# City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

PERMIT ISSUED
MAY - 1 2001
CITY OF PORTLAND

| Permit No: | Issue Date: | CBL: |
|---|---|---|
| 01-0354 | MAY - 1 2001 | 21 C009011 |

| Location of Construction: | Owner Name: | Owner Address: | Phone: |
|---|---|---|---|
| 335 Brighton Ave | Mmc Realty Corp | 22 Bramhall St | 207-871-2447 |
| **Business Name:** | **Contractor Name:** | **Contractor Address:** | **Phone** |
| n/a | Hebert Construction LLC | 9 Gould Rd. Lewiston | 2077832091 |
| **Lessee/Buyer's Name** | **Phone:** | **Permit Type:** | **Zone:** |
| n/a | n/a | Alterations - Commercial | R-3 |

| Past Use: | Proposed Use: | Permit Fee: | Cost of Work: | CEO District: |
|---|---|---|---|---|
| Procedure Room | Nephrology Procedure Room; Renovation to existing Procedure room to convert to Nephrology Procedure Room. Call Dan Hebert when ready #783-2091 | $336.00 | $52,000.00 | 3 |

**FIRE DEPT:** ☑ Approved ☐ Denied

Signature:

**INSPECTION:**
Use Group: I-2 Type: 2A
PERMIT ISSUED WITH REQUIREMENTS

Signature:

**Proposed Project Description:**
Renovations to Existing Procedure Room to set up for Nephrology Procedure Room

**PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)**

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

| Permit Taken By: | Date Applied For: |
|---|---|
| cih | 04/11/2001 |

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

## Zoning Approval

| Special Zone or Reviews | Zoning Appeal | Historic Preservation |
|---|---|---|
| ☐ Shoreland | ☐ Variance | ☐ Not in District or Landmark |
| ☐ Wetland | ☐ Miscellaneous | ☐ Does Not Require Review |
| ☐ Flood Zone | ☐ Conditional Use | ☐ Requires Review |
| ☐ Subdivision | ☐ Interpretation | ☐ Approved |
| ☐ Site Plan All internal | ☐ Approved | ☐ Approved w/Conditions |
| Maj ☐ Minor ☐ MM ☐ OK | ☐ Denied | ☐ Denied |
| Date: 4/17/01 | Date: | Date: |

PERMIT ISSUED
WITH REQUIREMENTS

## CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

# THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

## Building or Use Permit Pre-Application
## Attached Single Family Dwellings/Two-Family Dwelling
## Multi-Family or Commercial Structures and Additions Thereto

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit.

NOTE**If you or the property owner owes real estate or personal property taxes or user charges on ANY PROPERTY within the City, payment arrangements must be made before permits of any kind are accepted.

| | | |
|---|---|---|
| Location/Address of Construction (include Portion of Building): 385 Brighton Avenue | | |
| Total Square Footage of Proposed Structure 377 S.F | Square Footage of Lot | |
| Tax Assessor's Chart, Block & Lot Number<br>Chart# 121 Block# C Lot# 9 | Owner:<br>MAINE MEDICAL CENTER | Telephone#:<br>871-2447 |
| Owner's Address:<br>22 Bramhall Street<br>Portland, Maine 04102 | Lessee/Buyer's Name (If Applicable) | Cost Of Work: Fee<br>$ 52,000 $ 336.00 |
| Proposed Project Description:(Please be as specific as possible)<br>Renovate Existing Procedure Room & Convert to Nephrology Procedure Room | | |
| Contractor's Name, Address & Telephone Hebert Construction LLC<br>9 Gould Road, Lewiston, ME 04240 | | Rec'd By 4/11 CH<br>336.00 |
| Current Use: Bronchoscopy Room | Proposed Use: Nephrology Room | |

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

- All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.
- All plumbing must be conducted in compliance with the State of Maine Plumbing Code.
- All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.
- HVAC(Heating, Ventilation and Air Conditioning) installation must comply with the 1993 BOCA Mechanical Code.

You must Include the following with you application:

1) A Copy of Your Deed or Purchase and Sale Agreement
2) A Copy of your Construction Contract, if available
3) A Plot Plan/Site Plan

Mike Nugent has allready recieved CAD Plans

Minor or Major site plan review will be required for the above proposed projects. The attached checklist outlines the minimum standards for a site plan.

4) Building Plans

**Unless exempted by State Law, construction documents must be designed by a registered design professional.**

A complete set of construction drawings showing all of the following elements of construction:

- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Dan Hebert 783-2091 CALL when Ready

### Certification

I hereby certify that I am the Owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

| | |
|---|---|
| Signature of applicant: Daniel R Hebert | Date: 4-11-01 |

Building Permit Fee: $30.00 for the 1st $1000.cost plus $6.00 per $1,000.00 construction cost thereafter.
Additional Site review and related fees are attached on a separate addendum

## BUILDING PERMIT REPORT

DATE: 14 APRIL 2001 ADDRESS: 335 Brighton Ave. CBL: 121-C-009

REASON FOR PERMIT: To build Procedure Room

BUILDING OWNER: Maine Medical Center

PERMIT APPLICANT: /CONTRACTOR Hebert Const. LLC.

USE GROUP: I-2 CONSTRUCTION TYPE: 2A CONSTRUCTION COST: $2,000.00 PERMIT FEES: $36.00

The City's Adopted Building Code (The BOCA National Building Code/1999 with City Amendments)
The City's Adopted Mechanical Code (The BOCA National Mechanical Code/1993)

### CONDITION(S) OF APPROVAL

This permit is being issued with the understanding that the following conditions shall be met: *1, 21, *22, *23, *24, *28, *30, *38.

*1. This permit does not excuse the applicant from meeting applicable State and Federal rules and laws.
2. Before concrete for foundation is placed, approvals from the Development Review Coordinator and Inspection Services must be obtained. (A 24 hour notice is required prior to inspection) "ALL LOT LINES SHALL BE CLEARLY MARKED BEFORE CALLING."
3. Foundation drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2" of gravel or crushed stone, and shall be covered with not less than 6" of the same material. Section 1813.5.2
4. Foundations anchors shall be a minimum of ½" in diameter, 7" into the foundation wall, minimum of 12" from corners of foundation and a maximum 6' O.C. between bolts. Section 2305.17
5. Waterproofing and dampproofing shall be done in accordance with Section 1813.0 of the building code.
6. Precaution must be taken to protect concrete and masonry. Concrete Sections 1908.9-19.8.10/ Masonry Sections 2111.3-2111.4.
7. It is strongly recommended that a registered land surveyor check all foundation forms before concrete is placed. This is done to verify that the proper setbacks are maintained.
8. Private garages located beneath habitable rooms in occupancies in Use Group R-1, R-2, R-3 or I-1 shall be separated from adjacent interior spaces by fire partitions and floor/ceiling assembly which are constructed with not less than 1-hour fire resisting rating. Private garages attached side-by-side to rooms in the above occupancies shall be completely separated from the interior spaces and the attic area by means of ½ inch gypsum board or the equivalent applied to the garage side. (Chapter 4, Section 407.0 of the BOCA/1999)
9. All chimneys and vents shall be installed and maintained as per Chapter 12 of the City's Mechanical Code. (The BOCA National Mechanical Code/1993). Chapter 12 & NFPA 211
10. Sound transmission control in residential building shall be done in accordance with Chapter 12, Section 1214.0 of the City's Building Code.
11. Guardrails & Handrails: A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level. Minimum height all Use Groups 42". In occupancies in Use Group A, B.H-4, I-1, I-2, M, R, public garages and open parking structures, open guards shall have balusters or be of solid material such that a sphere with a diameter of 4" cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect. Handrails shall be a minimum of 34" but not more than 38". Exception: Handrails that form part of a guard shall have a height not less than 36 inches (914 mm) and not more than 42 inches (1067 mm). Handrail grip size shall have a circular cross section with an outside diameter of at least 1 ¼" and not greater than 2". (Sections 1021 & 1022.0). Handrails shall be on both sides of stairway. (Section 1014.7)
12. Headroom in habitable space is a minimum of 7'6". (Section 1204.0)
13. Stair construction in Use Group R-3 & R-4 is a minimum of 10" tread and 7 ¾" maximum rise. All other Use Group minimum 11" tread, 7" maximum rise. (Section 1014.0)
14. The minimum headroom in all parts of a stairway shall not be less than 80 inches. (6'8") 1014.4
15. The Minimum required width of a corridor shall be determined by the most restrictive of the criteria under section 1011.3 but not less then 36".
16. Every sleeping room below the fourth story in buildings of Use Groups R and I-1 shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside without the use of special knowledge or separate tools. Where windows are provided as means of egress or rescue they shall have a sill height not more than 44 inches (1118mm) above the floor. All egress or rescue windows from sleeping rooms shall have a minimum net clear opening height dimension of 24 inches (610mm). The minimum net clear opening width dimension shall be 20 inches (508)mm, and a minimum net clear opening of 5.7 sq. ft. (Section 1010.4)
17. Each apartment shall have access to two (2) separate, remote and approved means of egress. A single exit is acceptable when it exits directly from the apartment to the building exterior with no communications to other apartment units. (Section 1010.1)
18. All vertical openings shall be enclosed with construction having a fire rating of at least one (1) hour, including fire doors with self closure's. (Over 3 stories in height requirements for fire rating is two (2) hours. (Section 710.0)
19. The boiler shall be protected by enclosing with (1) hour fire rated construction including fire doors and ceiling, or by providing automatic extinguishment. (Table 302.1.1)

4/11/01

20. All single and multiple station smoke detectors shall be of an approved type and shall be installed in accordance with the provisions of the City's Building Code Chapter 9, Section 920.3.2 (BOCA National Building Code/1999), and NFPA 101 Chapter 18 & 19. (Smoke detectors shall be installed and maintained at the following locations):
    - **In the immediate vicinity of bedrooms**
    - **In all bedrooms**
    - **In each story within a dwelling unit, including basements**
21. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type. (Section 921.0)
22. The Fire Alarm System shall be installed and maintained to NFPA #72 Standard.
23. The Sprinkler System shall be installed and maintained to NFPA #13 Standard.
24. All exit signs, lights and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023.0 & 1024.0 of the City's Building Code. (The BOCA National Building Code/1999)
25. Section 25 – 135 of the Municipal Code for the City of Portland states, "No person or utility shall be granted a permit to excavate or open any street or sidewalk from the time of November 15 of each year to April 15 of the following year".
26. The builder of a facility to which Section 4594-C of the Maine State Human Rights Act Title 5 MRSA refers, shall obtain a certification from a design professional that the plans commencing construction of the facility, the builder shall submit the certification the Division of Inspection Services.
27. Ventilation and access shall meet the requirements of Chapter 12 Sections 1210.0 and 1211.0 of the City's Building Code. (Crawl spaces & attics).
28. All electrical, plumbing and HVAC permits must be obtained by Master Licensed holders of their trade. <u>No closing in of walls until all electrical</u> (min. 72 hours notice) <u>and plumbing inspections have been done.</u>
29. All requirements must be met before a final Certificate of Occupancy is issued.
30. All building elements shall meet the fastening schedule as per Table 2305.2 of the City's Building Code (The BOCA National Building Code/1996).
31. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical code (The BOCA National Mechanical Code/1993). (Chapter M-16)
32. Please read and implement the attached Land Use Zoning report requirements.
33. Boring, cutting and notching shall be done in accordance with Sections 2305.3, 2305.3.1, 2305.4.4 and 2305.5.1 of the City's Building Code.
34. Bridging shall comply with Section 2305.16.
35. Glass and glazing shall meet the requirements of Chapter 24 of the building code. (Safety Glazing Section 2406.0)
36. All flashing shall comply with Section 1406.3.10.
37. All signage shall be done in accordance with Section 3102.0 signs of the City's Building Code, (The BOCA National Building Code/1999).
38. All work shall Comply with section 409 of The bldg. Code.

P. Samuel Hoffses, Building Inspector
Cc: Lt. McDougall, PFD
Marge Schmuckal, Zoning Administrator
Michael Nugent, Inspection Service Manager

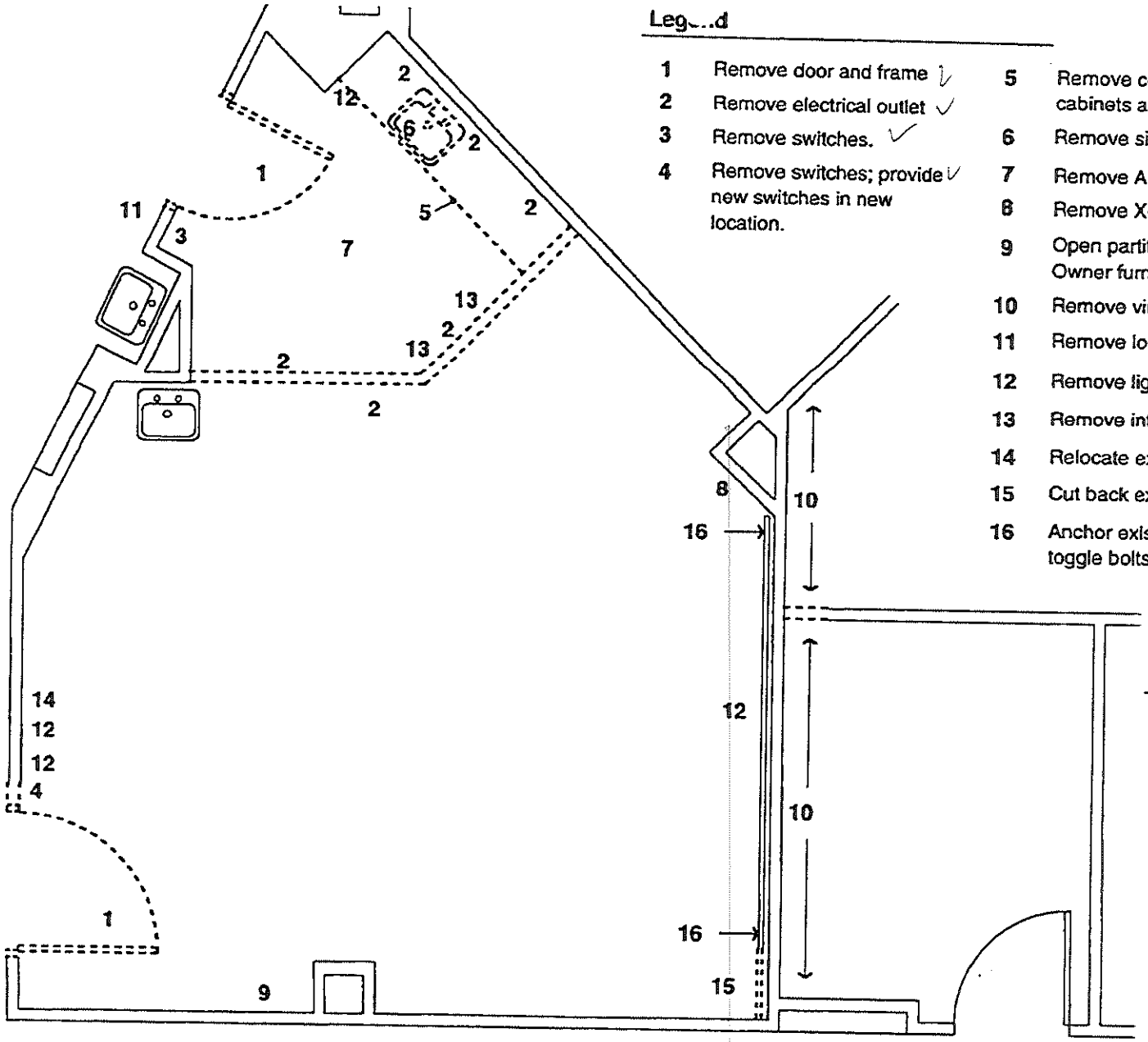
PSH 10/1/00

****This permit is herewith issued, on the basis of plans submitted and conditions placed on these plans, any deviations shall require a separate approval.**

*****THIS PERMIT HAS BEEN ISSUED WITH THE UNDERSTANDING THAT ALL THE CONDITIONS OF THE APPROVAL SHALL BE COMPLETED. THEREFORE, BEFORE THE WORK IS COMPLETED A REVISED PLAN OR STATEMENT FROM THE PERMIT HOLDER SHALL BE SUBMITTED TO THIS OFFICE SHOWING OR EXPLAINING THAT THE CONDITIONS HAVE BEEN MET. IF THIS REQUIREMENT IS NOT RECEIVED YOUR CERTIFICATE OF OCCUPANCY SHALL BE WITHHELD. ( You Shall Call for Inspections )**

******ALL PLANS THAT REQUIRE A PROFESSIONAL DESIGNER'S SEAL, (AS PER SECTION 114.0 OF THE BUILDING CODE) SHALL ALSO BE PRESENTED TO THIS DIVISION ON AUTO CAD LT. 2000, DXF FORMAT OR EQUIVALENT.**

*******CERTIFICATE OF OCCUPANCY FEE $50.00**




## Legend

1 Remove door and frame
2 Remove electrical outlet
3 Remove switches.
4 Remove switches; provide new switches in new location.
5 Remove counter. Remove base and wall cabinets and turn over to Owner for reuse.
6 Remove sink and branch piping back to mains.
7 Remove ACT ceiling and lights in this room.
8 Remove X-Ray outlet and circuit.
9 Open partition, install solid blocking for Owner furnished lead apron rack and patch.
10 Remove vinyl base and save for reuse.
11 Remove lock keypad, wiring and patch GWB.
12 Remove light switch and wiring.
13 Remove intercom unit and wiring.
14 Relocate existing fire extinguisher.
15 Cut back exist PLAM wall overlay.
16 Anchor exist overlay to GWB with (4) 1/4" toggle bolts with chrome head & grommet.

**Notes:**

Remove flooring and base throughout and provide 1/8" portland/latex skim coat.

See reflected ceiling plan for GWB ceiling removal.

---- Remove GWB partition.

## Removals Plan

1/4" = 1'-0"

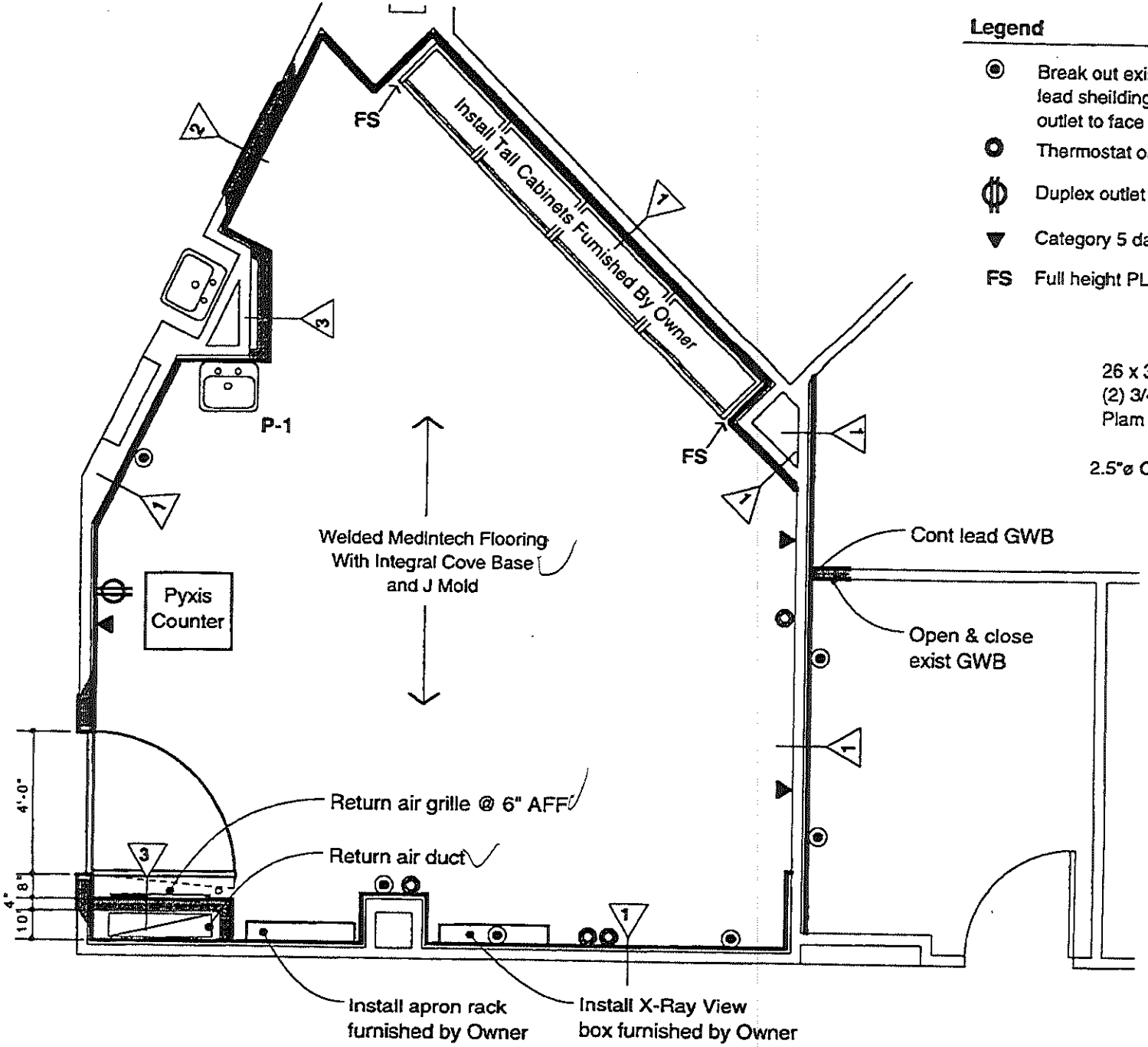
# Nephrology Intervention Room

Maine Medical Center Brighton Campus

Winton Scott Architects
5 Milk Street
Portland, Maine 04101

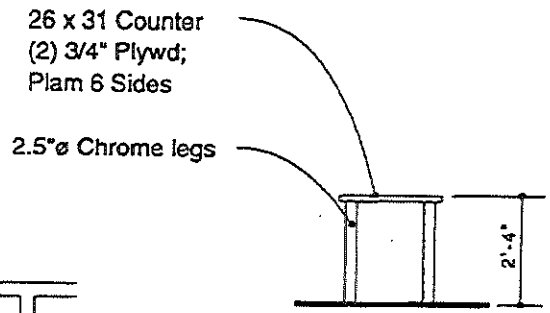
**D 1**

February 5, 2001




**Legend**

- Break out exist GWB and provide lead sheilding at existing duplex outlet. Extend outlet to face of new GWB overlay.
- Thermostat or intercom device per above.
- Duplex outlet with lead sheilding
- Category 5 data outlet with lead shielding
- FS Full height PLAM filler strip. Scribe to GWB.




**Pyxis Counter Elevation**

1/4" = 1'-0"

**P-1**

Remove exist sink. Break out GWB and provide lead shielding at piping penetrations. Reinstall to accomodate proposed thicker wall. Provide Chicago Faucets 834-EP pedal valve.

**Floor Plan**

1/4" = 1'-0"

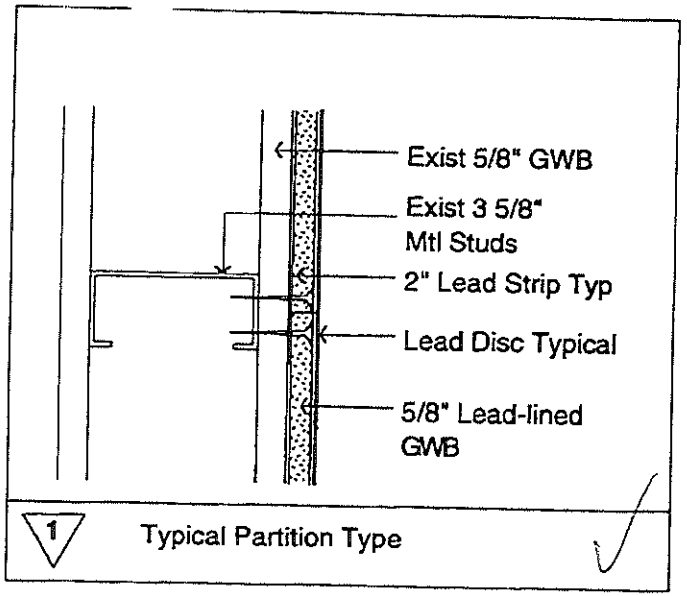
**A 1**

# Nephrology Intervention Room

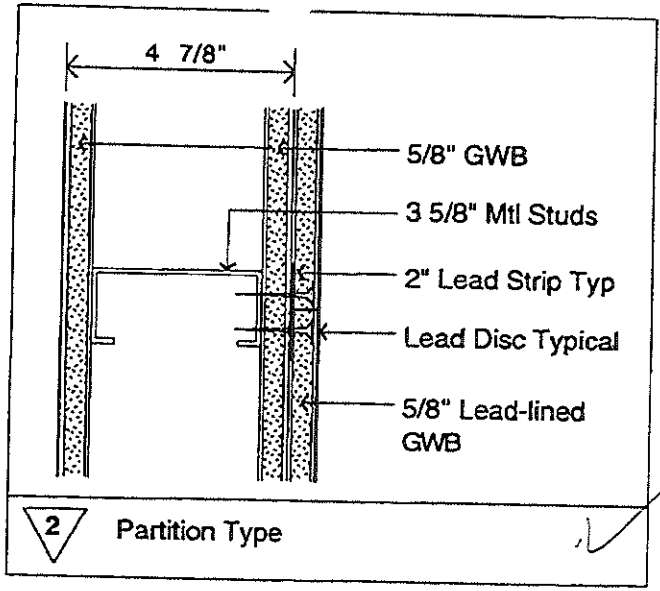
Maine Medical Center Brighton Campus

Winton Scott Architects
5 Milk Street
Portland, Maine 04101

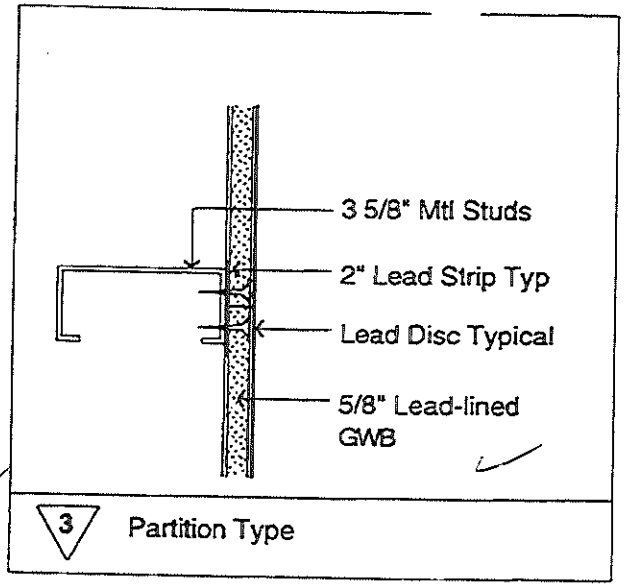
February 5, 2001




1 Typical Partition Type

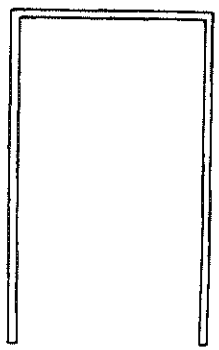



2 Partition Type

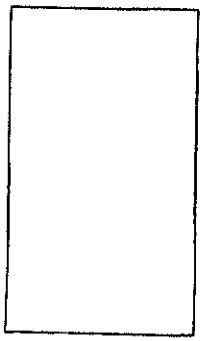



3 Partition Type

**Note:** Provide continuous 2" wide vertical lead 90º folded strip at all inside and outside corners.



HM Frame
1/4" = 1'-0"



Door
1/4" = 1'-0"

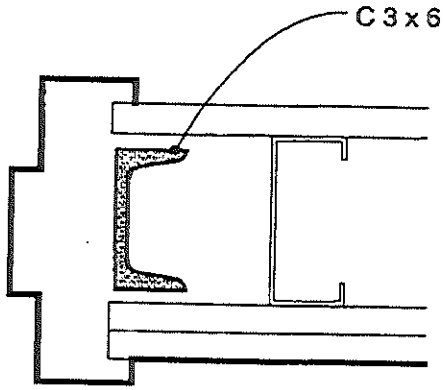
**Door and Hardware Notes:**

Wood door with 1/16" lead center lining
- Prefit, premachined
- Factory prime, field paint
- 3 ply birch skin
- Lifetime warranty

Acrovyn armor plate and edge guards
4'-0" x 7'-0" x 1 3/4"
Rixon Pivots: Top/L180; Intermediate/ML19
Rixon DA-L27-AHO-90 Recessed Floor Closer
- Delayed Action
- Auto Hold Open @ 90º

Glynn Johnson HL-6 US 32D Hospital Latchset
- Include Lead Lining Option
- 5" Backset
- "Push" and "Pull" engraved

Floor Stop (Set at 95º Position)
All US 26D Finish




Door Jamb Detail
3" = 1'-0"

## Partition And Door Details

## Nephrology Intervention Room

Maine Medical Center Brighton Campus

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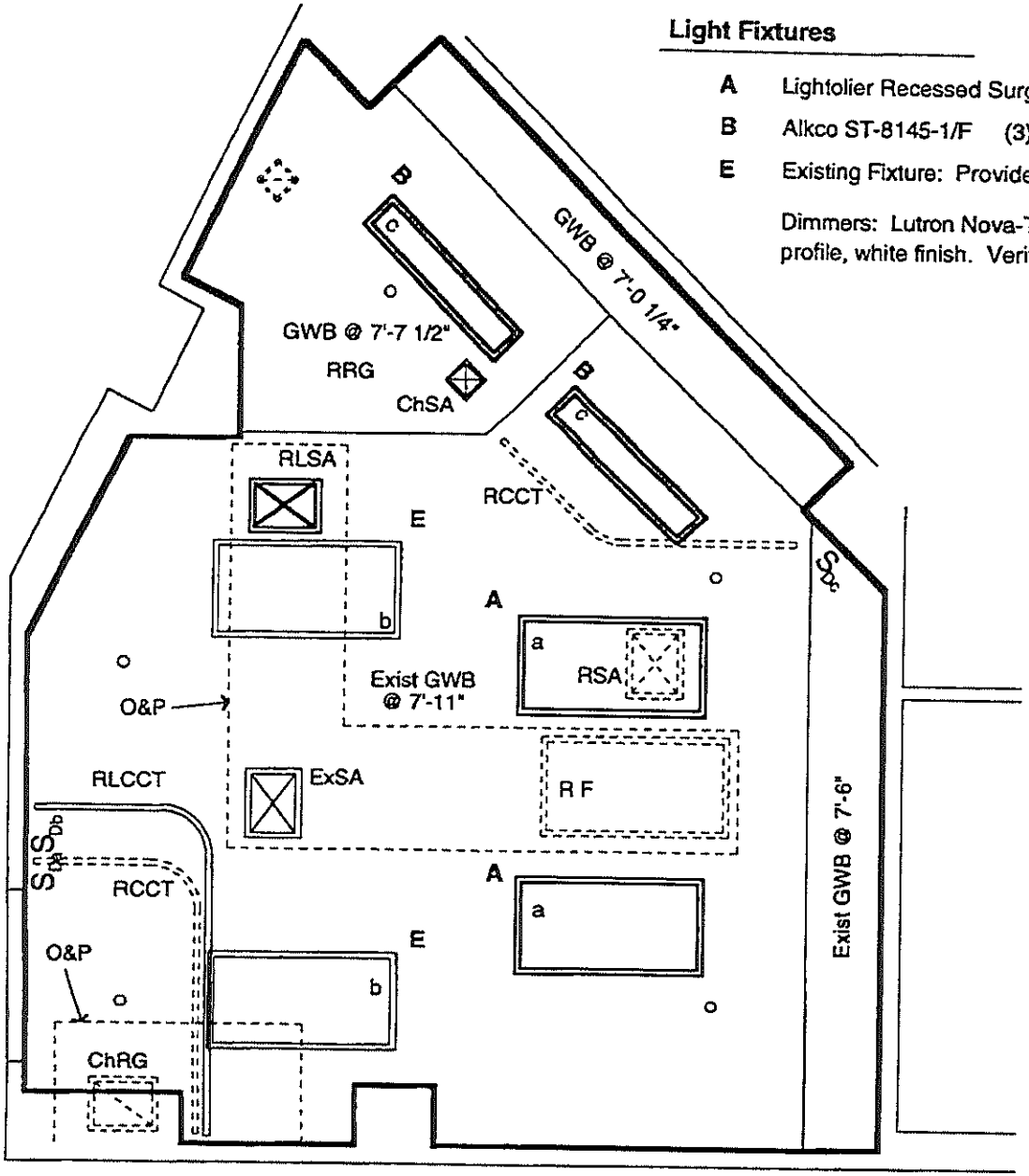
A 2

February 5, 2001




## Light Fixtures

| | | |
|---|---|---|
| A | Lightolier Recessed Surgical 2x4 | SUS2FFSMA440-VAC-PS-ACP2-RF Verify voltage. |
| B | Alkco ST-8145-1/F | (3) F32T8 Provide dimming ballast, verify voltage. |
| E | Existing Fixture: Provide dimming ballast and lamps | |

Dimmers: Lutron Nova-T NTF-10-120, slide-to-off, thin profile, white finish. Verify voltage and ballsat.

## Legend

| | |
|---|---|
| RSA | Remove supply air grille and patch ceiling |
| O&P | Open and patch ceiling |
| RLSA | Relocated supply air grille |
| ExSA | Existing supply air grille |
| R F | Remove light fixture, patch GWB |
| o | Existing sprinkler head |
| RRG | Remove return air grille and ductwork back to main and cap |
| ChSA | Remove supply air grille and provide grille with GWB frame. |
| ChRG | Remove return air grille and provide ductowrk drop in chase and sidewall grille. |
| RCCT | Remove cubicle curtain track. |
| RLCCT | Relocated/modified cubicle curtain track. |

## Reflected Ceiling Plan

1/4" = 1'-0"

**A 3**

# Nephrology Intervention Room

Maine Medical Center Brighton Campus

Winton Scott Architects
5 Milk Street
Portland, Maine 04101

February 5, 2001

# SECTION 13091 X-RAY PROTECTION

## PART 1 - GENERAL

### 1.01 SECTION INCLUDES

A. This section includes the following:
1. Lead sheet.
2. Lead-lined gypsum board.
3. Lead-lined metal door frames.
4. Lead-lined wood doors.
5. Informational signs.

### 1.02 DEFINITIONS

A. Lead Equivalence: The thickness of lead that provides the same attenuation (reduction of radiation upon passing through) under the specified conditions as the material in question.

### 1.03 SYSTEM PERFORMANCE REQUIREMENTS

A. Lead thicknesses and configurations have been determined by the Owner. The Contractor will not be expected to provide x-ray protection exceeding that physically possible by the materials indicated in the thicknesses and locations indicated.

1. The Owner's radiation protection design report is available to the Contractor upon request.

B. Make joints, fasten to substrates and shield penetrations to maintain the integrity of the shielding system.

C. Lead Thicknesses: Provide 1/16" lead thickness for all items. Unless otherwise indicated, the thickness of lead used in doors, door frames, windows, penetration shielding, joint strips, film transfer cabinets, and other items located in a lead-lined assembly shall not be less than that of lead in the assembly where they are installed.

### 1.04 SUBMITTALS

A. Submit in accordance with Section 01300, manufacturer's detailed technical product information and installation instructions for each item of x-ray protection and accessories required.

B. Submit shop drawings showing the layout of the entire x-ray protected area. Show special components and installation conditions that are not fully dimensionned or detailed in product data submittals.

### 1.06 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has successfully installed x-ray protection materials and products similar in material, design, and extent to those required for this Project.

B. Manufacturer Qualifications: Provide x-ray protection materials, equipment, and accessories produced as standard products by a manufacturer regularly engaged in producing x-ray protection materials.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Lead-Lined Gypsum Board: Comply with requirements of Section 09250 for delivery, storage, and handling requirements.

B. Lead-Lined Metal Door Frames: Comply with requirements of Section 08110 for delivery, storage, and handling requirements.

C. Lead-Lined Wood Doors: Comply with requirements of applicable Section 08211 for delivery, storage, and handling requirements.

1. Package prefinished doors individually at the factory prior to shipping, using the manufacturer's standard plastic or paper wrapping.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with requirements, provide products by one of the following or equal:

1. Lead Products and Products Fabricated with Lead:
   a. A & L Lead Company, Inc.
   b. Ameray Company.
   c. Bar-Ray Products, Inc.
   d. NELCO (New England Lead Burning Company, Inc.)
   e. Radiation Protection Products, Inc.
   f. Shielding Industries, Inc.

2.02 MATERIALS

A. Lead Sheet: Rolled sheet lead conforming to requirements of FS QQ-L-201, Grade C, or ASTM B749, type L51120 (chemical lead), in sizes and thicknesses indicated.

B. Lead-Lined Gypsum Board: Comply with requirements of ASTM C36. Provide board not less than 5/8 inch thick, of width and length required for support spacing and to prevent cracking during handling. Laminate a single sheet of lead, thickness as indicated, to back of board. Provide 1-1/2 inch wide lead strips for lapping at joints.

C. Lead-Headed Nails: Provide lead-headed nails of size, type, and design recommended by the system manufacturer.

E. Accessories and Fasteners: Provide the manufacturer's standard fasteners and accessories as required for installation, maintaining the same protection as the system.

2.03 MANUFACTURED UNITS

A. Lead-Lined Wood Doors: Solid-core, 5 ply flush construction with one or more continuous lead sheets to make up the total lead thickness.
   1. Core: Solid glued wood block or solid particleboard, glued to top and bottom rails and edge stiles. Lead lining may be constructed in the core or between the core and faces, at the manufacturer's option.
   2. Lead Lining: Extend lead sheet continuously from top to bottom and edge to edge. Assemble lead lining and core with poured lead fasteners or steel bolts. Space lead dowels not more than 1-1/2 inches from door edge and approximately 8 inches on

center. Countersink bolt heads and cover with poured lead.

3. Faces: Minimum 1/50 inch thick natural wood veneer, with cross-band.
4. Face veneers: Slip-matched, quarter sliced Hard Select White Maple, HPMA/AWI Grade AA, not less than 1/50 inch thick.
5. Factory-prefit to frames for 1/16 inch clearance at jambs and top and minimum clearance at bottom; premachine for hardware.
6 Finish: Factory-finish with the manufacturer's standard transparent catalyzed lacquer or conversion varnish.
7. Shield cutouts for locksets with sheet lead of the same thickness used in the door. Lap lining of cutouts with the door lining.
8 Prepare doors to receive viewing windows and louvers as indicated. Provide removable wood stops for glazed openings.
9. Provide lead-lined astragals for pairs of doors.

B. Lead-Lined Metal Door Frames: Minimum 16 gage formed steel sheet, with saw-mitered and fully welded corners.

1. Provide additional reinforcements and internal supports to adequately carry the weight of lead-lined doors. Perform such work prior to installing lead lining.
2. Line the inside of frames with sheet lead of thickness not less than that used in doors and walls where the frames are used. Form lead sheet to match the frame contour, continuous in each jamb and across the head, lapping the stops. Form lead shields around areas prepared to receive hardware. Fabricate lead lining wide enough to maintain an effective lap with the lead of adjoining shielding.

2.04 INFORMATIONAL SIGNS

A. Informational Signs, General: Provide signs in rooms as indicated. Fabricate signs from melamine plastic with contrasting color core with engraved lettering, attached with double-sided foam tape. Provide lettering as indicated or as directed by the Owner's health physicist. Provide signs of sufficient size to contain the required information.

1. Color: As selected by Architect from manufacturer's standard colors.
2. Indicate lead thicknesses in millimeters.

B. Rooms Where the Level of Protection is Uniform Throughout: Provide one sign for each room indicating the thickness of sheet lead and the total lead equivalence of partitions, ceiling, floor, doors, and other portions of the x-ray protection enclosure.

C. Rooms Where the Level of Protection is Not Uniform Throughout: N/A

D. Rooms with Non-Lead-Lined Partitions: N/A

E. Rooms Where Only Door is Shielded: N/A

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates in areas to receive x-ray protection before beginning installation to ensure that surfaces and existing conditions are suitable for the installation. Do not proceed with the installation until unsuitable conditions have been corrected.

B. Concrete Surfaces: N/A

3.02 PREPARATION

A. Field Measurements: Take field measurements prior to preparing shop drawings and fabrication, where possible, to ensure the work will fit properly.

3.03 INSTALLATION OF LEAD-LINED GYPSUM BOARD

A. Install board over supports as indicated.

B. Install board with long edge parallel to supports and lead lining facing supports. Provide blocking at end joints.

C. Openings: Extend gypsum board into frames of openings, lapping lead lining with lead frames or frame linings. Arrange board around openings so that neither horizontal nor vertical joints occur at corners of openings.

D. Install lead strips 1-1/2 inch wide minimum, and same thickness as the lead lining to face of supports and blocking where joints occur. Secure lead strips with nails along outer edges. Provide shims at intermediate supports.

E. Fastening to Wood Supports: Use lead-headed nails spaced as recommended by gypsum board manufacturer. Drive nail heads slightly below exposed surface.

F. Fastening to Metal Supports: Use drywall screws spaced as recommended by gypsum board manufacturer. Cover heads of screws with lead discs recessed flush into surface of board.

G. Two-Layer Systems: Apply a facing sheet of gypsum board over the base sheet using the manufacturer's recommended bonding adhesive. To ensure a positive bond, maintain pressure on the finish panel until the adhesive has set.

H. Install corner beads at external corners.

I. Install metal edge trim wherever edge of board would otherwise be exposed or partially exposed. Provide type with face flange to receive joint compound.

J. Finishing: See Division 9 Section "Gypsum Board Assemblies" for joint treatment and preparation for finishing.

3.04 INSTALLATION OF DOORS AND FRAMES

A. See applicable Sections in Division 8.

B. Frames: Install frames prior to constructing walls. Set frames accurately, plumb, and braced securely until permanent anchors are set.
   1. Provide three anchors per jamb, located adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb.
   2. In metal stud construction, use wall anchors attached to studs with screws.

C. Lap lead-lining of frames over lining in walls.

D. Line astragals with sheet lead.

E. Hardware: Line covers, escutcheons, and plates, as required, to provide effective shielding at cutouts and penetrations of frames and doors. See Division 8 Section "Door Hardware" for other installation requirements.

3.05 INSTALLATION OF PENETRATING ITEMS

A. At penetrations of lead linings, provide lead shields, as required, to maintain continuity of protection. Install shields according to manufacturer's instructions and as indicated.

B. Provide lead linings, sleeves, shields and other protection in an equivalent thickness of the lead used in the protection system being penetrated.

C. Secure shield: At penetrations using adhesive or wire ties but not penetrating fasteners, unless indicated on Drawings.

D. Outlet Boxes and Conduit: Cover or line with lead sheet lapped over adjacent lead lining. Wrap conduit with lead sheet for 10 inches from box.

E. Duct Openings: Line or wrap ducts with lead sheet for distance from partition/ceiling equal to three times the largest opening dimension. Lap lead sheet with adjacent lead lining.

F. Piping: Wrap piping with lead sheet for 10 inches from the point of penetration.

3.06 FIELD QUALITY CONTROL

A. Testing: After x-ray equipment has been installed and placed in operating condition, the Owner will arrange and pay for a health physicist to test the x-ray protection.

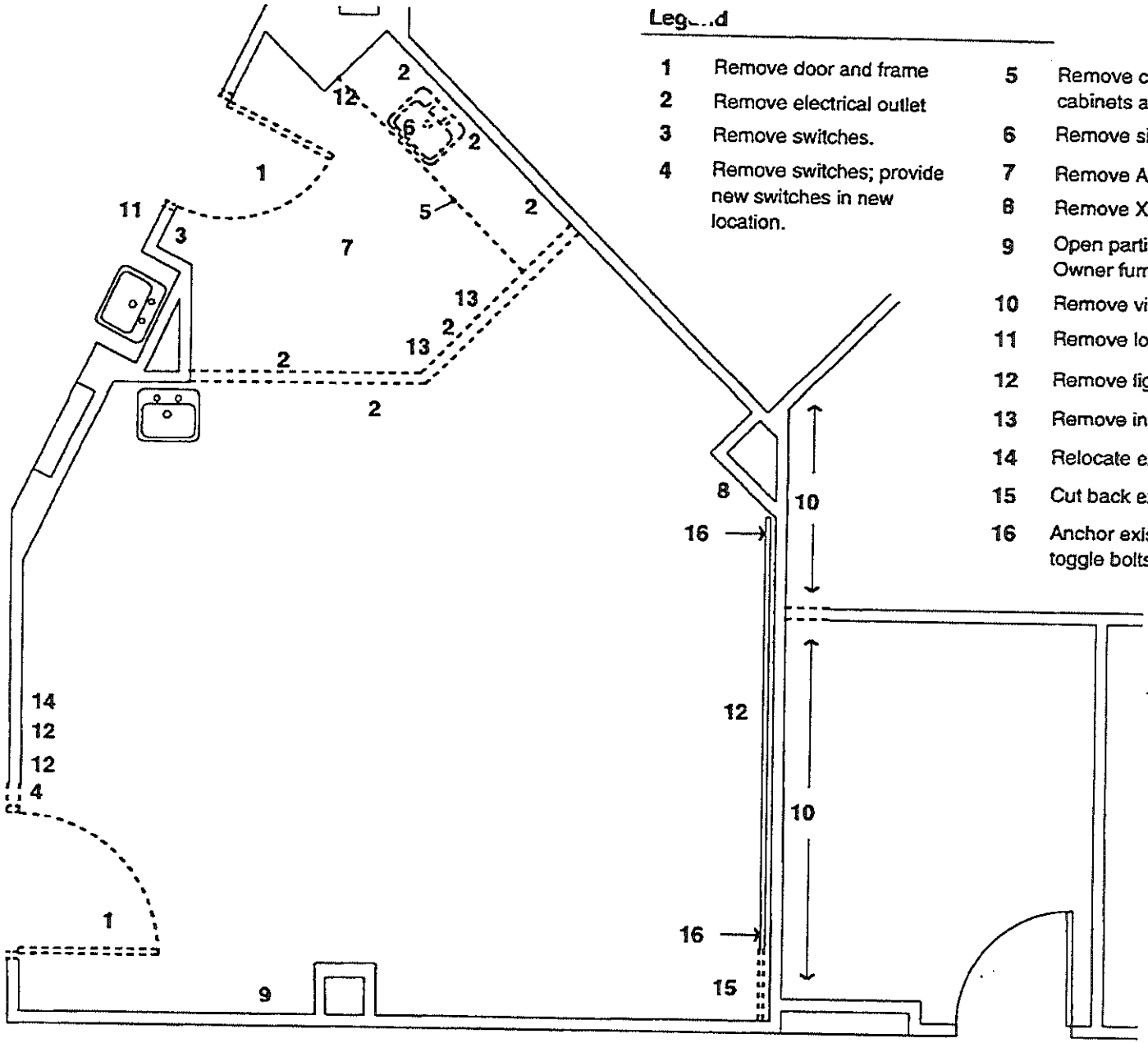
B. Make corrections required by the health physicist.

C. In the case of defective work, uncover and repair or replace, including work affected thereby. Arrange and pay for additional testing by the health physicist until no more corrections are required.

3.07 PROTECTION

A. Provide final protection and maintain conditions that ensures the x-ray protection is without damage or deterioration at the time of Substantial Completion.

END OF SECTION




## Legend

1 Remove door and frame

2 Remove electrical outlet

3 Remove switches.

4 Remove switches; provide new switches in new location.

5 Remove counter. Remove base and wall cabinets and turn over to Owner for reuse.

6 Remove sink and branch piping back to mains.

7 Remove ACT ceiling and lights in this room.

8 Remove X-Ray outlet and circuit.

9 Open partition, install solid blocking for Owner furnished lead apron rack and patch.

10 Remove vinyl base and save for reuse.

11 Remove lock keypad, wiring and patch GWB.

12 Remove light switch and wiring.

13 Remove intercom unit and wiring.

14 Relocate existing fire extinguisher.

15 Cut back exist PLAM wall overlay.

16 Anchor exist overlay to GWB with (4) 1/4" toggle bolts with chrome head & grommet.

## Notes:

Remove flooring and base throughout and provide 1/8" portland/latex skim coat.

See reflected ceiling plan for GWB ceiling removal.

---- Remove GWB partition.

## Removals Plan

1/4" = 1'-0"

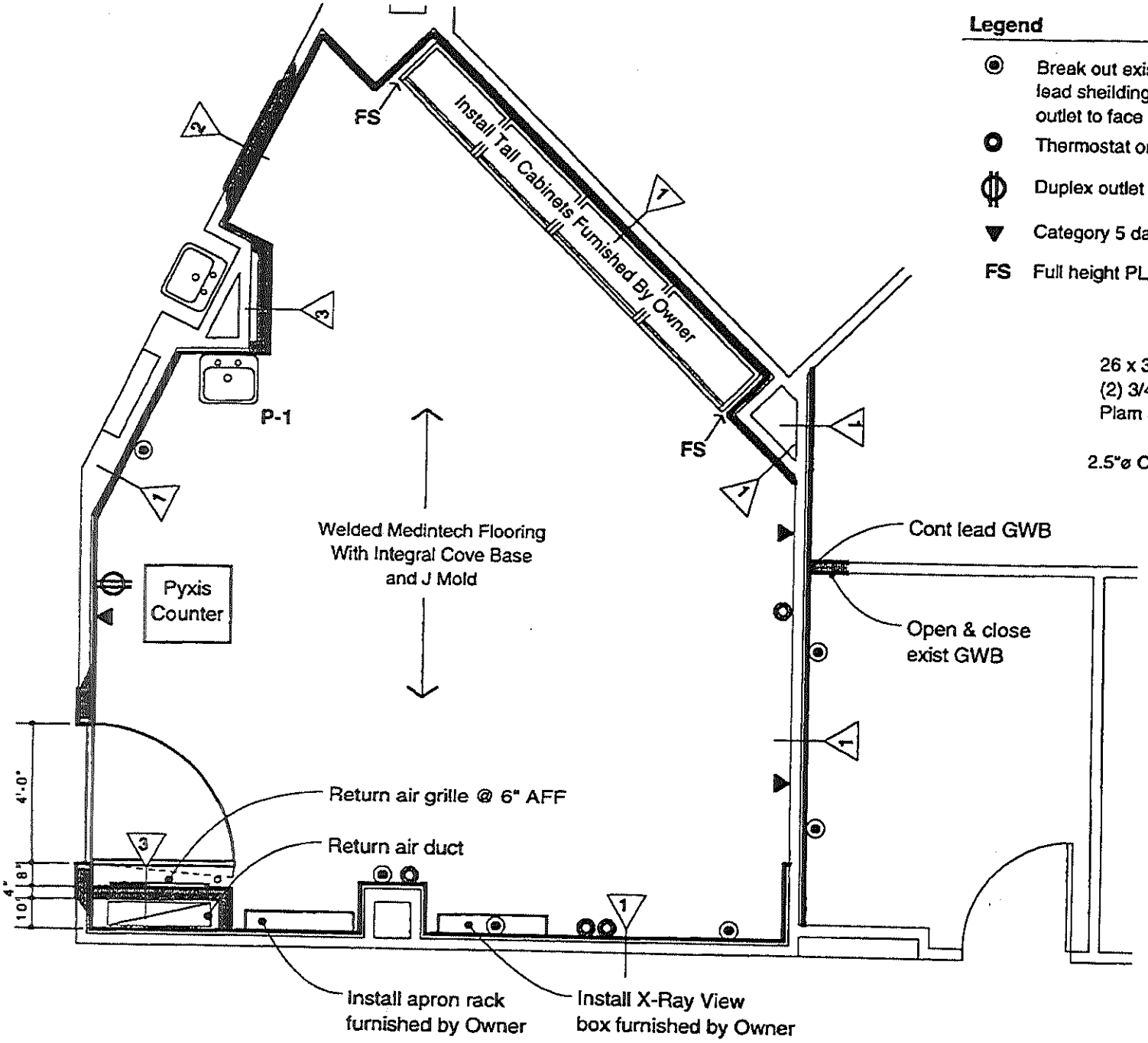
# Nephrology Intervention Room

Maine Medical Center Brighton Campus

Winton Scott Architects
5 Milk Street
Portland, Maine 04101

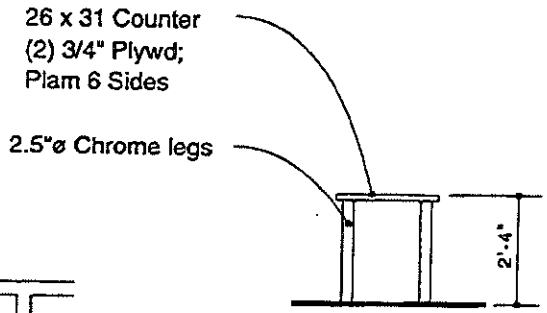
D 1

February 5, 2001




**Legend**

- Break out exist GWB and provide lead sheilding at existing duplex outlet. Extend outlet to face of new GWB overlay.
- Thermostat or intercom device per above.
- Duplex outlet with lead sheilding
- Category 5 data outlet with lead shielding
- FS Full height PLAM filler strip. Scribe to GWB.




**Pyxis Counter Elevation**

1/4" = 1'-0"

**P-1**

Remove exist sink. Break out GWB and provide lead sheilding at piping penetrations. Reinstall to accomodate proposed thicker wall. Provide Chicago Faucets 834-EP pedal valve.

**Floor Plan**

1/4" = 1'-0"

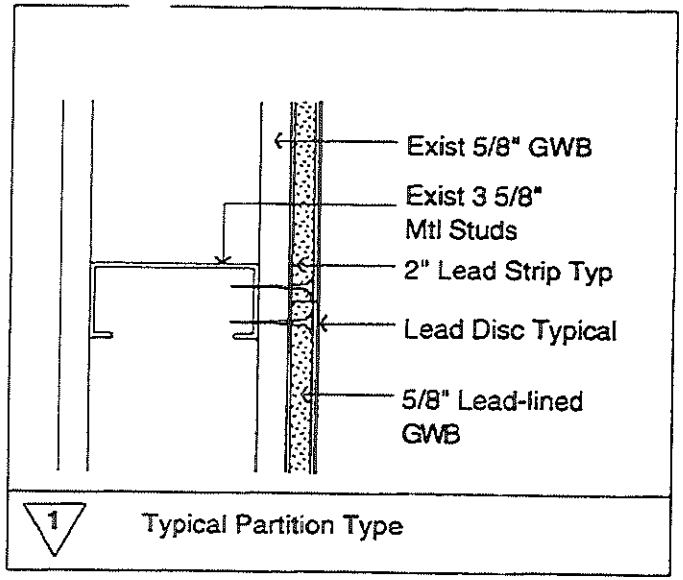
# Nephrology Intervention Room

Maine Medical Center Brighton Campus

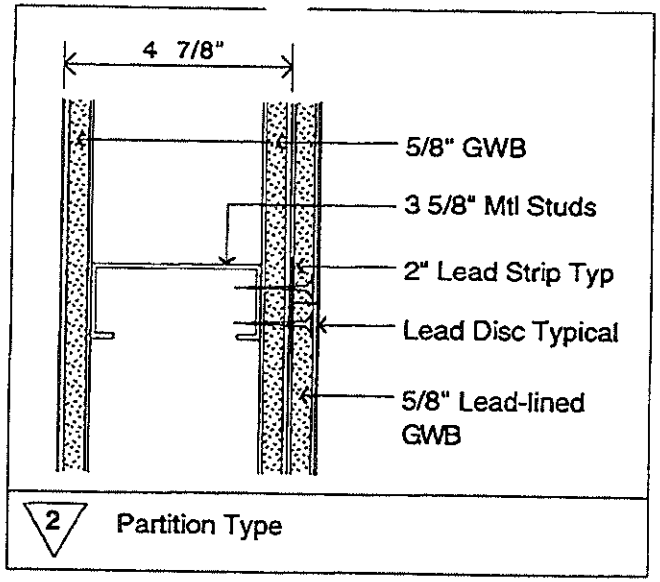
Winton Scott Architects
5 Milk Street
Portland, Maine 04101

**A 1**

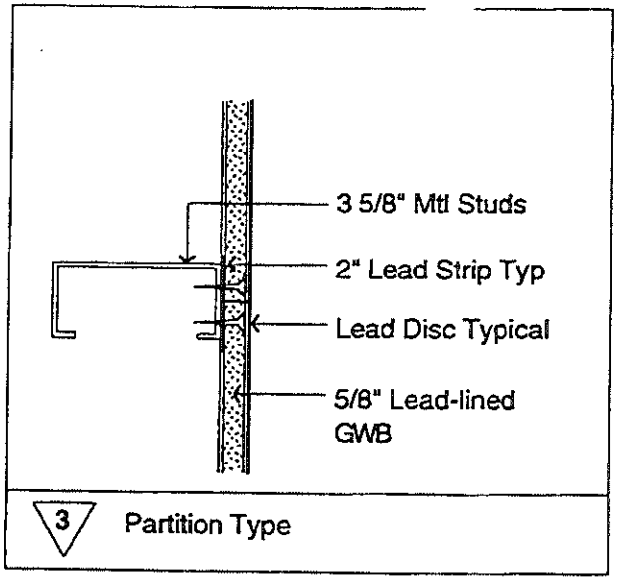
February 5, 2001




1 Typical Partition Type

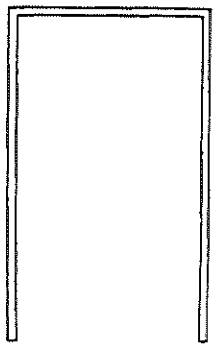



2 Partition Type

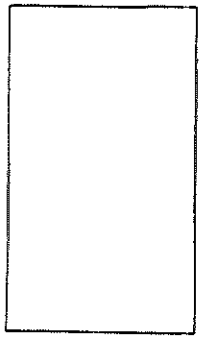



3 Partition Type

Note: Provide continuous 2" wide vertical lead 90º folded strip at all inside and outside corners.



HM Frame
1/4" = 1'-0"



Door
1/4" = 1'-0"

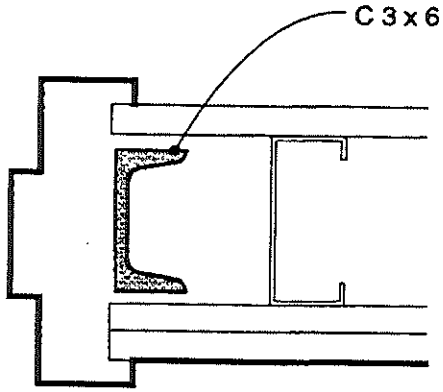
**Door and Hardware Notes:**

Wood door with 1/16" lead center lining
- Prefit, premachined
- Factory prime, field paint
- 3 ply birch skin
- Lifetime warranty

Acrovyn armor plate and edge guards
4'-0" x 7'-0" x 1 3/4"
Rixon Pivots: Top/L180; Intermediate/ML19
Rixon DA-L27-AHO-90 Recessed Floor Closer
- Delayed Action
- Auto Hold Open @ 90º

Glynn Johnson HL-6 US 32D Hospital Latchset
- Include Lead Lining Option
- 5" Backset
- "Push" and "Pull" engraved

Floor Stop (Set at 95º Position)
All US 26D Finish




Door Jamb Detail
3" = 1'-0"

## Partition And Door Details

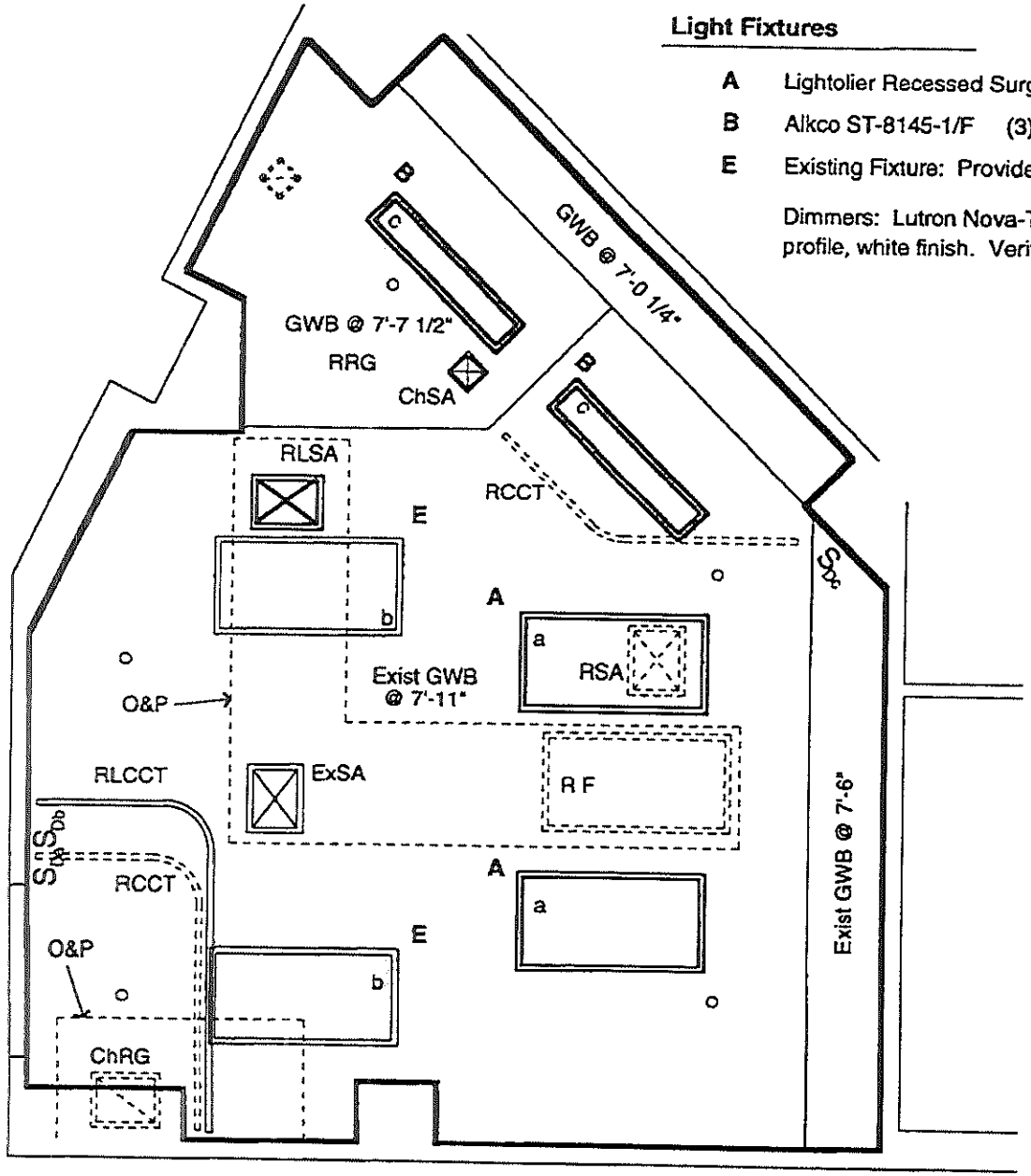
# A 2

February 5, 2001

## Nephrology Intervention Room

Maine Medical Center Brighton Campus

Winton Scott Architects
5 Milk Street
Portland, Maine 04101




## Light Fixtures

| | | |
|---|---|---|
| A | Lightolier Recessed Surgical 2x4 | SUS2FFSMA440-VAC-PS-ACP2-RF Verify voltage. |
| B | Alkco ST-8145-1/F | (3) F32T8 Provide dimming ballast, verify voltage. |
| E | Existing Fixture: Provide dimming ballast and lamps | |

Dimmers: Lutron Nova-T NTF-10-120, slide-to-off, thin profile, white finish. Verify voltage and ballsat.

## Legend

| | |
|---|---|
| RSA | Remove supply air grille and patch ceiling |
| O&P | Open and patch ceiling |
| RLSA | Relocated supply air grille |
| ExSA | Existing supply air grille |
| R F | Remove light fixture, patch GWB |
| o | Existing sprinkler head |
| RRG | Remove return air grille and ductwork back to main and cap |
| ChSA | Remove supply air grille and provide grille with GWB frame. |
| ChRG | Remove return air grille and provide ductowrk drop in chase and sidewall grille. |
| RCCT | Remove cubicle curtain track. |
| RLCCT | Relocated/modified cubicle curtain track. |

## Reflected Ceiling Plan

1/4" = 1'-0"

# A 3

February 5, 2001

## Nephrology Intervention Room

Maine Medical Center Brighton Campus

Winton Scott Architects
5 Milk Street
Portland, Maine 04101

**SECTION 13091 X-RAY PROTECTION**

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This section includes the following:
1. Lead sheet.
2. Lead-lined gypsum board.
3. Lead-lined metal door frames.
4. Lead-lined wood doors.
5. Informational signs.

1.02 DEFINITIONS

A. Lead Equivalence: The thickness of lead that provides the same attenuation (reduction of radiation upon passing through) under the specified conditions as the material in question.

1.03 SYSTEM PERFORMANCE REQUIREMENTS

A. Lead thicknesses and configurations have been determined by the Owner. The Contractor will not be expected to provide x-ray protection exceeding that physically possible by the materials indicated in the thicknesses and locations indicated.

1. The Owner's radiation protection design report is available to the Contractor upon request.

B. Make joints, fasten to substrates and shield penetrations to maintain the integrity of the shielding system.

C. Lead Thicknesses: Provide 1/16" lead thickness for all items. Unless otherwise indicated, the thickness of lead used in doors, door frames, windows, penetration shielding, joint strips, film transfer cabinets, and other items located in a lead-lined assembly shall not be less than that of lead in the assembly where they are installed.

1.04 SUBMITTALS

A. Submit in accordance with Section 01300, manufacturer's detailed technical product information and installation instructions for each item of x-ray protection and accessories required.

B. Submit shop drawings showing the layout of the entire x-ray protected area. Show special components and installation conditions that are not fully dimensionned or detailed in product data submittals.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has successfully installed x-ray protection materials and products similar in material, design, and extent to those required for this Project.

B. Manufacturer Qualifications: Provide x-ray protection materials, equipment, and accessories produced as standard products by a manufacturer regularly engaged in producing x-ray protection materials.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Lead-Lined Gypsum Board: Comply with requirements of Section 09250 for delivery, storage, and handling requirements.

B. Lead-Lined Metal Door Frames: Comply with requirements of Section 08110 for delivery, storage, and handling requirements.

C. Lead-Lined Wood Doors: Comply with requirements of applicable Section 08211 for delivery, storage, and handling requirements.

1. Package prefinished doors individually at the factory prior to shipping, using the manufacturer's standard plastic or paper wrapping.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with requirements, provide products by one of the following or equal:

1. Lead Products and Products Fabricated with Lead:
   a. A & L Lead Company, Inc.
   b. Ameray Company.
   c. Bar-Ray Products, Inc.
   d. NELCO (New England Lead Burning Company, Inc.)
   e. Radiation Protection Products, Inc.
   f. Shielding Industries, Inc.

2.02 MATERIALS

A. Lead Sheet: Rolled sheet lead conforming to requirements of FS QQ-L-201, Grade C, or ASTM B749, type L51120 (chemical lead), in sizes and thicknesses indicated.

B. Lead-Lined Gypsum Board: Comply with requirements of ASTM C36. Provide board not less than 5/8 inch thick, of width and length required for support spacing and to prevent cracking during handling. Laminate a single sheet of lead, thickness as indicated, to back of board. Provide 1-1/2 inch wide lead strips for lapping at joints.

C. Lead-Headed Nails: Provide lead-headed nails of size, type, and design recommended by the system manufacturer.

E. Accessories and Fasteners: Provide the manufacturer's standard fasteners and accessories as required for installation, maintaining the same protection as the system.

2.03 MANUFACTURED UNITS

A. Lead-Lined Wood Doors: Solid-core, 5 ply flush construction with one or more continuous lead sheets to make up the total lead thickness.
   1. Core: Solid glued wood block or solid particleboard, glued to top and bottom rails and edge stiles. Lead lining may be constructed in the core or between the core and faces, at the manufacturer's option.
   2. Lead Lining: Extend lead sheet continuously from top to bottom and edge to edge. Assemble lead lining and core with poured lead fasteners or steel bolts. Space lead dowels not more than 1-1/2 inches from door edge and approximately 8 inches on

center. Countersink bolt heads and cover with poured lead.

3. Faces: Minimum 1/50 inch thick natural wood veneer, with cross-band.
4. Face veneers: Slip-matched, quarter sliced Hard Select White Maple, HPMA/AWI Grade AA, not less than 1/50 inch thick.
5. Factory-prefit to frames for 1/16 inch clearance at jambs and top and minimum clearance at bottom; premachine for hardware.
6 Finish: Factory-finish with the manufacturer's standard transparent catalyzed lacquer or conversion varnish.
7. Shield cutouts for locksets with sheet lead of the same thickness used in the door. Lap lining of cutouts with the door lining.
8 Prepare doors to receive viewing windows and louvers as indicated. Provide removable wood stops for glazed openings.
9. Provide lead-lined astragals for pairs of doors.

B. Lead-Lined Metal Door Frames: Minimum 16 gage formed steel sheet, with saw-mitered and fully welded corners.
   1. Provide additional reinforcements and internal supports to adequately carry the weight of lead-lined doors. Perform such work prior to installing lead lining.
   2. Line the inside of frames with sheet lead of thickness not less than that used in doors and walls where the frames are used. Form lead sheet to match the frame contour, continuous in each jamb and across the head, lapping the stops. Form lead shields around areas prepared to receive hardware. Fabricate lead lining wide enough to maintain an effective lap with the lead of adjoining shielding.

2.04 INFORMATIONAL SIGNS

A. Informational Signs, General: Provide signs in rooms as indicated. Fabricate signs from melamine plastic with contrasting color core with engraved lettering, attached with double-sided foam tape. Provide lettering as indicated or as directed by the Owner's health physicist. Provide signs of sufficient size to contain the required information.
   1. Color: As selected by Architect from manufacturer's standard colors.
   2. Indicate lead thicknesses in millimeters.

B. Rooms Where the Level of Protection is Uniform Throughout: Provide one sign for each room indicating the thickness of sheet lead and the total lead equivalence of partitions, ceiling, floor, doors, and other portions of the x-ray protection enclosure.

C. Rooms Where the Level of Protection is Not Uniform Throughout: N/A

D. Rooms with Non-Lead-Lined Partitions: N/A

E. Rooms Where Only Door is Shielded: N/A

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates in areas to receive x-ray protection before beginning installation to ensure that surfaces and existing conditions are suitable for the installation. Do not proceed with the installation until unsuitable conditions have been corrected.

B. Concrete Surfaces: N/A

3.02 PREPARATION

A. Field Measurements: Take field measurements prior to preparing shop drawings and fabrication, where possible, to ensure the work will fit properly.

3.03 INSTALLATION OF LEAD-LINED GYPSUM BOARD

A. Install board over supports as indicated.

B. Install board with long edge parallel to supports and lead lining facing supports. Provide blocking at end joints.

C. Openings: Extend gypsum board into frames of openings, lapping lead lining with lead frames or frame linings. Arrange board around openings so that neither horizontal nor vertical joints occur at corners of openings.

D. Install lead strips 1-1/2 inch wide minimum, and same thickness as the lead lining to face of supports and blocking where joints occur. Secure lead strips with nails along outer edges. Provide shims at intermediate supports.

E. Fastening to Wood Supports: Use lead-headed nails spaced as recommended by gypsum board manufacturer. Drive nail heads slightly below exposed surface.

F. Fastening to Metal Supports: Use drywall screws spaced as recommended by gypsum board manufacturer. Cover heads of screws with lead discs recessed flush into surface of board.

G. Two-Layer Systems: Apply a facing sheet of gypsum board over the base sheet using the manufacturer's recommended bonding adhesive. To ensure a positive bond, maintain pressure on the finish panel until the adhesive has set.

H. Install corner beads at external corners.

I. Install metal edge trim wherever edge of board would otherwise be exposed or partially exposed. Provide type with face flange to receive joint compound.

J. Finishing: See Division 9 Section "Gypsum Board Assemblies" for joint treatment and preparation for finishing.

3.04 INSTALLATION OF DOORS AND FRAMES

A. See applicable Sections in Division 8.

B. Frames: Install frames prior to constructing walls. Set frames accurately, plumb, and braced securely until permanent anchors are set.
   1. Provide three anchors per jamb, located adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb.
   2. In metal stud construction, use wall anchors attached to studs with screws.

C. Lap lead-lining of frames over lining in walls.

D. Line astragals with sheet lead.

E. Hardware: Line covers, escutcheons, and plates, as required, to provide effective shielding at cutouts and penetrations of frames and doors. See Division 8 Section "Door Hardware" for other installation requirements.

3.05 INSTALLATION OF PENETRATING ITEMS

A. At penetrations of lead linings, provide lead shields, as required, to maintain continuity of protection. Install shields according to manufacturer's instructions and as indicated.

B. Provide lead linings, sleeves, shields and other protection in an equivalent thickness of the lead used in the protection system being penetrated.

C. Secure shield: At penetrations using adhesive or wire ties but not penetrating fasteners, unless indicated on Drawings.

D. Outlet Boxes and Conduit: Cover or line with lead sheet lapped over adjacent lead lining. Wrap conduit with lead sheet for 10 inches from box.

E. Duct Openings: Line or wrap ducts with lead sheet for distance from partition/ceiling equal to three times the largest opening dimension. Lap lead sheet with adjacent lead lining.

F. Piping: Wrap piping with lead sheet for 10 inches from the point of penetration.

3.06 FIELD QUALITY CONTROL

A. Testing: After x-ray equipment has been installed and placed in operating condition, the Owner will arrange and pay for a health physicist to test the x-ray protection.

B. Make corrections required by the health physicist.

C. In the case of defective work, uncover and repair or replace, including work affected thereby. Arrange and pay for additional testing by the health physicist until no more corrections are required.

3.07 PROTECTION

A. Provide final protection and maintain conditions that ensures the x-ray protection is without damage or deterioration at the time of Substantial Completion.

END OF SECTION