

**DIVISION 13 - SPECIAL CONSTRUCTION**

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**13 00 00. SPECIAL CONSTRUCTION**

**13 07 00. INTEGRATED CEILINGS**

.1 COORDINATION OF INSTALLATION: It is preferred that integrated ceilings be made a part of the General Contract and the General Contractor be required to coordinate the complete installation, including the work of the HVAC and Electrical Contractors. If the Associate feels that such ceilings should be installed by either of the other contractors, he should discuss the matter with the University Architect during the review conference for Design Development submittal. The Associate's HVAC and electrical consultants shall be present at this discussion.

**13 34 00. PRE-ENGINEERED STRUCTURES**

.1 ENGINEERING DATA REQUIRED: An analysis of framing and structural components is required. Data shall bear the seal and signature of a professional architect or engineer, registered in Ohio, attesting that the structures meet requirements of the specifications and comply with requirements of the OBC. Copies of this data shall be submitted to the University Architect.

**13 49 00. RADIATION PROTECTION**

.1 MATERIAL STANDARDS AND INSTRUMENTATION: Materials and equipment shall conform to applicable recommendations of the National Council on Radiation Protection and Measurements Reports No. 33, 34, 35, and 36, and shall be furnished and installed in accordance with the Code of Federal Regulations, Department of Health, Education, and Welfare (FDA Division). Installation shall be in strict adherence with manufacturer's requirements and approved shop drawings.

NCRP Report No.	Title
33	Medical X-ray and Gamma Ray Protection for Energies up to 10 MeV-Equipment Design and Use
34	Medical X-ray and Gamma Ray Protection for Energies up to 10 MeV-Structural Shielding Design and Evaluation
35	Dental X-ray Protection
36	Radiation Protection in Veterinary Medicine

When planning a structure containing facilities in which radioactive materials are to be used, such as laboratories or certain hospital rooms, the following references should be consulted:

Brodsky, A., Determination of facilities, equipment, and procedures requires for various types of operations, in "Handbook of Radioactive Nucleides", Wanh Y., Ed. CRC Press, Boca Raton, FL 1969, pp. 664-710.

**13 49 00. RADIATION PROTECTION (Cont'd)**

**.1 MATERIAL STANDARDS AND INSTRUMENTATION: (Cont'd)**

Brodsky, A., Determining industrial hygienics requirements for installations using radioactive materials, in Handbook of Laboratory Safety", 2nd ed., Steere, NV, ED. Chemical Rubber Company, Cleveland, OH, 1971, pp. 482-502.

U.S. Nuclear Regulatory Commission, Regulatory Guides 1.86 and B.23 (Since they address surface contamination limits).

International Atomic Energy Agency - Safety Series books

No. 91982, Basic Safety Standards for Radiation Protection

No. 381973, Radiation Protection Procedures.

These references, and others are available for review at the Ohio State University Office of Radiation Safety, B-042 Graves Hall 333 W. 10th Avenue (614-292-0122). Associates architects are encouraged to contact radiation safety officer here if there are any questions about facility suitability.

**.2 TESTING:** After the X-ray equipment has been installed and placed in operating condition, a radiation survey shall be performed by a qualified expert as recommended by NCRP. After radioactive material containment facilities are placed in operating condition, air flow rates shall be measured by a qualified expert at all intakes and exhaust points of the ventilation system affected.

**.3 LISTING REQUIRED:** The University Office of Radiological Health and Safety has the responsibility of registering all sources of radiation generated by an electronic product, subject to Radiation Control for Health and Safety Act of 1968. A listing of all such devices, as well as all radioactive materials specified in the contract documents, shall be submitted by the Associate to the University Architect with those documents. Devices include, but are not necessarily limited to:

lasers and maser

radar

microwave generators

electron microscopes

infrasonic, sonic, and ultrasonic generators

X-ray generators and accelerators

electron welders

diatherapy units

infrared and ultra-violet sources

TV sets (of the projection type only)

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END OF DIVISION 13 - SPECIAL CONSTRUCTION