

# **MODEL CLASSROOM DESCRIPTIONS AND REQUIREMENTS INDIANA UNIVERSITY, BLOOMINGTON**

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## **INSTRUCTIONAL AREAS**

### **DESCRIPTION**

Projection Booth, Large  
42 assignable square feet

### **DEFINITION**

A large enclosed space near the rear of the classroom that can house equipment securely and from which projection and video-conferencing equipment can be operated. It is large enough to provide workspace for a technician.

### **WEB LINKS**

For those who are accessing this material on the Internet, the following links are available:

- Advanced Technology Classroom (Type IV)
- Video Origination Addendum
- Media Equipment Closet
- Projection Booth, Small
- IU Building Design Standards
- IU Electrical Standards
- IU Mechanical Design Standards
- Building Telecommunications Design Guidelines
- Notes Regarding Classroom Technology, Renovation, and Construction

## **SPECIAL ROOM REQUIREMENTS**

### *IU Design Standards*

#### Architectural Requirements

- Dimensions: 7' w. x 6' d. at minimum
- Projection window 4' above finished floor, window maximum size to accommodate all image projection technologies [Note: In a room with a sloped seating arrangement, an extreme projection angle might cause one to consider lowering the shelf.]
- Provide at least 28" clearance from the projection shelf to the ceiling (for 16mm large reel)
- Projection shelf 30" deep, shelf flush with bottom of the window glass.
- Provide 36" work space between shelf and rear wall of booth
- Floor to deck walls
- Door from corridor and from inside classroom (if possible)
- Provide 2 full room lengths of unistrut fastened directly to floor deck above for projector and camera mounting. First piece to be parallel to and 12" from projection booth window. Second piece to be 18" from projection booth window. Area below unistrut to be free of mechanical and electrical equipment.

### *IU Engineering Standards*

#### Mechanical

- Extend HVAC to Projection Booth with independent thermostat or thermostatically controlled exhaust fan or vent
- Introduce supply air low and remove exhaust air high
- Provide cooling for current equipment array and allow for expansion of cooling required to double current output
- Follow IU Engineering Standards for supply/exhaust in classroom

#### Electrical

##### Conduit Requirements

- 2" conduit from conduit rack in Media Equipment Closet (MEC) to Projection Booth per projector
- (2) 1 1/2" from conduit rack in MEC to Projection Booth, landed in a series of (2) 3 gang junction boxes (minimum 3 1/2" deep) mounted vertically on the wall of the booth above the projection shelf. See attached schematic diagram for layout of junction boxes in projection booth.
- 3/4" from conduit rack in MEC to Projection Booth, landed in a separate single gang box for male slide projector control jack.
- 3/4" from Projection Booth to lighting control system, for lighting control scene controller
- 1/2" conduit from conduit rack in MEC for relay solenoid control door lock (optional)
- 3/4" from conduit rack in MEC to a separate junction box in Projection

Booth for speaker wires, landing in a 2 gang box on wall of projection booth. Install second ¾" conduit from this box to projection booth ceiling space.

- 1 ½" conduit from camera to MEC

### Lighting

- Dimmable light (10% minimum) with independent control
- Lighting control scene controller for classroom
- Master programming controller for architectural dimming system may be located in projection booth only if it is separated from the dimming control panel. If the master programming controller and the dimming panel are integrated, the unit shall not be located in the projection booth but in the Electrical Equipment Closet or some other isolated location near the classroom

### Audio

- Provide line level sound jack in booth for 16mm film projection
- Provide at least one speaker, with independent volume control, for distributed sound
- Provide at least one speaker, with independent volume control, for program sound
- Provide volume control for house program source

### Power

- Provide one (1) dedicated 20 Amp circuit for power below projection shelf with one 20A duplex outlet every 4' with a minimum of 3 outlets.
- Provide one (1) dedicated 20 Amp circuit for video projector(s), powering no more than two (2) projectors per dedicated circuit, one duplex outlet per projector
- Above dedicated circuits to be all on same phase
- Provide one (1) dedicated 20 Amp circuit for two duplex outlets above projection shelf and for camera location.

### Telecommunications

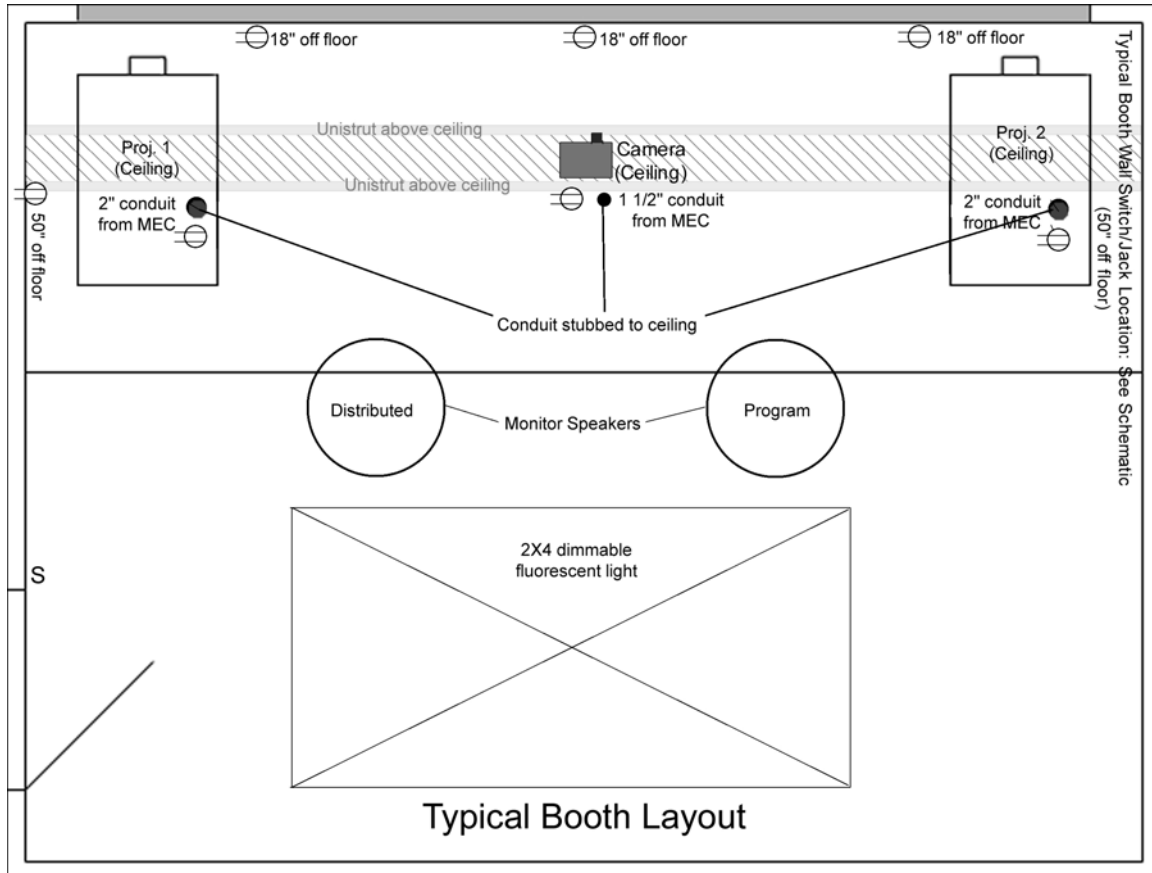
- Install pathway according to IU Telecommunications Standard and specific campus addendums to bring voice, data, video coax, and fiber from source outside room (IDF closet) to a standard communications outlet in Projection Booth

## EQUIPMENT REQUIREMENTS

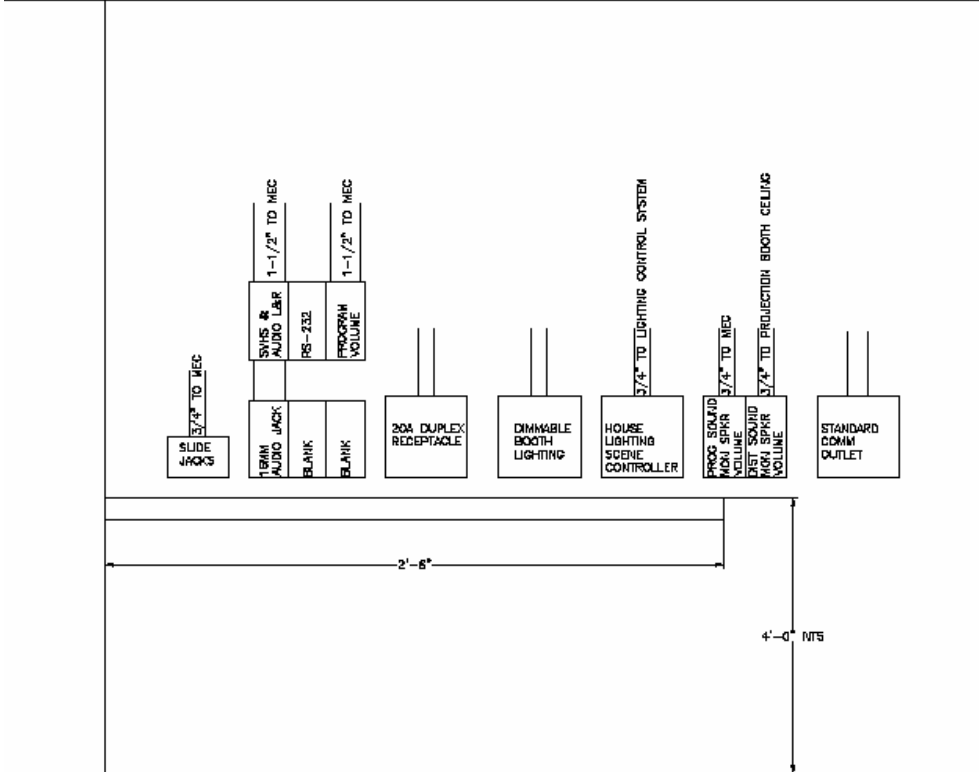
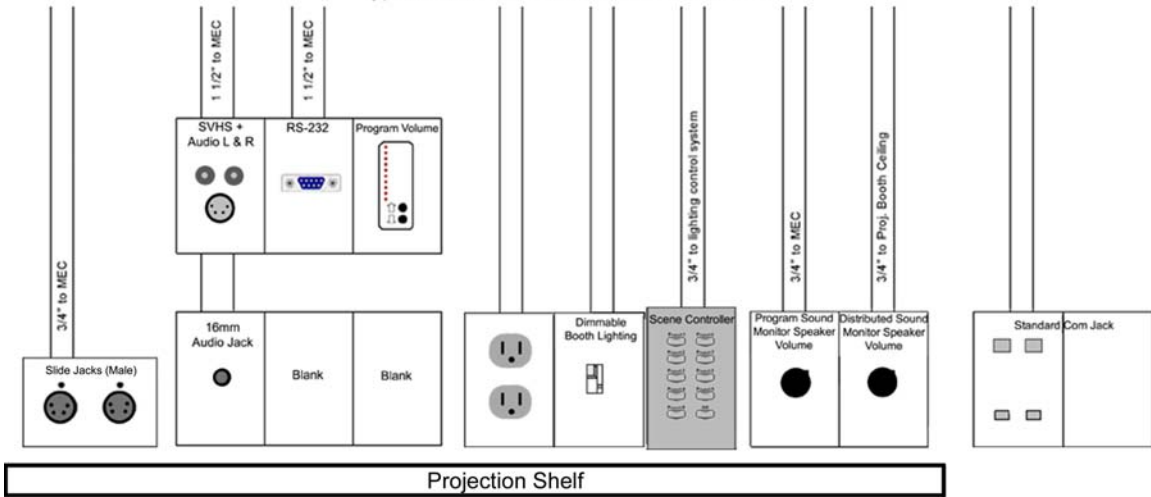
See Lecture Hall Building Equipment List.

## LOCATION REQUIREMENTS

Locate at rear of classroom.



Typical Booth Wall Switch/Jack Locations



INDIANA UNIVERSITY  
 ARCHITECTS OFFICE  
 ENGINEERING SERVICES  
 500 N. UNIVERSITY BLVD.  
 BLOOMINGTON, IN 47406

DATE: 02/27/02

PROJECT TITLE  
 LECTURE HALL BUILDING  
 TECHNOLOGY CLASSROOM  
 PROJECTION BOOTH

SHEET TITLE  
 JUNCTION BOX LAYOUT

DESIGN:	SEC
CHECKED BY:	SEC
DATE:	02/27/02
WORK PERM. NO.:	
WORK PROJ. NO.:	
CAD FILE NAME:	
TRACING INDEX NO.:	
DRAWN BY:	EL
ELDA. NO.:	

SHEET:  
**1**  
 OF 1 SHEETS