



PLANNING ADVISORY NOTICE

The Coordinating Engineer Framework for Wireless Telecommunications Projects

This paper provides an introduction and overview of the Coordinating Engineer Framework for successful and straightforward design and jurisdictional review of proposed wireless telecommunications project scopes. Like traditional construction projects, wireless telecommunications projects are designed by qualified engineers and executed by qualified contractors with these projects subject to established building permit review and approval processes overseen by authorities having jurisdiction.

Due to the end user's network requirements, wireless telecommunications projects may be installed on various types of vertical infrastructure. Consideration of the intended use of that structure (refer to "Intended Use of Structures with Emphasis on Small Cell" White Paper <https://tifonline.org/wp-content/uploads/2023/05/TIF-White-Paper-Intended-Use-of-Structures-with-Emphasis-on-Small-Cell-Ed.-2.1-2023.04.17.pdf>), and frequently changing network needs, wireless telecommunications projects also often require specialized design and engineering skillsets that can differ significantly from traditional commercial building construction projects (refer to "Reliability of Telecommunications Structures" White Paper <https://tifonline.org/contentresources/white-paper-reliability-of-telecommunications-structures>). As with construction projects serving other industries, individual wireless telecommunications projects frequently rely on multiple engineers of record with expertise spanning many specialized areas of focus. These sub-disciplines include site civil design, RF design, supporting structure design and analysis, mount design and analysis, foundation design and analysis, electrical design, grounding design, and mechanical design. Additionally, telecommunications structures are typically planned as "un-manned or unoccupied"

facilities, meaning they often have drastically different requirements than a typical commercial building from a permitting and code perspective when it comes to occupancy.

Under the coordinating engineer framework for wireless telecommunications projects the end user engages an engineer to oversee the comprehensive project scope. This engineer serves as the "coordinating engineer" and is able to combine the various segments of the project developed under the qualified team of engineers of record contributing their specialized segments required for the project scope.

A classic example of this for a wireless telecommunications project is when the end user engages several different structural engineers for tower analysis, mount analysis, foundation analysis, and/or equipment platform design.



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The end user’s coordinating engineer will present a construction drawing package that references the specialized segments produced by the other engineers on the project team. The end product will consist of a coordinated package of design deliverables with each component part developed by a qualified engineer that specializes in their detailed area of expertise. This framework for project team structure utilized by many industry design professionals takes root in governance established in the National Society of Professional Engineers (NSPE) “Code of Ethics for Engineers.”

Per NSPE Code of Ethics for Engineers Section II: Rules of Practice, Section 2.c:

“Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment.”

This section of the Code of Ethics for Engineers guides design professionals to leverage the expertise of multiple qualified engineers to prepare separate segments or portions of a given project. Projects managed under this approach allow the Coordinating Engineer to combine design documents prepared by others under one singular project. Under this framework, the building official may accept a complete project package composed of separate segments prepared by multiple Engineers of Record as one single set of construction documents that is coordinated on behalf of the owner under the Coordinating Engineer.

We recognize the coordinating engineer framework as an industry best practice in project management to uphold and reinforce the ethical practice of engineering in support of the telecommunications industry. This approach facilitates and streamlines the design and permitting process proactively mitigating potential delays in the deployment of essential and critical telecommunications networks. The development of a project under the coordinating engineer framework results in a fully coordinated and comprehensive set of construction documents that meets the detailed requirements of the end user, their contractors, and network operations teams. Presenting wireless telecommunications projects in this manner provides the building official with assurance that the project has been fully coordinated and made up of segments of work produced by multiple licensed engineers practicing in their specific area of expertise. ●

