

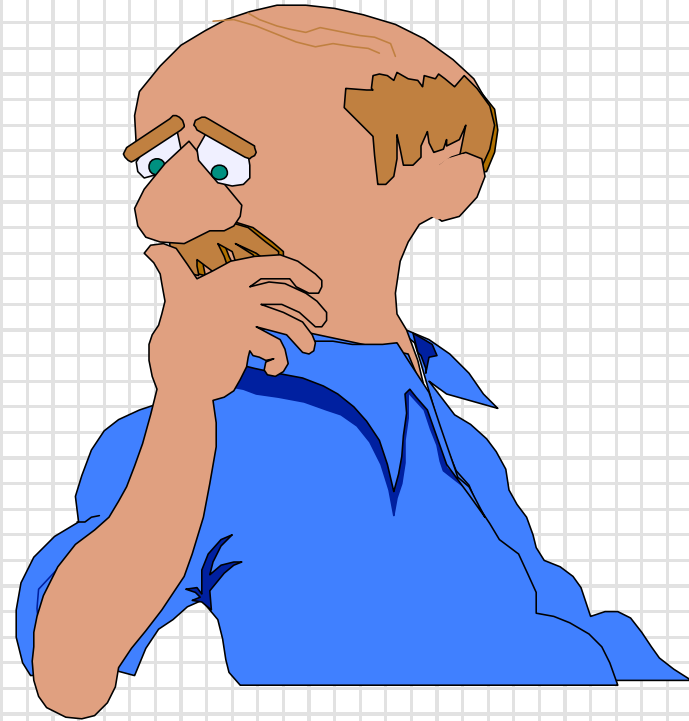
NCRR Research Facilities Improvement Program WORKSHOP

July 18, 2003

- **Division of Policy and Program Assessment (DPPA)**
- **Technical Review Team**

Purpose

- The DPPA review helps insure that the goals of the facility and interests of NIH are met through-
 - *Accurate program interpretation*
 - *Sound technical / design practices*
 - *Does not replace review by facility*



Purpose

• Benefits of Review

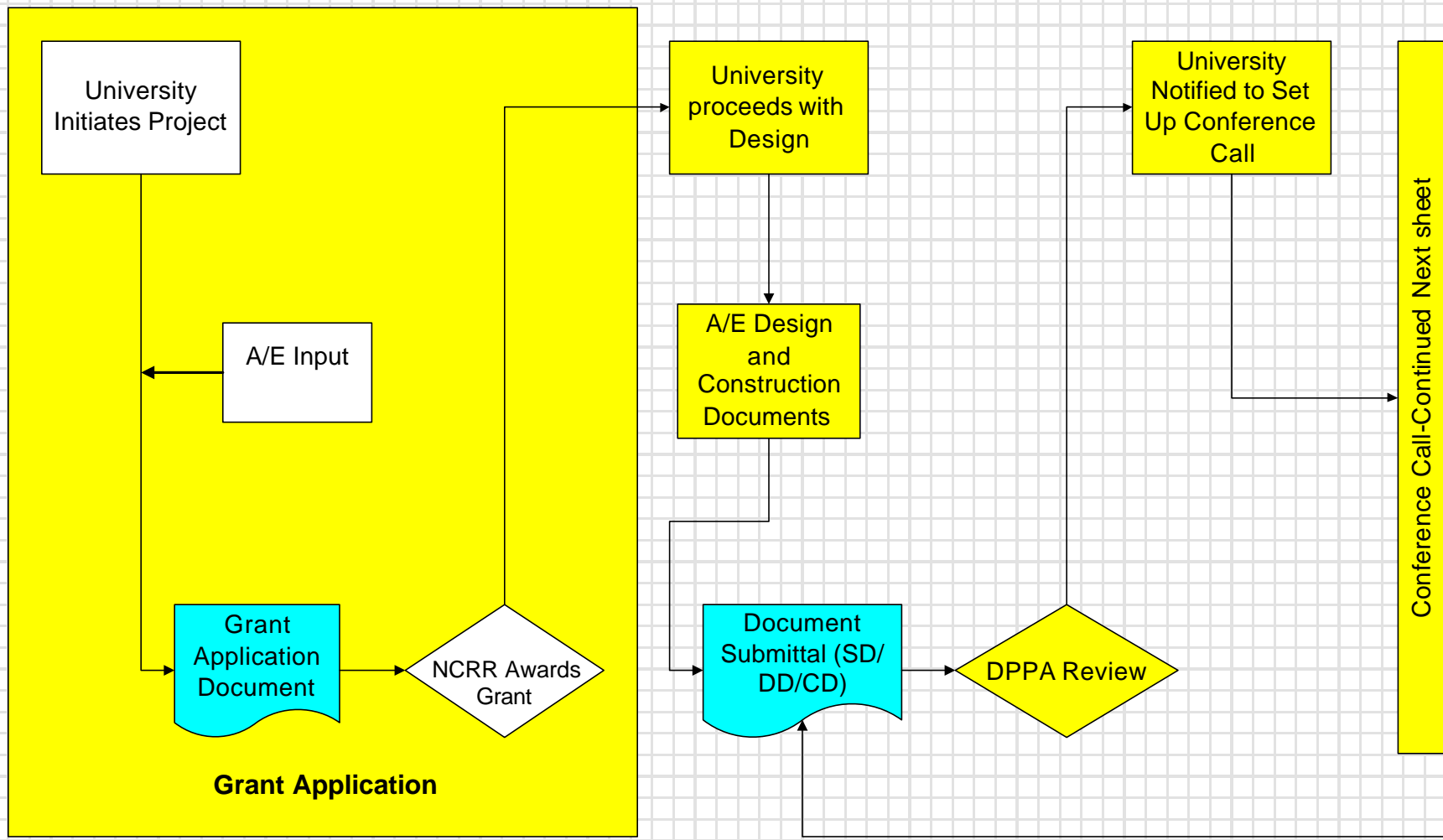
- **Increased Communications**
 - *Early identification of potential problems*
 - *Program people understand what A/E is providing*
 - *Learning process*
- **Document Accuracy**
 - *Technical /constructability*
 - *Bidability of documents*
 - *Coordination*



Grant Review Process >>>>>>

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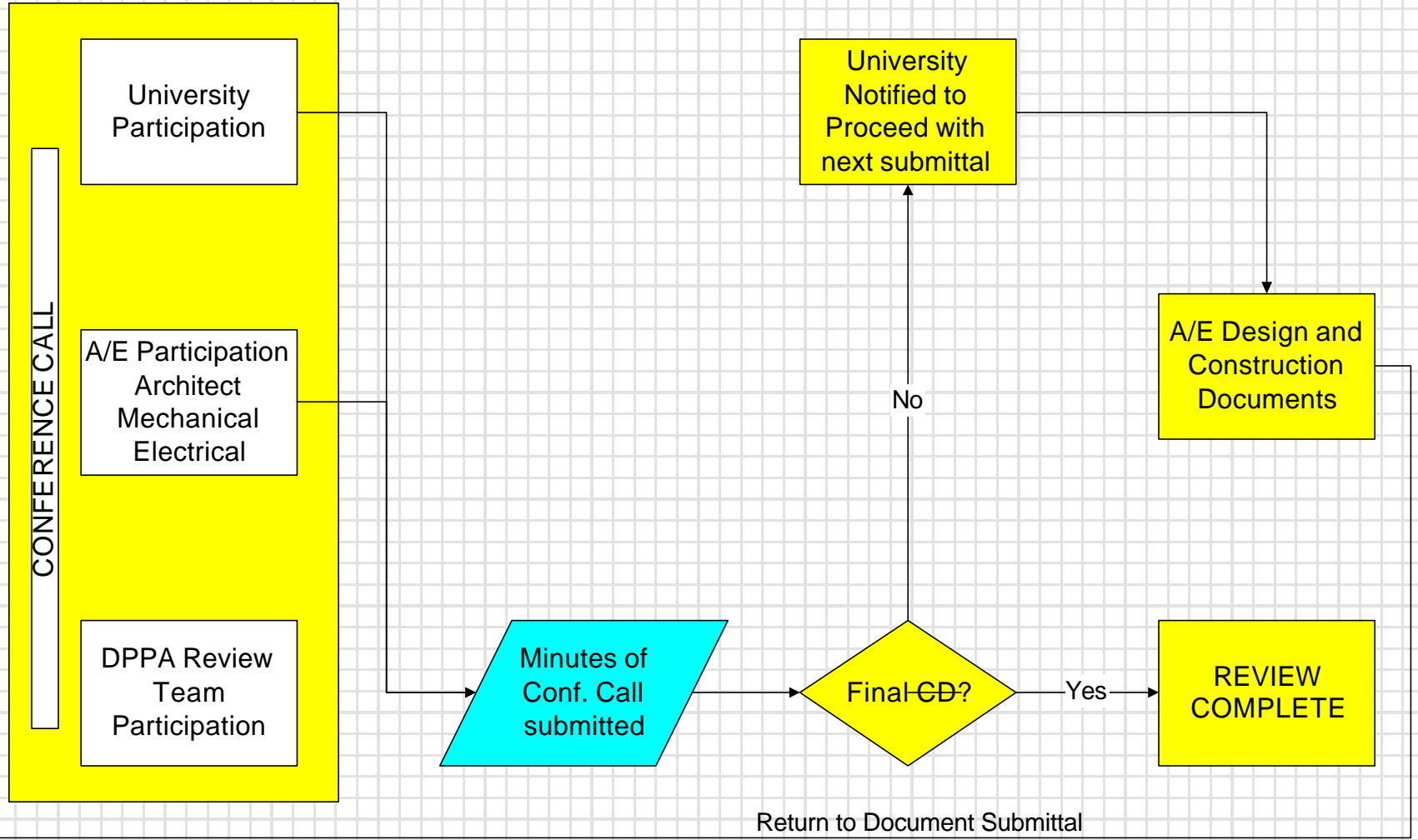
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Grant Review Process >>>>>

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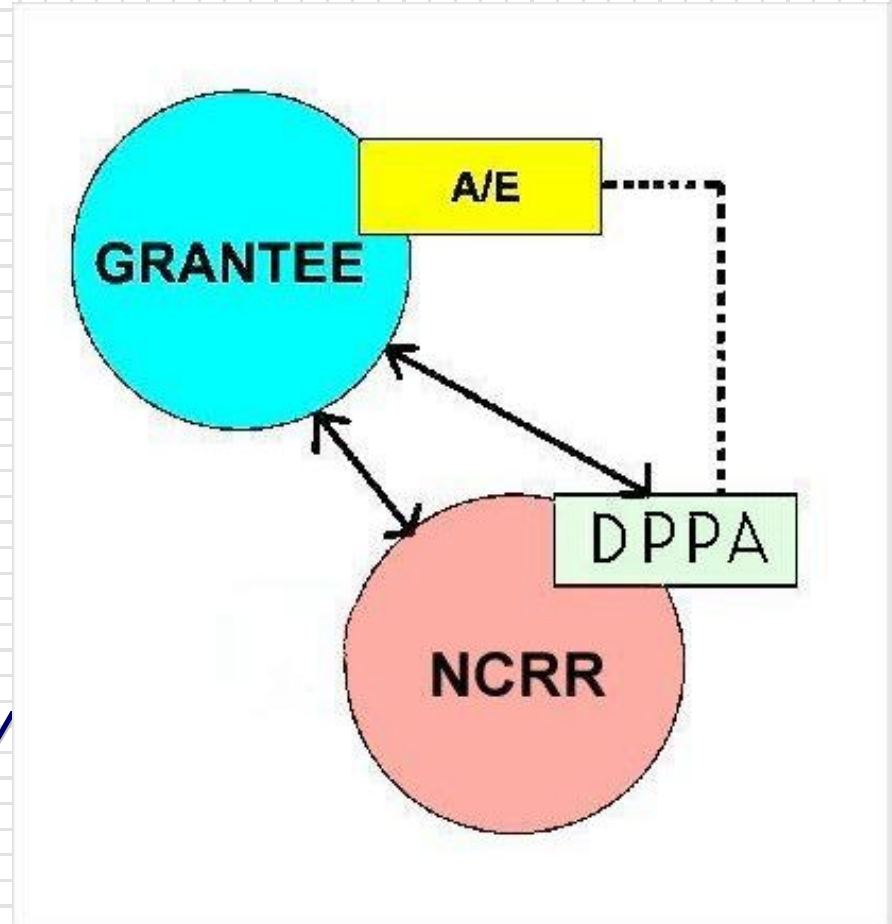
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Relationship Diagram

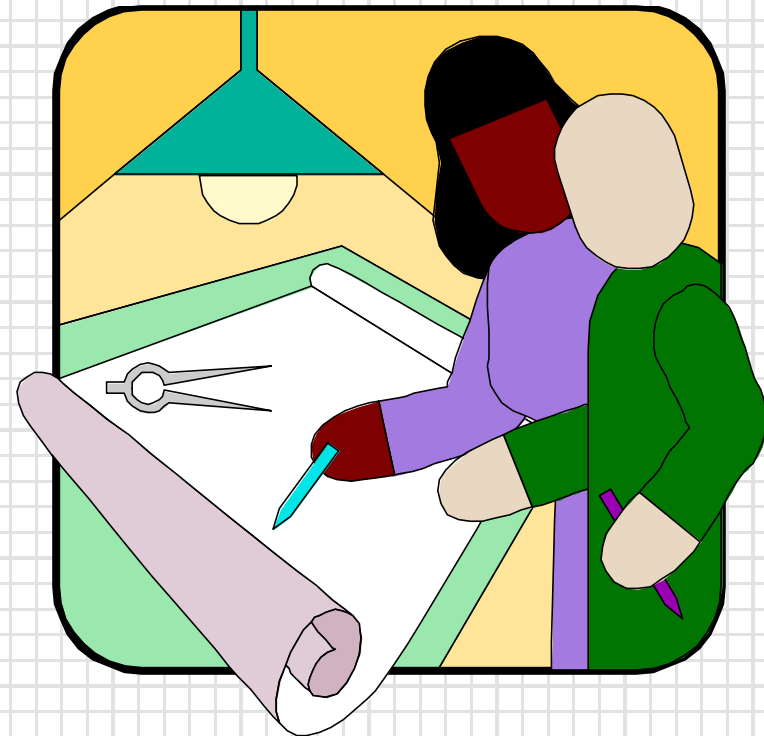
• Interactions

- *Main connection is Grantee to NCRR*
- *DPPA involvement after grant is awarded*
- *DPPA and A/E may have direct discussion*



Required Submittals

- Schematic Design(SD)
 - *15-35% complete*
 - *2 Copies to NCRR*
- Design Development (DD)
 - *65-75% complete*
 - *Copies to DPPA*
- Construction Documents (CD)
 - *95% complete-Final*
 - *Copies to DPPA*



Required Submittals

• Final Record Set

- *Incorporating all comments in drawings and specs*
- *Provided to NCRR and DPPA*
- *An electronic version of the documents is now required.*
- *The CD submittal may be accepted as the final record set.*

Submittal Checklist

Schematic Design Phase Submission (SD)- 15-35% complete

The **SD** submission documents should include at the minimum the following:

1. General

- Be coordinated with similar activities in all disciplines.
- Outline Specifications
- Demolition plans for all disciplines
- Preliminary cost estimates
- Hazardous material report (i.e., PCB, Asbestos, Fluorescent lamps, etc.)

2. Architectural

- Existing site plan. (if applicable)
- Proposed site plans. (if applicable)
- Program or Basis for Design Report
- Proposed floor plans of each level
- Fire protection (fire/ smoke walls), new fire protection mains, and fire protection egress plan, Travel distance, access of refuge
- Reflected ceiling plans (areas of special interest and major equipment)
- Preliminary furniture plan (if applicable)
- Proposed finishes
- Indicate major material and systems
- Identification of special structural considerations or systems

Submittal Checklist

3. HVAC/ Plumbing

- Layout of major components in equipment rooms
- Single line of presentation of ductwork and HVAC piping mains
- Energy conservation measures
- Heating and Refrigeration sources
- Block load calculations for space heating and cooling
- Location of existing plumbing equipment
- Plumbing fixtures
- Distribution layouts

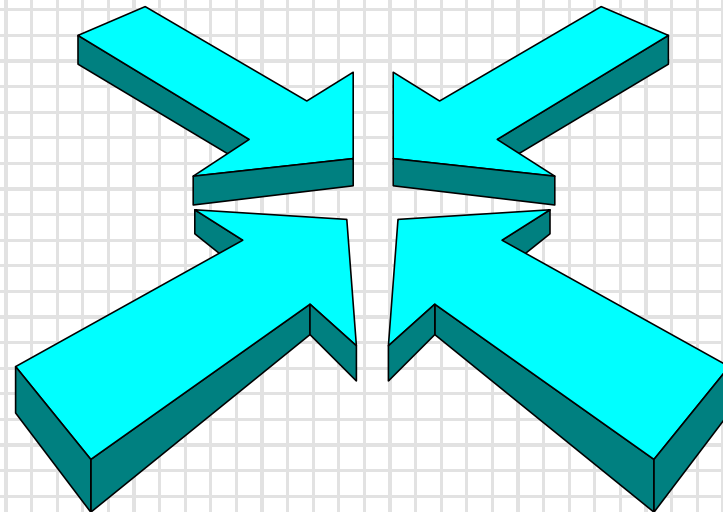
4. Electrical:

- Preliminary design calculations
- One line diagram of proposed electrical system
- Locate connections for normal and emergency power electrical services on floor plans
- Preliminary sizes of major distribution and transformation
- Layout of major distribution and transformation components
- Grounding
- Identify special requirements: grounding, shielding, vibration, magnetic, TVSS, UPS
- Location and types of lighting fixtures (illuminance calculations available)
- Locations of mechanical and major power consuming equipment
- Identification of special systems
- Telephone, data and LAN system requirements
- Communications service entrance location(s) and closets locations
- Fire alarm and other systems

Review Methods

☼ Conference Call

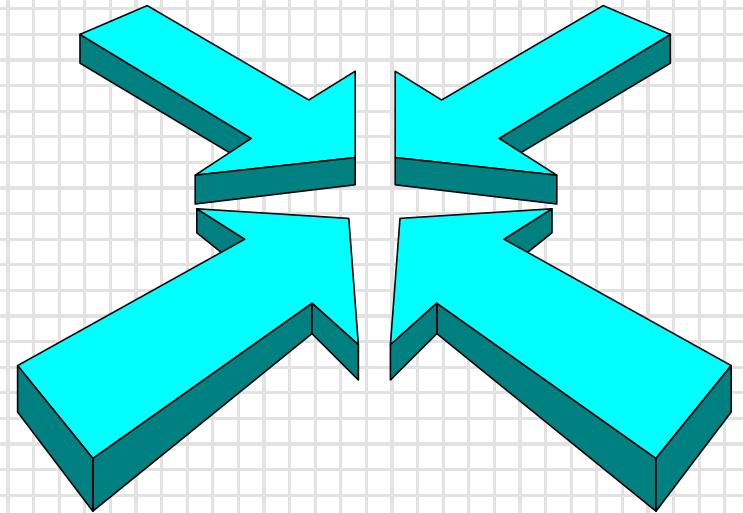
- no back and forth of written comments
- discussions resolve issues during conference call
- minutes of call are recorded and submitted by the grantee or A/E
- submittal completed when minutes are submitted and accepted



Review Methods

• Written Comments

- Provided on standard form, via e-mail
- Clearly indicated if Requirement, Recommendation, or Question
- Response by A/E on form via return e-mail.



Review Methods

DD Submittal Review

For any questions or clarifications please call Gary Zackowitz, NIH, 301-435-2105.

General Comments

1. Introduction

Response Action Code Key:

A – Accepted; WILL BE INCORPORATED INTO NEXT SUBMITTAL

C – Under Consideration; A/E will check with owner for action

E – Explanation; Comment not accepted with explanation

W – Withdrawn; Withdrawn by NIH after discussion

Comment Code Key:

M – Mandatory

R – Recommended

Q – Question or Suggestion

SPECIFICATIONS

No.	Page/Dwg.	Comment Code Key	Comment / Recommendation	Response Action Code Key
1.	Tab 2 Page 7	R	Remove reference to natural gas.	
2.	Mechanical Page 1	R	Include helium and DI water piping, remove reference to natural gas.	
3.	A001	Q	Three air-handling systems are referred to but only two are identified. Is the computer room air conditioner the third system?	
4.	General	R	There is no section of the spec devoted to lab equipment or lab furniture, normally Div 11000 or 12000. At the DD level	

Review Methods

DD Submittal Review

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General Comments

1. Introduction

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SPECIFICATIONS

No.	Page/Dwg.	Comment Code Key	Comment / Recommendation	Response Action Code Key
1.	Tab 2 Page 7	<i>R</i>	Remove reference to natural gas. Natural gas is specified because the generator is fueled by natural gas.	<i>E</i>
2.	Mechanical Page 1	<i>R</i>	Include helium and DI water piping; remove reference to natural gas.	<i>A</i>
3.	A-001	<i>Q</i>	Three air-handling systems are referred to but only two are identified. Is the computer room air conditioner the third system?	<i>E</i>

Typical Comments

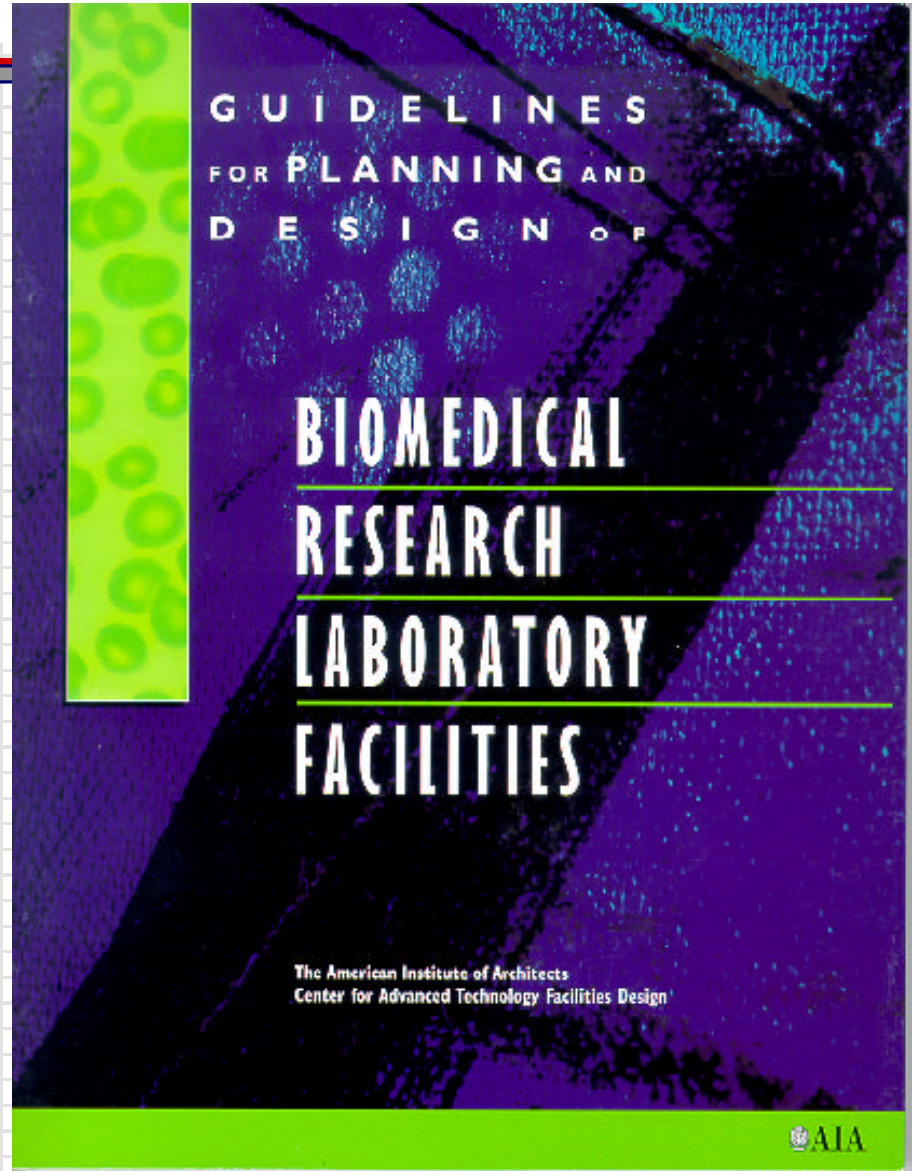
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COMMENT	RESPONSE BY	FORM OF RESPONSE	Requirement	Recommendations
Code Issue	A/E	Change drawings to comply with code or verify compliance	X	
Program/Plan	User and A/E	Issue reviewed, change or explanation provided	X	X
Technical/ Constructability	A/E	Revise drawing if required or explain intent	X	X
Safety	User	Response provided by institute safety officer may include SOP	X	
Special NIH Requirement	User and A/E	Change is made or SOP is submitted for review	X	X

References

- Lab Design Guide
 - *NIH/AIA collaboration*



References

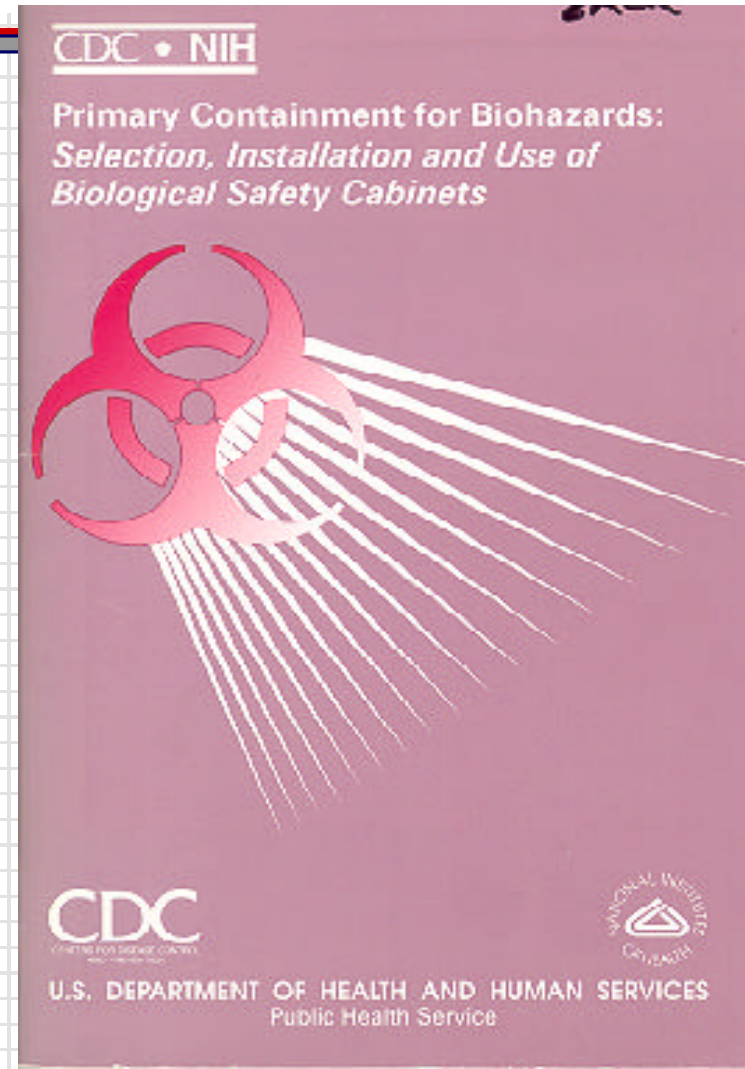
☼ Biosafety

- BSL Levels
 - *Physical*
 - *SOP*
- Labs and Animal
- Containment Devices
- Available on Internet



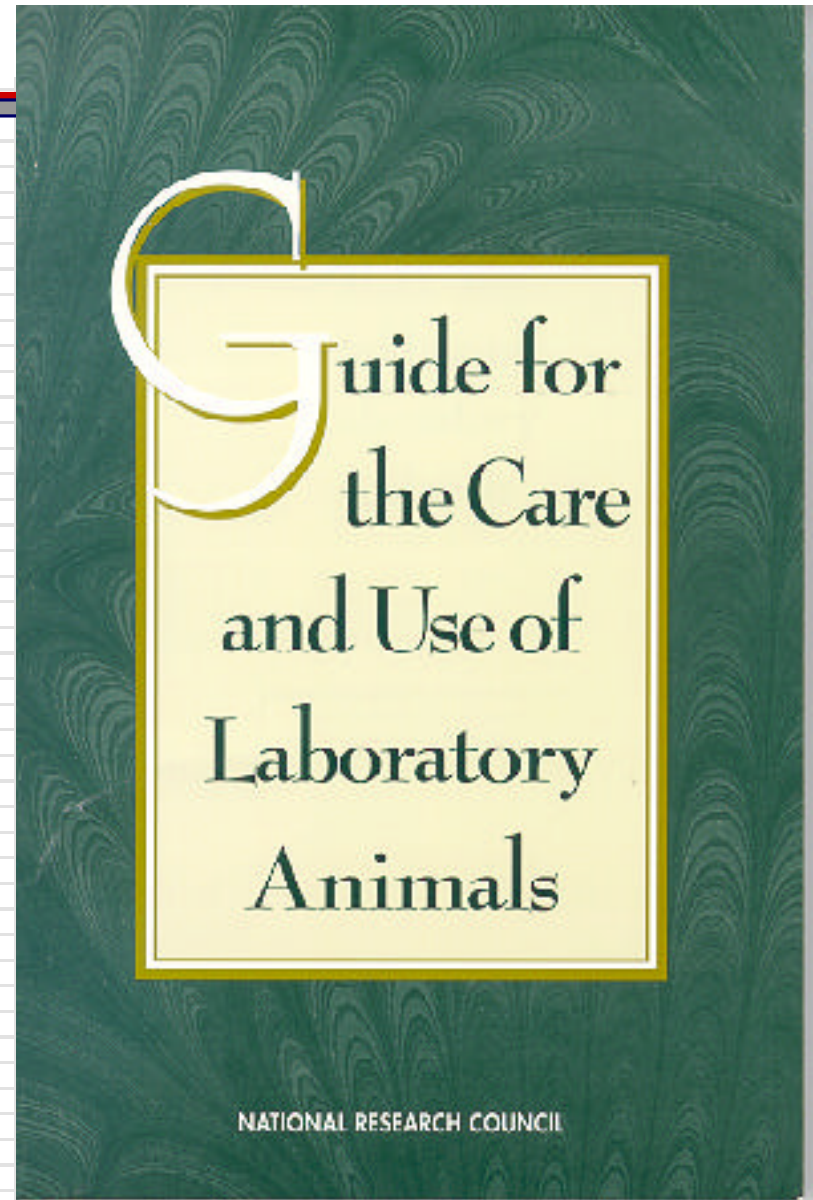
Reference

- Biological Safety Cabinets



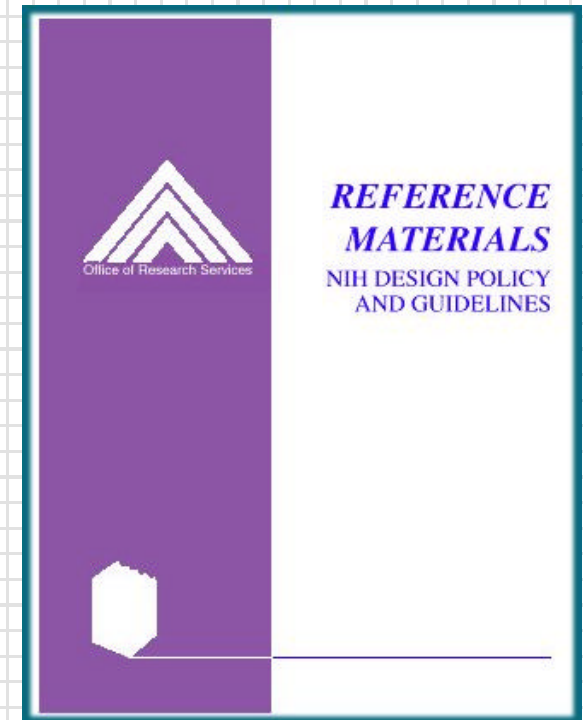
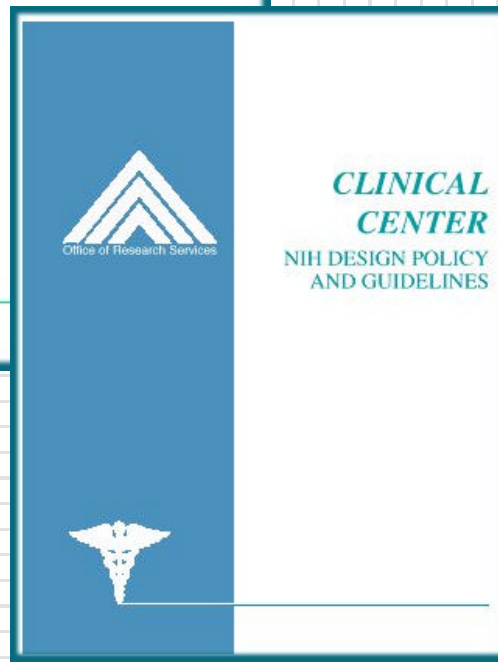
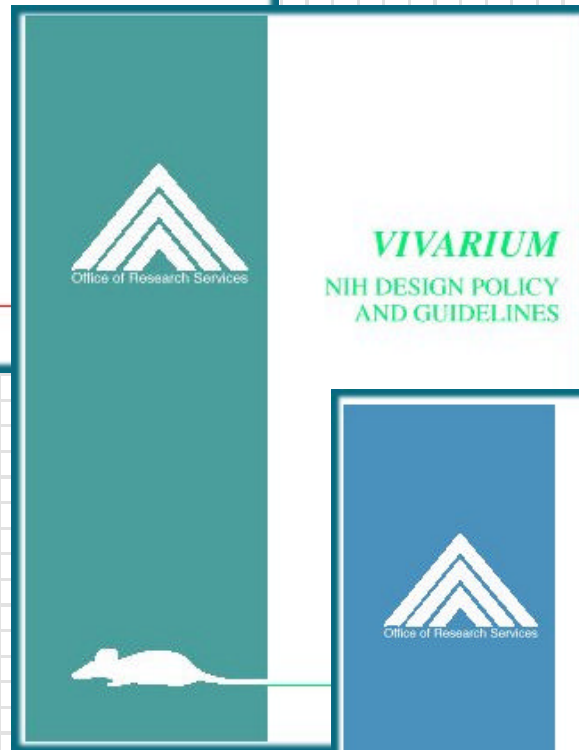
References

- The “Guide”
 - *Design of the animal environment*
 - *Referred to for AAALAC accreditation*



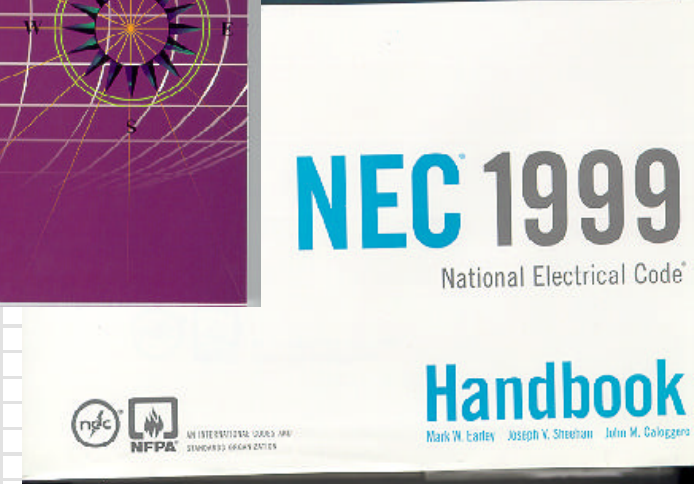
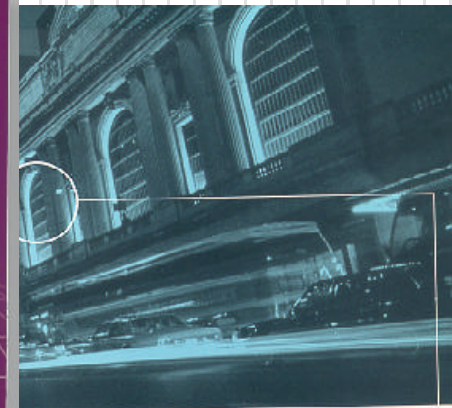
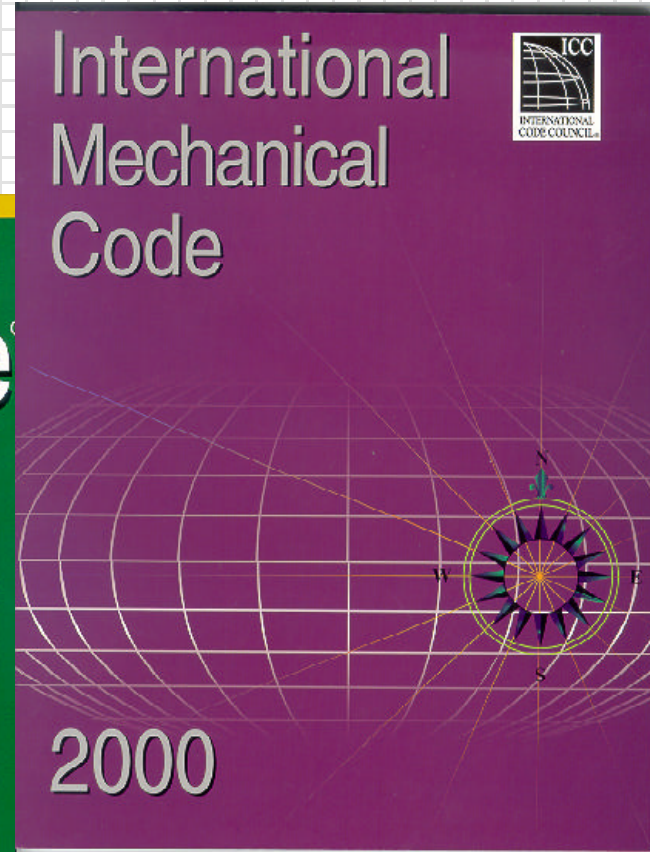
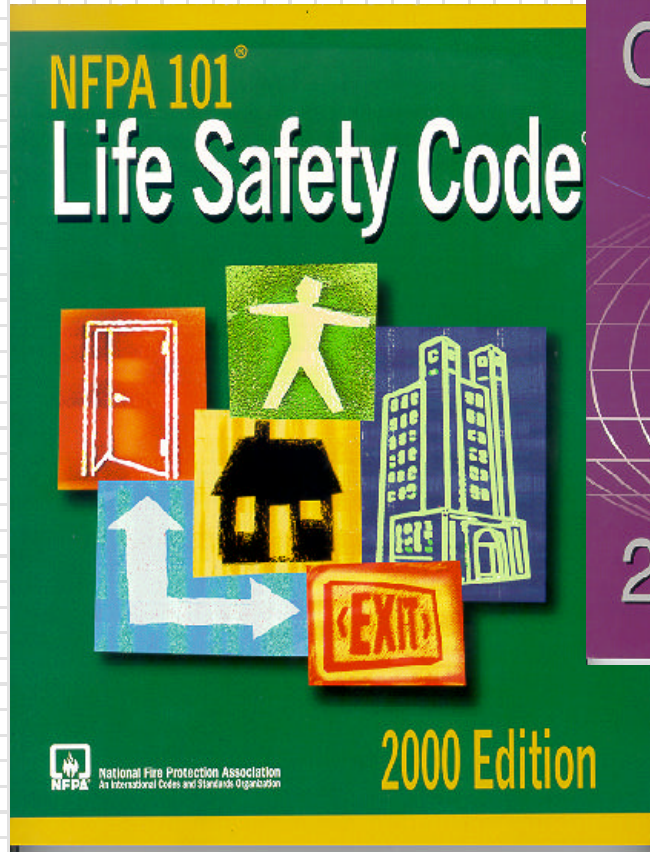
References

- NIH Design Policy and Guidelines
 - *available on internet*



References

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W



Questions/Answers

• Technical Review Team

- **Gary Zackowitz, RA**
 - coordination/ architectural
 - 301-435-2105
- **Tom Ligis**
 - Electrical
 - 301-435-2129
- **Bob Farahpour**
 - Mechanical
 - 301-435-2119

