

**Information Notice Number 18
(November 1997)**

For Florida Radiation Machine Registrants

Department of Health, Bureau of Radiation Control

TYPICAL SHIELDING REQUIREMENTS FOR MEDICAL USE REGISTRANTS

The State of Florida administrative rules require radiation machine registrants to adequately shield the x-ray beams and scattered radiation produced by their machines. The purpose of this requirement is to ensure machine operators and members of the general public are not unnecessarily exposed to radiation and are kept below their legal dose limits. Shielding requirements will be determined by this potential exposure to humans and must take into consideration occupancy factors, distance, work load, energy, and direction of the primary beam, and other related factors.

Typical medical office x-ray machine installations are above table radiographic or chest only machines. Generally for this type of x-ray machine installation, the following guidance applies:

1. No shielding is necessary for outside walls.
2. Shielding is necessary for inside walls when
 - a. the primary beam will be directed toward it without a beam block to intercept, or
 - b. normally occupied spaces are within eight (8) feet of the source of scatter.
3. A protected position is required for the operator.

Thus, one-sixteenth (1/16) inch lead equivalent shielding would be required to a height of seven (7) feet for the operator's protected position. Any inside wall mounted vertical bucky would require one-sixteenth (1/16) inch lead equivalent shielding to block the primary beam. No additional shielding beyond standard drywall construction is normally required on the other walls except in special cases, such as when an office worker is in close proximity to the x-ray room or a wall of the x-ray room is shared with another tenant.

Shielding plan review and/or approval is not required by this office unless the energies used exceed 200 kVp. High volume offices (greater than 1,000 mA minutes per week) or offices with fluoroscopic or special function machines should consider having their shielding planned by a licensed medical physicist. The Bureau of Radiation Control will inspect each facility that uses a radiation machine and require adequate shielding to protect operators and the public.

If you have questions or need guidance, please contact this office at:

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