

A construction expert will have this broad expertise, together with the ability to work cooperatively and sympathetically with the design team and to respect the integrity of their design. In this way, the constructability review process becomes a team operation where the constructability resource and the design team work together cooperatively to integrate constructability into the design process.

#### **ITEMS TO BE ADDRESSED UNDER CONSTRUCTABILITY INCLUDE:**

Access to adjacent residential and commercial properties should be maintained at all times.

Contractor operations: Adequately evaluate and explain appropriate construction task and operations. This may include the order of construction activities.

Drainage issues: Drainage network errors have had the largest dollar impact and account for 25% of total errors on plans; last minute design changes to the roadway plans, which often require adjustments to the drainage plans, caused many of these errors. Check inverts of culverts and systems to insure positive drainage and outfall. Utility conflicts can significantly affect the sequence of construction. Address the need for temporary drainage for construct, detours, slope drains, etc. See VDOT's [Drainage Manual](#).\*

Easements and right of way must be sufficient to construct Project. Few issues can cause more construct delay than the lack of necessary easements or right of way.

Environmental issues: These are issues that can cause more construction delay or unexpected cost. Environmental Division representatives will provide guidance on these issues such as permits required for construction in live streams or concerning wetlands.

Equipment necessary such as piers, cranes, etc.: Adequate equipment clearance such as a crane swing radius is a constructability issue, for safety and functional reasons. Large equipment deserves special consideration as to how it will be transported to the job site and to provide adequate maneuvering clearance during construction. The Construction Division is a source for advice.

Excavation near existing structures: One issue may be a question of providing adequate horizontal distance to maintain the integrity of existing structures. A subsurface investigation may be appropriate for some locations. The Construction Division is a source for advice.

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\* Rev. 7/16