

Data Center Services

Facility Design Peer Review

At a Glance:

- Consult with professionals who have 2.5+ million square feet and decades of real-world data center experience
- Ensure that your construction documents and engineering specifications will meet your ultimate needs and requirements
- Gain a fresh perspective on whether you have discovered all potential single points of failure and opportunities for cost and efficiency improvements

Validate The Design of Your Mission-Critical Data Center

You have been working with an experienced project architect/engineer-of-record to complete the construction documents and engineering specifications for your new data center. Special care and consideration have been placed in the development of these documents to ensure a successful construction phase. Since data centers are fundamentally different from other types of construction projects—with their own set of considerations, requirements and needs—it can be extremely helpful to obtain an objective evaluation from experienced data center design professionals. Forsythe will confirm that important items such as power, cooling, capacities/loads, redundancies and life/safety have been properly and optimally engineered. In fact, we will work with you to examine all of your engineering categories—confirming accuracy, efficiencies and potential opportunities for cost savings. We will also benchmark your plans against best practices and The Uptime Institute's Tier Level for Reliability Standards. Whatever stage of development you are in, Forsythe can provide you with crucial data center construction insight.

Comprehensive Peer Review

In order to perform a peer review that will give you all of the key insights you need for successful construction and operation of your data center, Forsythe will evaluate the following:

- Scope documents
- Engineering specifications
- Design assumptions
- Tier Level requirements
- Client-specific project needs
- Construction documents to-date

Systematic Review of Engineering Categories

Forsythe will double-check all engineering and design categories of your data center project so you can make any necessary adjustments prior to construction.

- Civil
- Architectural
- Floor Plan
- Structural
- Electrical
- Mechanical
- Fire detection/suppression
- Plumbing
- Physical security
- Telecom entrance
- Disaster avoidance
- Green/operational efficiencies

Peer Review Findings

After your review is completed, Forsythe will present you with a detailed, easy-to-read, point-by-point summary of findings.

Findings Include:

- Items of concern/improvement
- Rationale for questioning the original design/infrastructure item
- Potential capital and operating cost savings

Categories	Sample Peer Review Findings
A2-Partial Floor Plan	<ol style="list-style-type: none"> 1. Confirm that the Type 3 wall construction is substantial enough for a data center. 2. Are the partition and door in the UPS Room rated at least 1-hour to meet code? 3. If there is 480V equipment in the UPS Room along with batteries, you are required to install two entrance/exit doors. 4. Must see layout of the UPS Room to confirm that it contains CRAC units. 5. Consider relocating the UPS systems and the electrical gear to the vestibule to reduce heat-load and increase floor space in the data center.
M3-Mechanical Plans	<ol style="list-style-type: none"> 1. Check to be sure that the 18" floor can handle the volume of airflow distributed by the supply duct. Consider distributing it through multiple locations. 2. The wall in the center of the room was removed, so the humidistat will need to be relocated. 3. Provide drip pans under any sources of water above the data center floor. 4. If there is a drop-ceiling, provide return air ductwork from the hot aisles back into the three A/C units.
M4-Mech Details, Elevations & Schematics	<ol style="list-style-type: none"> 1. Is noise a concern outside the windows shown to the east of A/C-3? 2. Is screening required? 3. Ensure that A/C-3 is situated so there are no concerns with generator exhaust entering the fresh air intake of the units.
ED-01-Lighting Partial Plan	<ol style="list-style-type: none"> 1. The lighting layout concept is satisfactory, but it will need to be adjusted based on the number of additional walls. 2. Fixture types should have a protective guard around them in lieu of the industrial type fixtures. 3. Where is the lighting panel located? 4. An exit sign is needed in the vestibule. 5. An exit sign is needed at Door 4.

Get the Forsythe Advantage.

For more than 35 years, Forsythe has delivered forward-thinking advice, technology, and operation-enhancing solutions. As an independent advisor, Forsythe can help you address every aspect of your infrastructure, including how new solutions may affect the bigger picture. Working with every major provider, Forsythe acts as your single point of contact for managing the cost, effectiveness, and risk related to your information systems.

Let Forsythe Help.

Business objectives—and business issues—don't exist in a vacuum. Forsythe identifies and addresses IT interdependencies to deliver solutions that work across your enterprise. Call us today.

