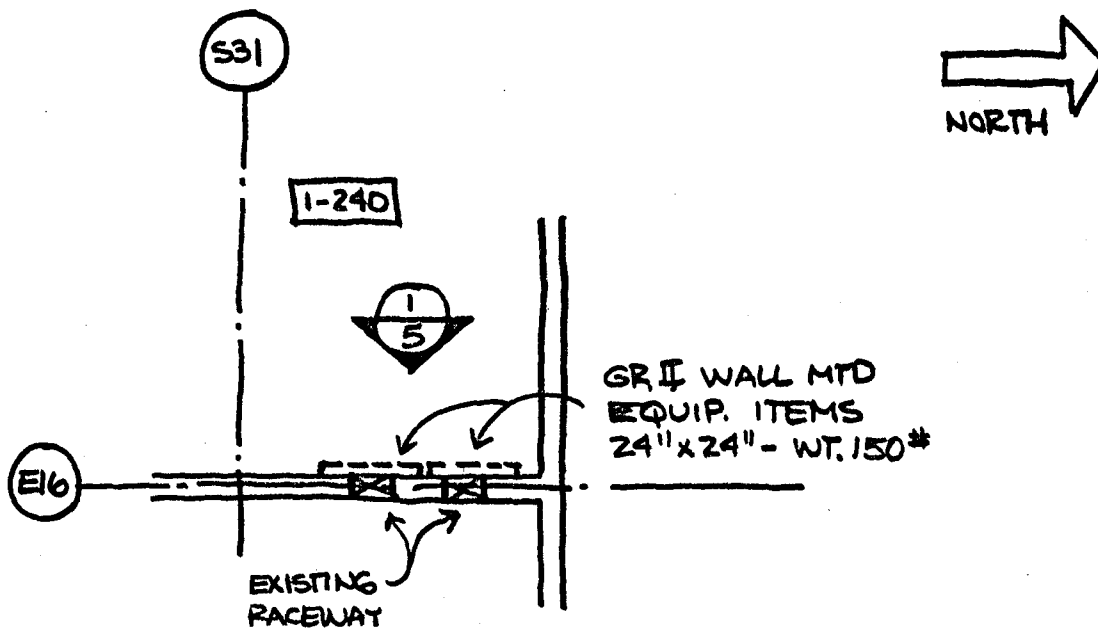
PLAN



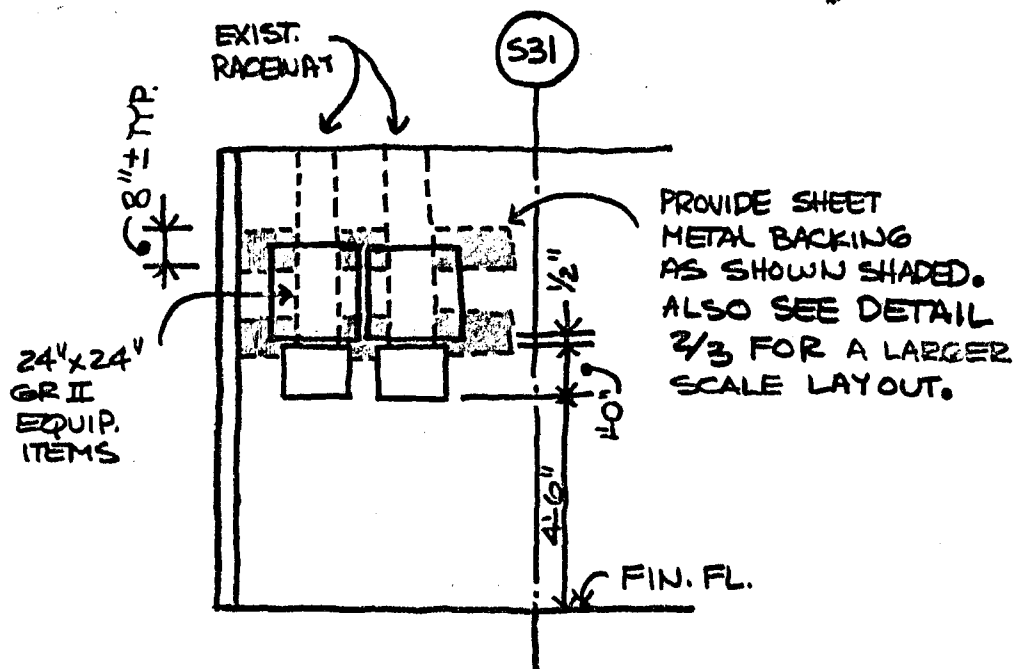
1 ELEVATION
4 NORTH WALL

2 DETAIL
4

ROOM 1-240 : RADIOGRAPHY



PLAN



1/5 ELEVATION EAST WALL

4/5/77 (BACKING REQUIRED)

* PERTAINS TO ROOMS 1-232,
1-235 & 1-242 FILM DISPENSER
SEE ARCH. ELEV. 2/13-8, 7/13-84
13/13-8

II. PRE-INSTALLATION

There are a number of factors to consider when deciding on the layout details of the Daylight System Components. These factors are covered in depth in the "Handbook for Planning DuPont Daylight Systems." When deciding exactly where the equipment is to be located, there are some installation requirements that must also be considered. This section of the manual will point out those requirements. It is assumed that an order has been placed and a pre-installation check list (copy at end of this section) has been completed and sent to DuPont.

Only three of the components require physical installation. These are:

1. Cronex® Daylight Film Dispenser
2. Cronex® Daylight Processor Adapters
3. Cronex® Daylight Cassette Unloader if installed through-the-wall

A. Cronex® Daylight Film Dispenser

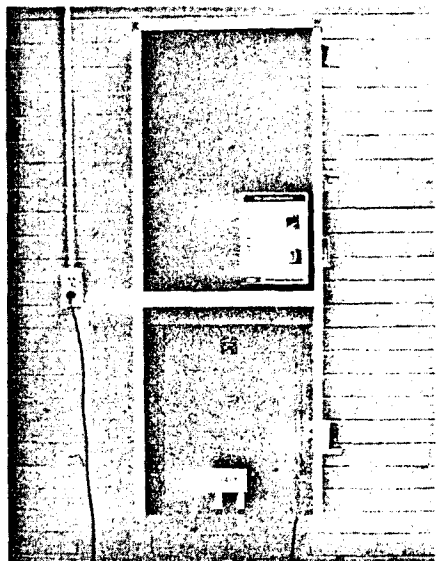


Figure 1 - Cronex® Daylight Film Dispenser

The film dispenser is mounted on brackets attached rigidly to the wall, as shown in Figure 1. A typical multi-unit film dispenser installation, with dimensions and clearances, is shown in Figure 2. Typical dimensions of single units are shown in Figure 3.

The wall construction, on which the film dispenser is to be mounted, must be determined so that proper fasteners can be installed for attaching the brackets. The brackets must support the weight of the film dispensers plus an additional load applied when loading cassettes. Although the brackets can be mounted directly to the wall, it is sometimes desirable to use an intermediate mounting panel. This may be the case when mounting to a wall with 2" X 4" studding. If the stud location is not convenient, a wood panel can be mounted to the wall and the brackets attached to the panel.

The lead shield integrity of the wall must be maintained. If the mounting of the brackets could cause a puncture in the lead, this puncture must be repaired.

Building services, such as water and electrical lines, are sometimes installed in the interior of partitions. The design for mounting the brackets should avoid interference with these services.

Each dispenser has a power cord equipped with a standard 115V, 60 Hz, 3-prong grounded plug. Suitable electrical outlets should be provided within 6 feet of each unit.

X 481

II-2

C1-222, 226

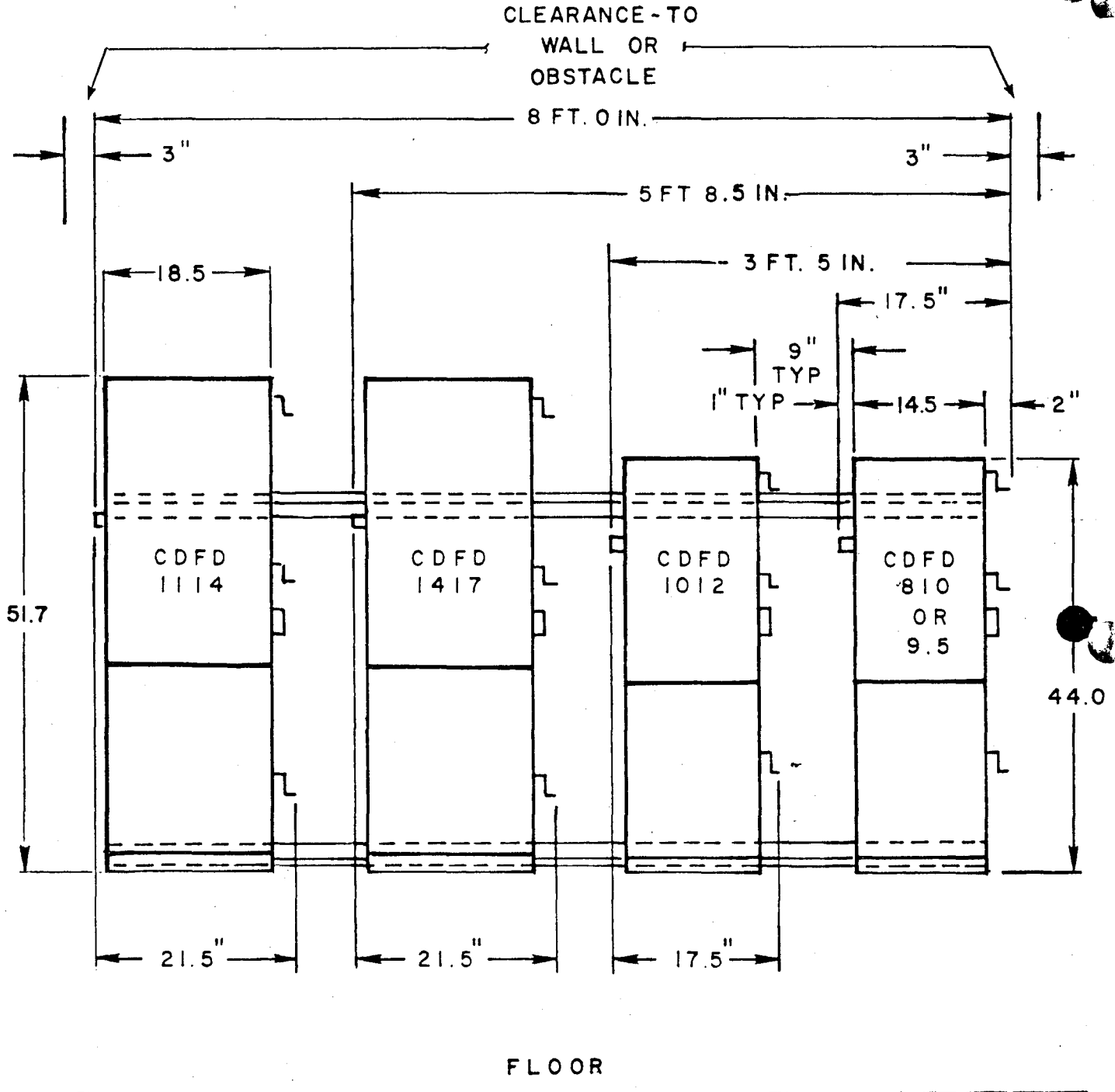
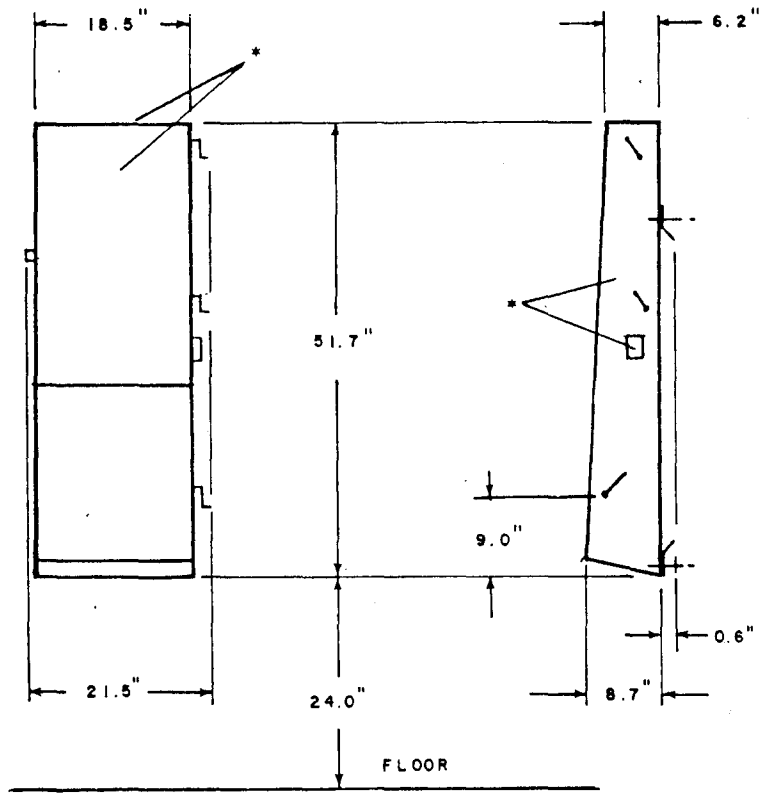


FIG. 2



* 0.02 THK LEAD SHIELDING IN TOP COVER, SIDES AND SLIDING DOOR OF FILM STORAGE.

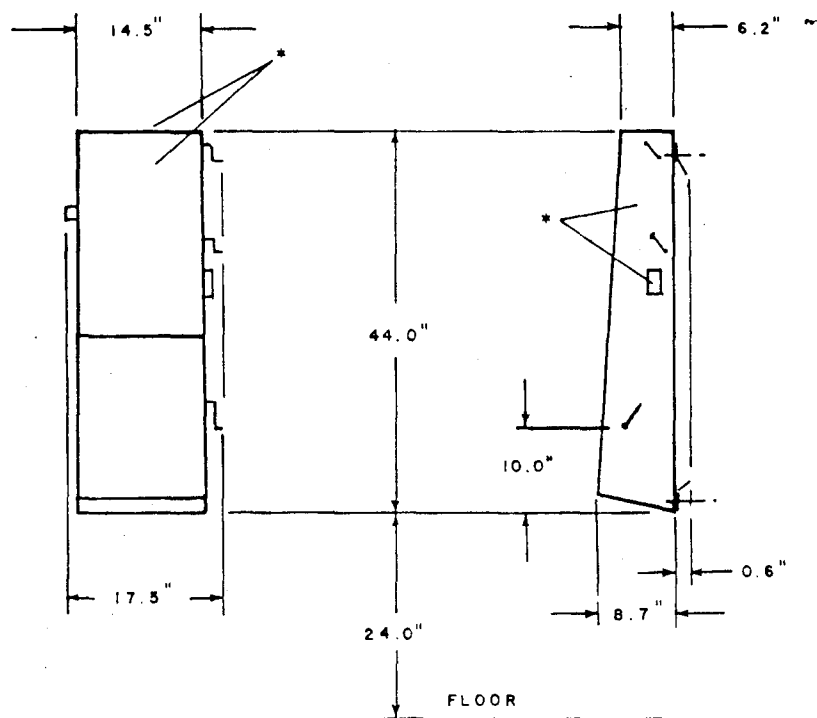


FIG. 3

TABLE 1

EQUIPMENT SIZE, WEIGHT, CAPACITY AND RECOMMENDED TYPE OF MOUNTING

<u>Equipment</u>	<u>Depth Inches</u>	<u>Width Inches</u>	<u>Height Inches</u>	<u>Weight in Lbs</u>	<u>Film Sheet Capa- city</u>	<u>Mounting</u>
*CDFD 1417	9.5	21	52	71	100	Wall or Rack
*CDFD 1114	9.5	21	52	71	100	Wall or Rack
*CDFD 1012	9.5	18	44	57	100	Wall or Rack
*CDFD 810	9.5	18	44	57	100	Wall or Rack
*CDFD 9.5	9.5	8	44	57	100	Wall or Rack
CDC 1417	0.71	15.12	18.12	7.5	1	None
CDC 1114	0.71	12.12	15.12	6	1	None
CDC 1012	0.71	11.12	13.12	4	1	None
CDC 810	0.71	9.12	11.12	3	1	None
CDC 9.5	0.71	10.62	10.62	3.2	1	None
CDFI	0.37	3.5	3.2	0.2	-	None
*CDCU	21	28	41	113	-	On Floor
CDTC	9	17	20	9.5	50	None
CDTF	12	13	18	15.5	30	None
CDUT	10	10	22	6	-	Table Top
CDSF	14	26	27	54	-	On Auto Processor
*CDCA	15	26	28	69	-	On Auto Processor
*CDAA	14	15	27	31	-	On Auto Processor

*Requires 115V, 60 Hz, 3-prong grounded outlet



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

April 7, 1977

TO: Robert Dickler
Greg Kujawa
Dr. Seymour Levitt
Tom Stone
Oliver Hughes
Jerry Staiger

FROM: Paul Maupin *Paul Maupin*

SUBJECT: Building B/C
Restricted Work Area

The Building B/C schedule indicates that in the very near future the construction contractors will be moving earth and working in the vicinity of the Linear Accelerator Facility. Therefore, the Health Sciences Planning Office is taking this opportunity to notify all parties of this construction effort and to provide you with the information contained in the Unit B/C construction documents related to this effort. The following portion of the construction documents is for your information.

1.46 RESTRICTED WORK AREA

A. The area adjacent to the Linear Accelerator Facility (Linac Facility, which may be referred to on the drawings as Accelerator Laboratory), with the center of the area at approximately grids W-4 and S-56, is a Restricted Work Area. Work and workmen in this area, after excavation commences, may be subject to radiation exposure. Therefore precautions must and shall be taken and certain procedures and work periods are required. Refer to site plan Sheet A2-5 for the location of the Restricted Work Area.

B. Except for installation of the fencing prior to excavation, all work in the Restricted Area must be done between the hours of 4:00 PM and 7:00 AM for the purpose of protecting personnel from radiation exposure and to eliminate the possible disruption of patient treatment in the Linac Facility. The work period shall extend throughout the construction in this area, until such time that the University determines that radiation exposure hazards do not exist.

C. The Contractors shall comply with OSHA requirements and the General Contractor shall provide the necessary caution signs for the area.

D. The General Contractor shall provide a fence around the Restricted Area which shall be an "inner fence" within the construction site fencing. Should University radiation monitoring indicate a greater area inside the fence enclosure is required, the General Contractor shall extend the fencing. From 7:00 AM to 4:00 PM all workmen and the public shall be kept out of the restricted area and from 4:00 PM to 7:00 AM no unauthorized persons shall be allowed in the area. Clearance shall be received each day from the University's Health Sciences Planning Office prior to personnel being allowed in the area.

E. As specified under Article 1.40 of this Section, no jack hammering, pile driving or other loud operations will be permitted in the Restricted Work Area between 8:00 PM and 7:00 AM.

F. The General Contractor shall provide and install all temporary lighting required for good working conditions for night work in this area.

G. During construction, health physicists of the University's Division of Environmental Health and Safety will monitor and evaluate radiation exposure levels in the area surrounding the Linac Facility, with Linear Accelerator operating under various conditions. As a minimum the measurements will be made each day before work commences in the restricted area; after completion of footings, walls and backfill; and at other phases as determined by the University. The contractors shall comply with any recommendations which result from the monitoring of radiation.

H. As much of an earth barrier as possible shall be maintained between the north wall of the Linac Facility and adjacent buildings during construction. Excavations shall be kept at a minimum necessary to accomplish the construction until the backfill is placed and radiation protection has been verified by the University.

I. The mound of earth over the Linac Facility shall be disturbed to the minimum extent, except as required to complete construction work, as it also serves as a radiation barrier.

In closing, it should be understood, however, that the Health Sciences Planning Office shall permit the construction contractor to work during these restricted hours unless we have been notified forty-eight (48) hours in advance of any required schedule change.

PJM:rm

cc: Eugene Kogl
Robert Swanson



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 20, 1977

Mr. Larry Bruce
Siemens Corporation
7232 Boone Ave. N.
Suite 22
Brooklyn Park, Minnesota 55428

Dear Mr. Bruce,

In reference to our August 18, 1977, letter and upon inspection and acceptance of the X-ray equipment at your storage site by a representative of the University of Minnesota we are prepared to pay upon receipt of your invoice 100% of the total contract price with storage costs absorbed by your firm for the complete X-ray equipment system including installation as specified in University of Minnesota Purchase Order No. E06794.

To initiate this procedure, we require from you on your letterhead, two statements:

First, a statement that you agree that the following conditions apply:

The payment of your invoice will in no way release your company from the obligation to install the equipment and insure its performance according to the specifications and conditions stated in the bid documents. The unit, when installed must meet the usual acceptance tests performed by the Department of Radiology. If the unit does not meet these tests, the equipment must be repaired, replaced, or the full purchase price refunded to the University of Minnesota.

Secondly, a statement of the effect, if any, this delay will have on your warranties. It is our hope the warranty begins with "first use" with patients and is not affected by delivery schedule and payment plan selected.

Please clarify in your letter to us.

Yours very truly,

A handwritten signature in cursive script that reads "Warren G. Forslund".

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mkw

cc: Robert Dickler
Dr. Eugene Gedgudas
Robert James
Greg Kujawa
Jeffrey Lalla
Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 20, 1977

Mr. George Myers
Northern X-ray
2118 4th Avenue South
Minneapolis, Minnesota

Dear Mr. Myers,

In reference to our August 18, 1977, letter and upon inspection and acceptance of the X-ray equipment at your storage site by a representative of the University of Minnesota we are prepared to pay upon receipt of your invoice 100% of the total contract price with storage costs absorbed by your firm for the complete X-ray equipment system including installation as specified in University of Minnesota Purchase Order No. E06795.

To initiate this procedure, we require from you on your letterhead, two statements:

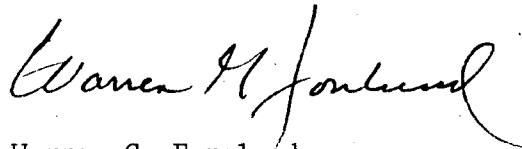
First, a statement that you agree that the following conditions apply:

The payment of your invoice will in no way release your company from the obligation to install the equipment and insure its performance according to the specifications and conditions stated in the bid documents. The unit, when installed must meet the usual acceptance tests performed by the Department of Radiology. If the Unit does not meet these tests, the equipment must be repaired, replaced, or the full purchase price refunded to the University of Minnesota.

Secondly, a statement of the effect, if any, this delay will have on your warranties. It is our hope the warranty begins with "first use" with patients and is not affected by delivery schedule and payment plan selected.

Please clarify in your letter to us.

Yours very truly,



Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WFG:mkw

cc: Robert Dickler
Dr. Eugene Gedgudas
Robert James
Greg Kujawa
Jeffrey Lalla
Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 20, 1977

Mr. Dave Milton
Litton Medical Products
4700 Olson Memorial Highway
Minneapolis, Minnesota

Dear Mr. Milton,

In reference to our August 18, 1977, letter and upon inspection and acceptance of the X-ray equipment at your storage site by a representative of the University of Minnesota we are prepared to pay upon receipt of your invoice 100% of the total contract price with storage costs absorbed by your firm for the complete X-ray equipment system including installation as specified in University of Minnesota Purchase Order No. E06636.

To initiate this procedure, we require from you on your letterhead, two statements:

First, a statement that you agree that the following conditions apply:

The payment of your invoice will in no way release your company from the obligation to install the equipment and insure its performance according to the specifications and conditions stated in the bid documents. The unit, when installed must meet the usual acceptance tests performed by the Department of Radiology. If the unit does not meet these tests, the equipment must be repaired, replaced, or the full purchase price refunded to the University of Minnesota.

Secondly, a statement of the effect, if any, this delay will have on your warranties. It is our hope the warranty begins with "first use" with patients and is not affected by delivery schedule and payment plan selected.

Please clarify in your letter to us.

Yours very truly,

A handwritten signature in cursive script that reads "Warren G. Forslund". The signature is written in dark ink and is positioned above the typed name and title.

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mkw

cc: Robert Dickler
Dr. Eugene Gedgaudas
Robert James
Greg Kujawa
Jeffrey Lalla
Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 20, 1977

Mr. Don Graff
General Electric
X-ray Department
14700 Martin Drive
Eden Prairie, Minnesota 55343

Dear Mr. Graff,

In reference to our August 18, 1977, letter and upon inspection and acceptance of the X-ray equipment at your storage site by a representative of the University of Minnesota we are prepared to pay upon receipt of your invoice 100% of the total contract price with storage costs absorbed by your firm for the complete X-ray equipment system including installation as specified in University of Minnesota Purchase Order No. E06637.

To initiate this procedure, we require from you on your letterhead, two statements:

First, a statement that you agree that the following conditions apply:

The payment of your invoice will in no way release your company from the obligation to install the equipment and insure its performance according to the specifications and conditions stated in the bid documents. The unit, when installed must meet the usual acceptance tests performed by the Department of Radiology. If the unit does not meet these tests, the equipment must be repaired, replaced, or the full purchase price refunded to the University of Minnesota.

Secondly, a statement on the effect, if any, this delay will have on your warranties. It is our understanding that in conversations between you and Tom Stone, the following statement would apply:

The warranty period begins with "first use" with patients and is not affected by delivery and payment plan selected.

Please reaffirm in your letter to us.

Yours very truly,

A handwritten signature in cursive script that reads "Warren G. Forslund". The signature is written in dark ink and is positioned above the typed name and title.

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mkw

cc: Robert Dickler
Dr. Eugene Gedgudas
Robert James
Greg Kujawa
Jeffrey Lalla
Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

September 20, 1977

Mr. Roger Anderson
Picker Medical Products
2797 Egandale Boulevard
West St. Paul, Minnesota 55118

Dear Mr. Anderson,

In reference to our August 18, 1977, letter and upon inspection and acceptance of the X-ray equipment at your storage site by a representative of the University of Minnesota we are prepared to pay upon receipt of your invoice 100% of the total contract price with storage costs absorbed by your firm for the complete X-ray equipment system including installation as specified in University of Minnesota Purchase Order No. E06851.

To initiate this procedure, we require from you on your letter-head, two statements:

First, a statement that you agree that the following conditions apply:

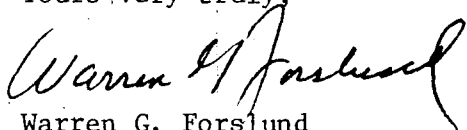
The payment of your invoice will in no way release your company from the obligation to install the equipment and insure its performance according to the specifications and conditions stated in the bid documents. The unit, when installed must meet the usual acceptance tests performed by the Department of Radiology. If the unit does not meet these tests, the equipment must be repaired, replaced, or the full purchase price refunded to the University of Minnesota.

Secondly, a statement on the effect this delay will have on your warranties. It is our understanding from your letter dated August 4, 1977, to Tom Stone that the following statement would apply:

In regard to the warranty, the standard 6 months from the date of installation would apply should you delay the order. If you accept delivery in August of 1977, you would have a 6 month grace period with no additional charge. If installation goes beyond the 6 months, one half of one percent of the total dollar amount would be added per month to extend the delivery.

Please reaffirm in your letter to us.

Yours very truly,



Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WFG:mkw

cc: Robert Dickler
Dr. Eugene Gedgaudas
Robert James
Greg Kujawa
Jeffrey Lalla
Paul Maupin
Tom Stone

PICKER CORPORATION

MEDICAL PRODUCTS DIVISION

2797 EAGANDALE BOULEVARD
SAINT PAUL, MINNESOTA 55121

Unit B/C - Radiology

December 29, 1977

RECEIVED

JAN 4 1978

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

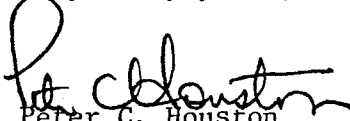
Mr. Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office
University of Minnesota
Box 95, 4103 Powell Hall
Minneapolis, Minnesota 55455

Dear Mr. Forslund:

This letter is in answer to your September 20 letter to our Roger Anderson. Picker agrees that should the University of Minnesota pay 100% of the total contract price, that we will absorb the storage costs for the x-ray systems ordered on University of Minnesota Purchase Order No. E06763 and that the following conditions apply:

1. Payment of the invoice will in no way release Picker Corporation from the obligation to install the equipment and insure performance according to the specifications and conditions stated in the bid documents. The unit, when installed, will meet the usual acceptance tests performed by the Department of Radiology. If the unit does not meet the tests, the equipment will be repaired, replace, or the full purchase price refunded to the University of Minnesota.
2. The warranty as stated in our letter of August 4, 1977 will be the standard 6 months from the date of installation. By paying 100% of the invoice and having Picker Corporation store the equipment, you will be given a 6 month additional grace period with no additional charge. If the installation goes beyond the 6 months, one half of 1% of the total dollar amount will be added per month to extend the warranty.

Very truly yours,


Peter C. Houston
District Manager

PCH:ds

cc: Robert Dickler
Robert James
Jeffrey Lalla
Tom Stone

Dr. E. Gedgudas
Greg Kujawa
Paul Maupin
Job File #67500-503

PICKER



UNIVERSITY OF MINNESOTA
TWIN CITIES

Unit B/C - Radiology

File

Department of Therapeutic Radiology
Radiation Physics Section
Medical School
Box 494 Mayo Memorial Building 420 Delaware S.E.
Minneapolis, Minnesota 55455
(612) 373-8680

September 26, 1977

RECEIVED

OCT 3 1977

Mr. Walter Petrykowski
Hospital Maintenance Superintendent
Box 702 Mayo

UNIVERSITY OF MINNESOTA
HOSPITAL MAINTENANCE
PLANNING OFFICE

Re: Electrical Ground Plane for 4 MeV Linear
Accelerator and Cobalt unit in Radiation Therapy

Dear Mr. Petrykowski:

The electrical ground plane for the above mentioned units is located somewhere in the area where the ground is being dug around the radium ventilator in front of Powell Hall. However, the exact location of the ground plane is not shown on the drawings (per Oliver Hughes - phone 6-1391). To our knowledge, no one has been looking out for the ground plane at the digging site. It may be pointed out that the ground plane is essential in order to maintain a good electrical grounding for these machines. Testing of lines is very difficult to prove ground plane compared to high surges of R.F. energy. We would therefore like to know if this ground plane is open now. Also we request that the problem be brought to the attention of those involved with digging in that area to make sure that the ground plane has not been accidentally wrecked. Any questions about this matter may be directed to Howard Larson in this department at 3-7585. Please inform us of any action taken as soon as possible.

Sincerely yours,

Faiz M. Khan

Faiz M. Khan, Ph.D.
Director, Radiation Physics

FMK/sb

cc: Seymour H. Levitt, M.D., Professor & Head, Therapeutic Radiology
Michael McKee, Assistant Director, Hospital Administration
✓ Thomas Jones, Associate Director, Hospital Administration

HSAE

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC.
UNIVERSITY PARK PLAZA SUITE 704 2829 UNIVERSITY AVENUE S.E. MINNEAPOLIS, MINNESOTA 55414 (612) 378-3833

RECEIVED

8 May 1978

MAY 10 1978

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

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

Regarding: Unit B/C - Health Sciences Expansion
Radiology Department Film Processor Piping.

Dear Mr. Maupin:

On Wednesday, May 3rd Gary A. Hall and myself accompanied representatives of the Planning Office, hospital, B/C Construction Office and the User on a tour of the First Floor Diagnostic Radiology Suite.

During that tour Mr. Thomas Stone indicated that a tempered water connection will be required to each of the automatic film processor units. Since these connections are presently not a responsibility of the Mechanical Contractor to provide, it was suggested that University Plant Services may perform the required work. The following description would, therefore, apply for the installation of these lines in Rooms 1-234, 1-240, and 1-243: *physical plant will do. 5/18/78*

"Provide $\frac{1}{2}$ " connection into tempered water line and extend $\frac{1}{2}$ " piping up into ceiling and extend over to processors. Drop through ceiling down to units. Connections to be made by equipment installers. Exposed piping to be chrome plated. Provide vacuum breaker where required at processor."

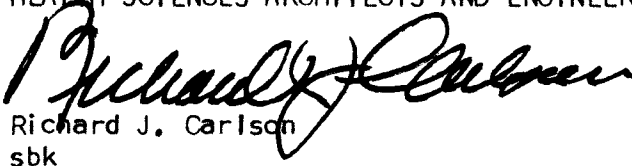
Furthermore, Mr. Stone indicated that the Equipment Vendor had made no provisions for securing the ceiling rail for the Picker Corporation Mammorex Unit in Room 1-242. These provisions were not included in modifications 122-P since it was agreed in discussions with your Office that it would be more appropriate to make these the responsibility of the Equipment Vendor. If the track is secured directly to the ceiling grid and service panels it will conflict with a sprinkler head and two recessed light fixtures.

Mr. Paul Maupin
8 May 1978
Page Two

We would suggest that additional struts of unistrut P1001 sections 1-5/8" wide by 3-1/4" high be secured and surface mounted perpendicular to the track and attached on either end to the service panel grid. The ends of the new unistrut sections should be closed and the members field painted to match the exposed ceiling grid. This should "furr" the track enough to clear the sprinkler and the light fixtures.

Sincerely,

HEALTH SCIENCES ARCHITECTS AND ENGINEERS, INC.



Richard J. Carlson
sbk

cc: Greg Kujawa
Wally Mellum
E.A. Kogl
Gary A. Hall



UNIVERSITY OF MINNESOTA
TWIN CITIES

Unit B/C - Radiology

Health Sciences Planning Office
Physical Planning
4103 Powell Hall, Box 75
500 Essex Street S.E.
Minneapolis, Minnesota 55455
(612) 373-8981

May 8, 1978

TO: Oliver Hughes
FROM: Robert Swanson *RS*
SUBJECT: Unit B/C - Phase I
Radiology Department
Completion Dates

On Wednesday afternoon, May 3, 1978, Tom Stone, Greg Kujawa and I met with the Unit B/C supervision staff to discuss the completion of the Department of Radiology's space on floor 1. In order for the Radiology Department to open their facilities in conjunction with the other Hospital facilities in September, the Group II Radiology equipment installation must begin no later than May 29, 1978. Therefore, Steve Green indicated that the above ceiling punch out must be completed by Monday, May 15, 1978, thus giving Steve the required two week interval to complete the final general punch out of the space for acceptance.

Unless I receive from your department a written notice that the above schedule cannot be met, I will assume that the Radiology equipment installation can begin on May 29, 1978.

RMS:rt

cc: Eugene Kogl
Greg Kujawa
Tom Stone
Steve Green
Wally Mellum
Jim Hastert



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1978

Mr. Don Graff
General Electric
X-Ray Department
14700 Martin Drive
Eden Prairie, Minnesota 55343

Dear Mr. Graff,

In accordance with (1) Conditions, Specifications and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) your Bid Quotation 430-76-334 dated December 8, 1976, and (3) University of Minnesota Purchase Order E06637, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978 (the official start date); however, you may start delivery and installation as early as June 5, 1978.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mg

cc: Robert Dickler
Dr. Eugene Gedgaudas
Greg Kujawa
✓ Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
4103 Powell Hall, Box 75
500 Essex Street S.E.
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1978

Mr. Don Graff
General Electric
X-Ray Department
14700 Martin Drive
Eden Prairie, Minnesota 55343

Dear Mr. Graff,

In accordance with (1) Conditions, Specifications and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) your Bid Quotation 430-76-326 dated December 7, 1976, and (3) University of Minnesota purchase order E06776, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978 (the official start date); however, you may start delivery and installation as early as June 5, 1978.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mkw

cc: Robert Dickler
Dr. Eugene Gedgaudas
Greg Kujawa
/ Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1978

Mr. Roger Anderson
Picker Medical Products
2797 Eagandale Boulevard
West St. Paul, Minnesota 55118

Dear Mr. Anderson.

In accordance with (1) Conditions, Specifications and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) your Bid Quotation 543-1155-031208 dated December 8, 1976, and (3) University of Minnesota Purchase Order E06777, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978 (the official start date); however, you may start delivery and installation as early as June 5, 1978.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mg

CC: Robert Dickler
Dr. Eugene Gedgaudas
Greg Kujawa
✓ Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
4103 Powell Hall, Box 75
500 Essex Street S.E.
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1978

Mr. Dave Milton
Litton Medical Products
4700 Olson Memorial Highway
Minneapolis, Minnesota

Dear Mr. Milton,

In accordance with (1) Conditions, Specifications, and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) your Bid Quotation 430-76-326 dated December 7, 1976, and (3) University of Minnesota purchase order E06852, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978, the official start date.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mkw

cc: Robert Dickler
Dr. Eugene Gedgaudas
Greg Kujawa
✓ Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
4103 Powell Hall, Box 75
500 Essex Street S.E.
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1977

Mr. Don Graff
General Electric
X-Ray Department
14700 Martin Drive
Eden Prairie, Minnesota 55343

Dear Mr. Graff,

In accordance with (1) Conditions, Specifications and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) your Bid Quotation 430-76-326 dated December 7, 1976, and (3) University of Minnesota purchase order E06723, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978 (the official start date); however, you may start delivery and installation as early as June 5, 1978.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mkw

cc: Robert Dicklet
Dr. Eugene Gedguadas
Greg Kujawa
Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
4103 Powell Hall, Box 75
500 Essex Street S.E.
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1978

Mr. Roger Anderson
Picker Medical Products
2797 Eagandale Boulevard
West St. Paul, Minnesota 55118

Dear Mr. Anderson,

In accordance with (1) Conditions, Specifications and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) Your Bid Quotation 543-1153-011208 dated December 8, 1976, and (3) University of Minnesota Purchase Order E06763, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978 (the official start date); however, you may start delivery and installation as early as June 5, 1978.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mg

cc: Robert Dickler
Dr. Eugene Gedgudas
Greg Kujawa
✓ Paul Maupin
Tom Stone



UNIVERSITY OF MINNESOTA
TWIN CITIES

Health Sciences Planning Office
Physical Planning
Box 75 Powell Hall
4103 Powell Hall
Minneapolis, Minnesota 55455
(612) 373-8981

May 19, 1978

Mr. Roger Anderson
Picker Medical Products
2797 Eagandale Boulevard
West St. Paul, Minnesota

Dear Mr. Anderson,

In accordance with (1) Conditions, Specifications and Related Documents for X-ray Equipment as set forth in University of Minnesota Special #540, (2) your Bid Quotation 543-1156-041208 dated December 7, 1976, and (3) University of Minnesota Purchase Order E06851, you are directed to deliver and install the X-ray equipment in University of Minnesota Unit B/C Radiology Department rooms starting June 19, 1978 (the official start date); however, you may start delivery and installation as early as June 5, 1978.

Very truly yours,

Warren G. Forslund
Health Sciences Equipment Coordinator
Health Sciences Planning Office

WGF:mg

cc: Robert Dickler
Dr. Eugene Gedgudas
Greg Kujawa
✓ Paul Maupin
Tom Stone

FILE.
6/8/78

HSAE

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC
UNIVERSITY PARK PLAZA SUITE 704 2829 UNIVERSITY AVENUE S.E. MINNEAPOLIS, MINNESOTA 55414 (612) 378-3839

RECEIVED

May 26, 1978

MAY 30 1978

UNIV. OF MINN.
HEALTH SCIENCE
PLANNING OFFICE

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

Regarding: Unit B/C - Health Sciences Expansion
Radiology Department X-ray Trough

Dear Mr. Maupin:

During our tour of the First Floor Diagnostic Radiology Suite on May 3rd, Mr. Thomas Stone again raised the question of accessibility to the horizontal trough above the ceilings.

Attached is a letter from Gary A. Hall to E.A. Kogl dated 21 March, 1977, which will serve as reference in this matter. The third paragraph of the letter indicated that "a modification should be prepared to cover the cost for the changes in the work, determined to be the responsibility of the U of M and HSAE". Page three of the letter indicated, in all rooms "cut all removable covers at horizontal trough above ceiling into 2' ± sections."

A copy of Gary Hall's letter was given to and reviewed with the Electrical Contractor, and the note referring to cutting the covers into two foot sections was marked by HSAE on the belated shop drawing submittal as a condition for acceptance. The Electrical Contractor, to our knowledge, made no attempt to perform this additional work nor did he submit a cost quotation in spite of the request.

Since the Electrical Contractor had no apparent interest in performing this added work, during our tour it was suggested as an alternative that University shops complete the task.

(Con't next page)

* 6/7/78 NO ACTION REQ'D

AS PER OUR TOUR ON MAY 3, 78
WALLY MELLUM WAS TO REVIEW
THE INSTALLATION TO VERIFY
THE ACTUAL COVER LENGTHS
PROVIDED BY THE ELEC.
CONTR., SINCE THE MAY 3, 78
(OVER)

MEETING WALLY VERIFIED THAT
THE ELECTRICAL CONTRACTOR
DIDNOT ELECT TO CUT THE
COVERS & THEREFORE AT
OUR MAY 18, 1978 MEETING
WITH THE HOSPITAL, IT
WAS DETERMINED WITH APPROVAL FROM
THE HOSPITAL, THAT PHYSICAL
PLANT WILL CUT THE COVERS
AS REQUIRED DURING THE GR II
EQUIP. INSTALLATION USING
HOSPITAL FUNDS.

RS

May 26, 1978
Unit B/C

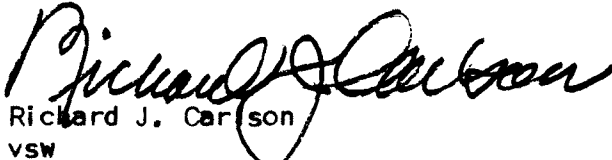
Page - 2 -

In summary, the provision of cutting the trough into two foot sections was not a part of the original contract documents. The Electrical Contractor was asked to submit a cost for performing the additional work and chose not to. The alternative was to have University Shops perform the work because of the immediate need for access to the space by the Owner and the anticipated prohibitive cost from the Electrical Contractor.

If you feel we can provide further background or assistance in this matter, please contact us.

Sincerely,

HEALTH SCIENCES ARCHITECTS AND ENGINEERS, INC.


Richard J. Carlson
vsw

cc: E.A. Kogl
Wally Mellum
Gary Hall
Greg Kujawa
John Patterson

HSAE

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC
UNIVERSITY PARK PLAZA SUITE 704 2829 UNIVERSITY AVENUE S.E. MINNEAPOLIS, MINNESOTA 55414 (612) 378-3833

21 March 1977

Mr. Eugene Kogl
Overall Construction Coordinator
Unit B/C Construction Office
611 Delaware Street S.E.
Minneapolis, Minnesota 55414

Regarding: Unit B/C - Health Sciences Expansion
Radiology Suite

Dear Mr. Kogl:

Pursuant to our meeting with Oliver Hughes and Wally Mellum on March 15th, we submit for your review a copy of the x-ray trough drawings provided by Premier Electric and modified as noted by Mr. Tom Stone, Wally Mellum and Gary Hall to provide for a workable x-ray trough installation.

These drawings were transmitted to Premier Electric on February 22, 1977 (see copy of transmittal attached).

The following review of the trough installations by room should clarify responsibility for the changes required. A modification should be prepared to cover cost for the changes in work determined to be the responsibility of the U of M and HSAE.

<u>Room 1-232</u>	<u>Responsibility</u>
1. Relocate barrier to center of trough as specified by Contract Documents. Locations shown on Drawings SS76216-1 and SS76216-2.	(1) Electrical Contractor
2. Provide removable covers at high voltage section of bottom trough as required by Contract Documents. Locations shown on Drawing SS76216-1.	(2) Electrical Contractor
MOD. 122P 3. Rotate trough and control box 180°. Covers to be removable from control room. Adjust duct to match wall location. Refer to Drawing SS76216-1.	(3) University of Minnesota and H.S.A.E.
4. Relocate Unistrut vertical supports to accommodate the correct location of the Materials Handling System pathway as indicated on Sheet M-48 and referred on Drawing Sheet No. A1-1, General Note No. 28. Coordinate this change with the Materials Handling System Contractor.	General Contractor

Room 1-235

Responsibility

1. Relocate barrier to center of trough as specified by Contract Documents. Location shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor
2. Provide removable covers at high voltage section of bottom trough as required by Contract Documents. Location shown on Drawing SS76216-2. (2) Electrical Contractor
3. Split removable top cover. Location as shown on Drawing SS76216-1. (3) University of Minnesota and H.S.A.E.

Room 1-240

- MCP
10/1/77
1. Relocate trough to enter Box "B". Location shown on Drawing SS76216-1. Work presently covered under preliminary Modification 122-P. (3) University of Minnesota and H.S.A.E.
 2. Relocate barrier to center of trough as specified by Contract Documents. Location shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor

Room 1-242

1. Relocate trough per location shown on Contract Documents; Sheet E57. Refer to Drawing SS76216-1. (4) General Contractor,
Mechanical Contractor, &
Electrical Contractor

Installed items by the General and Mechanical Contractor, such as the Unistrut vertical supports, must be relocated to accommodate the correct location of the raceway. These potential conflicts were very specifically indicated on the Unistrut shop drawings reviewed by HSAE on 26 July 1976 and returned to Sheehy Construction Company marked "Revise and Resubmit". Since the corrections and coordination were not made at that time, the required adjustments to these items should be made at no cost to the Owner.
2. Relocate barrier to center of trough as specified by Contract Documents. Locations shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor
3. Relocate Control Box "B" per Contract Documents; Sheet E57. Refer to Drawing SS76216-1. (1) Electrical Contractor

Room 1-243

1. Relocate barrier to center of trough as specified by Contract Documents. Locations shown on Drawings SS76216-1 and SS76216-2. (1) Electrical Contractor

Page 3
Eugene Kogl
21 March 1977

Responsibility

2. Provide bottom access with screw cover per Drawing SS76216-1.

(3) University of Minnesota and H.S.A.E.

All Rooms

1. Cut all removable covers at horizontal trough above ceiling into 2' ± sections.

(3) University of Minnesota and H.S.A.E.

Reference Notes

- (1) Trough shipped to job and installed with barrier located with 3" and 7" high and low voltage section without approved shop drawings.
- (2) Shop drawings were not approved and does not meet Contract Document requirements.
- (3) Field conditions and/or change require revision to trough.
- (4) Required coordination among Contractors did not occur resulting in trough installation at unworkable location.

Sincerely,

HEALTH SCIENCES ARCHITECTS AND ENGINEERS, INC.

Gary A. Hall/ljg

Gary A. Hall
ljg

cc: Oliver Hughes
Wally Mellum
Paul Maupin
John Scott

Enclosures

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC
UNIVERSITY PARK PLAZA SUITE 704 2020 UNIVERSITY AVENUE S.E. MINNEAPOLIS, MINNESOTA 55414 (612) 375-3833

Transmittal

To <u>MIC JOHN BELAIR</u> <u>PREMIER ELEC CONST. CORP.</u> <u>MPLS. MN.</u>	We forward: <input checked="" type="checkbox"/> WITH THIS FORM <input type="checkbox"/> UNDER SEPARATE COVER <input type="checkbox"/> PRINTS <input type="checkbox"/> SEPIAS <input type="checkbox"/> COPY OF LETTER
Date <u>2-22-77</u>	
Project <u>UNIT P/C HSE</u>	
Re <u>X-RAY TROUGH</u>	

NO. COPIES	SHEET NO.	DATE	DESCRIPTION
1 SEPIA	EST 76216 L 2 53	12-18-76	X-RAY TROUGH & DUCT

REMARKS
 THE NOTES & PROPOSED REVISIONS REFLECT THE FIELD REVIEW OF TROUGH W/ U&M, PREMIER & HSAE. PLEASE REVIEW THESE DRAWINGS & INDICATE TO HSAE & U&M HOW & WHEN THE CHANGES WILL BE ACCOMPLISHED.

IF ENCLOSURE IS NOT AS LISTED ABOVE PLEASE NOTIFY US AT ONCE.

COPIES _____

HEALTH SCIENCES ARCHITECTS AND ENGINEERS INC.
 BY Cam V. Hae