

## ABC-UTC 2023 In-Depth Web Training: Precast Substructures

#	Questions	Responses
	<b>Module 5: Utah's Riverdale Road over I-84 Precast Substructure and Its Performance</b>	
1	Has the use of precast substructures proven to decrease or increase the lifetime performance of the structure?	This was included in the presentation.
2	Is galvanic corrosion with black steel and galvanized corrugated metal pipe (CMP) sleeves an issue that has been encountered?	It is common to use uncoated steel tendons in galvanized steel ducts for post-tensioned structures. This has proven to not be a corrosion issue.
3	Compared to the cast-in-place approach, what are the costs of the precast substructure?	This topic was not included in this webinar. Information on this topic can be found in training modules developed under NCHRP Project 12-102A. These modules can be downloaded from: <a href="https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5433">https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5433</a>
4	Can you provide a detailed comparison of the two building systems, i.e., ABC versus conventional cast-in-place construction?	This was included in the presentation.
	<b>Questions during Module 5</b>	
5	Within coastal zones and flash flood or shallow underground water levels, geofoam material is sometimes used to construct bridge abutments and roadway subbases. Are there other U.S. states or construction contractors who use geofoam material for bridge and roadway approach construction?	The Utah DOT uses geofoam for bridge abutments and approaches due to large settlements or global stability issues tied to deep lakebed clay materials. UDOT has significant information with geofoam design in-house and in their geotechnical design manual.
6	Was lightweight aggregate considered to reduce the weight of the bent caps?	It was not at that time (mid 2000's), but the Utah DOT has used lightweight aggregate more recently on ABC projects.
7	What was the issue with waterproof membrane on accelerated construction projects?	The challenge to mitigate is that when ABC uses precast elements, there are joints between the elements. When there is backfill material behind these elements, water can leak through the joints and stain the concrete, and accelerate deterioration. So using waterproof membranes prevents this from happening.