

# TOPICS



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## Orchestrating a Multi-disciplinary Design Yields the Best Solutions

“Success has many fathers.” This oft-quoted proverb rings especially true in energy development, where a project’s success is the product of many contributors. Recent TOPICs on Pre-Design have illustrated how to build the proper foundation for the next critical step in energy development – the Design phase. Effective design is fundamentally tied to the orchestration of many design disciplines.

Site design comes together in much the same way that an orchestra blends distinct sounds. Just as the conductor brings the music score to life by uniting the diverse talents of the wind, string, and percussion sections, a successful developer understands that each design professional on a project team plays a unique role. Some roles are more visible, some operate primarily in the background – but all contribute to a much better result by working together than if played solo.

Comprehensive site design relies on a number of disciplines, including environmental scientists, GIS specialists, archaeologists, civil engineers, and surveyors. Eliminating or minimizing any of these disciplines can be detrimental to the design process. Even if all the key players are assembled on a team, they need to design in concert with each other. Otherwise, the civil engineer may design the most efficient method of grading a site based on the plan layout, while not fully realizing the impacts on a patch of native grassland. Similarly, a meteorologist may determine the highest yielding locations for wind turbines without considering site engineering or constructability, thereby producing unrealistic expectations for the eventual project layout.



A site design based on extensive multi-disciplinary interaction comes out of the Design phase having been molded, tweaked, and massaged into something more efficient, less costly, easier to build, and with minimized visual impact. Multi-disciplinary design is much less apt to be stalled during the entitlement process or to result in intervention by regulatory agencies. It is also less likely to have unforeseen issues that increase the number of engineering iterations or cause expensive construction delays. In short, multi-disciplinary design is value-added design that minimizes project risk.

Good project designs are crafted by experts who have a keen understanding of technical, natural, and political constraints and who work side-by-side rather than in sequence. Just as careful Pre-Design helps lay the foundation for subsequent phases, a thorough Design phase allows the project to proceed smoothly into Post-Design, where effective designs get translated into successful construction and compliance practices. By orchestrating multi-disciplinary design, your next project can resemble a musical symphony rather than a cacophony of sounds.



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