

# Infrastructure Symposium Breakout: Did We Design It Right? Utility Project Conceptual Planning and Detailed Design

Moderator: Alan Saunders

Senior Industry Manager, Utilities  
Autodesk

# Are you ready to RUMBLE?

Who is in the room? A passionate, growing community ready to share best practices. Make new contacts, share best practices, find connections.



|                                     |  |
|-------------------------------------|--|
| Advanced Connections Inc.           | HBE Corporation                                |
| Anchorage Municipal Light and Power | HDR  |
| Arizona Public Service              | Independence Power and Light                   |
| Athabasca Oil Corporation           | Lincoln Electric System                        |
| Bolton & Menk, Inc.                 | Nashville Electric Service                     |
| Brown and Caldwell                  | Northeast Utilities                            |
| Bureau of Reclamation               | NV Energy                                      |
| Chelan County PUD No.1              | PacifiCorp                                     |
| City of Alexandria                  | Phelan Pinon Hills Community Services District |
| City of Tacoma                      | Pictometry                                     |
| Duke Energy Progress                | PNM  |
| Empire District Electric            | Reykjavik Energy                               |
| Farmington Electric Utility System  | SA Power Networks                              |
| Filippon Engenharia                 | San Diego Gas & Electric                       |
| FIRM ENGINEERING                    | Seattle City Light                             |
| Freese and Nichols, Inc.            | So. Cal. Edison                                |
| Geonius                             | Stantec  |
| Grady Consulting, L.L.C.            | Structor Uppsala                               |
| GVEA                                |  |

# Agenda - Utility Planning and Design Roundtables

## Session UT6637 Monday 3-4PM Islander C

| Time | Topic   | Speakers / Table Leaders   |
|------|---|--|
| 3:00 | <b>Introduction</b>   | Alan Saunders, Autodesk  |
| 3:05 | <b>Topic Introductions</b> <ol style="list-style-type: none"><li>1. Reality Capture &amp; Existing Conditions (Underground facilities)</li><li>2. Reality Capture &amp; Existing Conditions (Overhead lines)</li><li>3. Engage the Community for Permitting &amp; Approvals (Using InfraWorks)</li><li>4. AutoCAD Utility Design Update</li><li>5. Substation Consortium Update</li><li>6. Automationforce Substation Design Suite Update</li><li>7. Engineering Design Integration</li><li>8. Spatial Data Integration with Design</li><li>9. BIM Business Cases</li></ol> | Everett Clary and Forrest Roy, Anchorage MLP, Rick Johnston, Autodesk<br>Cole Smith, Southern California Edison, Pat Byrne, Autodesk<br>David Lawrence, URS, Ian Matthew, Autodesk<br>Dan Leighton, DL Consulting, Walt Smith, Autodesk<br>Michael Goins, Duke Energy, David Milks, Autodesk<br>Trevor Scullion, Automationforce<br>Ram Ramalingam, Autodesk<br>Pat Reid, SBS<br>Alan Saunders, Autodesk |
| 3:20 | Roundtable Discussions  | All  |
| 3:50 | Wrap Up and Observations  | Alan Saunders, Autodesk  |
| 3:55 | Session close   |  |

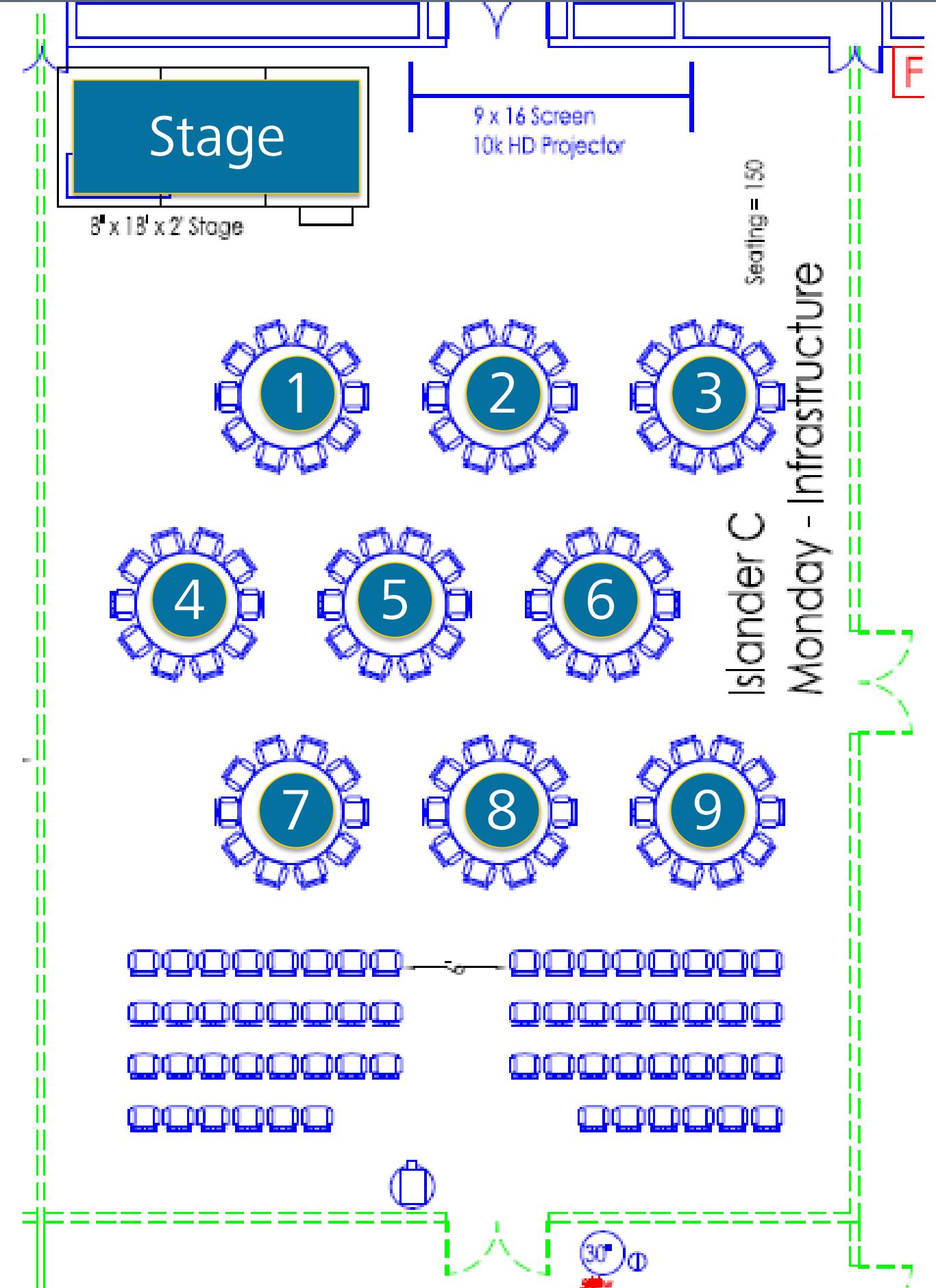
# Format

# Process:

- Choose a table according to topic
- Please – spread yourselves around and balance the tables

## Discussion:

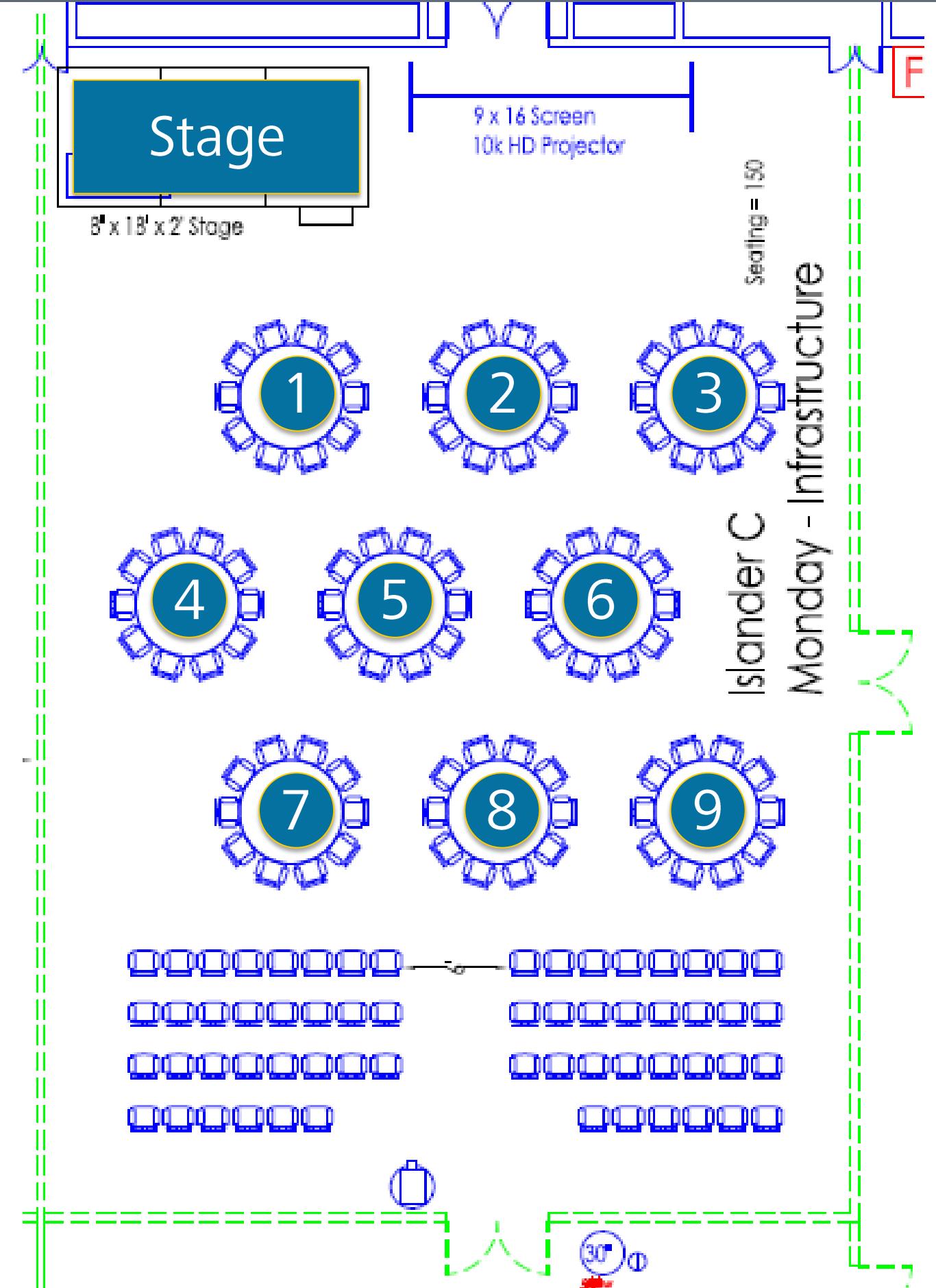
- Get to know each other – who you are, where you work, and why are you here
- What are your experiences with the topic?
- Business issues
- Process issues
- Technical issues
- Best practices



# Format

# Topics

1. Reality Capture & Existing Conditions (Underground facilities)
2. Reality Capture & Existing Conditions (Overhead lines)
3. Permitting & Approvals (Using InfraWorks to Engage the Community)
4. AutoCAD Utility Design Update
5. Substation Consortium Update
6. Automationforce Substation Design Suite Update
7. Technical Integration Topics
8. Spatial Data Integration with Design
9. Business Cases for BIM



# Roundtable 1: Reality Capture & Existing Conditions

Leads: Everett Clary and Forrest Roy, AMLP, Rick Johnston, Autodesk

Paper or non-existent data on UG facilities? Need models?

Learn more about what Anchorage Municipal Light & Power has done, and share your use cases and challenges for creating models of UG facilities. Likely topics include...

- Business case for better information on UG facilities
- What is the status of your data today
- Approaches for condition capture and lessons learned
- Now we have the data, how do we use it?



# Roundtable 2: Reality Capture & Existing Conditions

Leads: Cole Smith, SCE, Pat Byrne, Autodesk

## Using LiDAR to create models of OH T&D?

Learn more about what SCE is doing, and share your use cases and challenges for creating models of existing OH facilities. Likely topics include...

- The stakeholders – regulators, other departments, environmental groups, other utilities...
- Level of data accuracy required at different stages
- Approaches for condition capture and lessons learned
- Turning data into information



# Roundtable 3: Engage the Community

Leads: David Lawrence, URS, Ian Matthew, Autodesk

Increasing expectations from project stakeholders? Need better visualizations to engage and communicate?

Learn how URS has used InfraWorks on large, highly visible utility projects. Share your use cases and challenges for creating compelling visuals for these projects. Likely topics include...

- Business case for better community engagement
- How do you communicate project intent today?
- Data sources and techniques
- Lessons learned



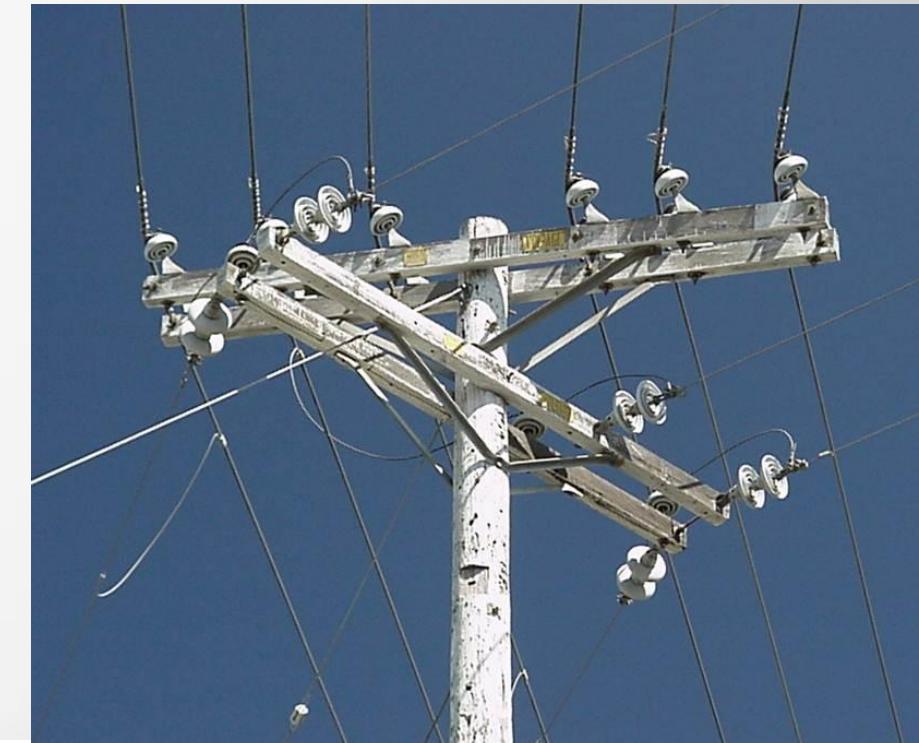
# Roundtable 4: AutoCAD Utility Design

Leads: Dan Leighton and Walt Smith

Considering AUD? Implementing AUD? In deployment?

Every month we learn of more utilities moving forward with AUD. Whether you're just kicking the tires or if you've been working with AUD for a long time, please join us for this roundtable session. Likely topics include...

- What's needed to move to AUD
- Practical implementation strategies
- Approaches for deployment
- AUD integration



# Roundtable 5: Substation Consortium Update

**Chairman: Michael Goins, Duke Energy**

Interested in a consortium approach to establish industry standards and share best practices?

Learn about the initiative of several utilities who are deploying the Autodesk substation design solution to establish industry standards, establish best practices, and drive development.

Topics include...

- Why the consortium was formed
- Who is participating
- Group Goals and Charter
- How and when to get involved



## Roundtable 6: Automationforce Substation Design Suite Update Leads: Trevor Scullion, Duke Energy

### Considering SDS? Implementing SDS? In deployment?

Every month we learn of more utilities moving forward with SDS. Whether you're just kicking the tires or if you've been working with SDS for a long time, please join us for this roundtable session. Likely topics include...

- Why move to model-based substation design / SDS
- Best practice implementation strategies
- Approaches for deployment
- What should be next



## Roundtable 7: Completing the BIM workflow – engineering integration

Leads: Ram Ramalingam

How to get the most out of your workflows by integrating design with existing engineering applications.

To complete designs, many of you use 3<sup>rd</sup> party tools to validate engineering and enforce certain standards. This session how to plan and execute the right workflow integrations. Likely topics include...

- What 3<sup>rd</sup> party tools are you using
- Planning workflows and data exchanges
- Practical implementation strategies
- What works and What are the pain points today?



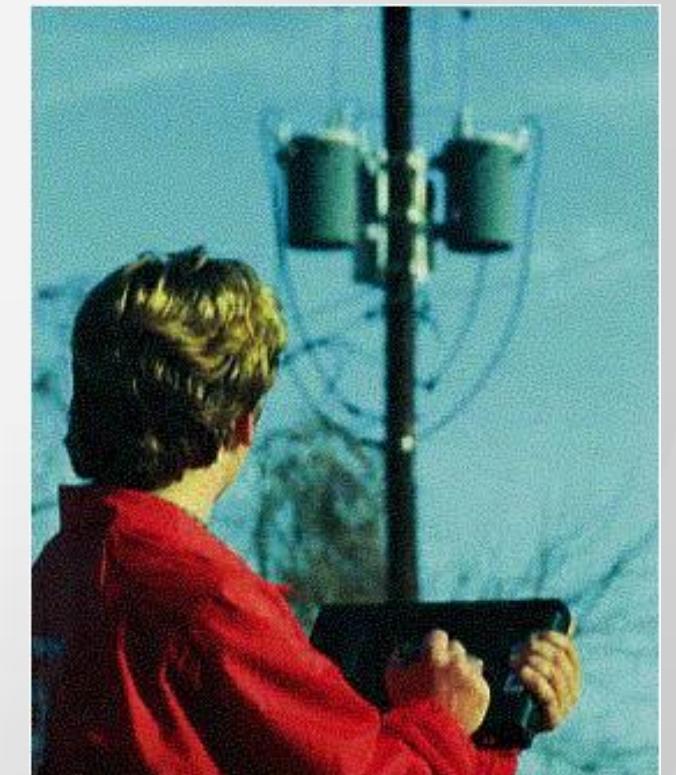
# Roundtable 8: Spatial Data Integration with Design

## Leads: Pat Reid, Spatial Business Systems

How do you get started with a new design?

To start a new design, better data on what is really in the field will improve design quality and reduce design time. This session will explore how to gather and aggregate various spatial data. Likely topics include...

- Data sources
- Field data collection
- Use cases
- Challenges and best practices



# Roundtable 9: Business Cases for BIM

## Leads: Step right up

### Justifying transformation

Most in the industry agree that the transition to model-based design has begun. What are the business cases to support this transformation? Likely topics include...

- Regulatory drivers
- Project risks – safety, cost, schedule
- Workforce change
- Challenges and best practices



FINAL RULE ON  
**Transmission Planning and Cost Allocation**  
**by Transmission Owning and Operating Public Utilities**

Briefing on Order No. 1000 Presented by  
Federal Energy Regulatory Commission Staff



