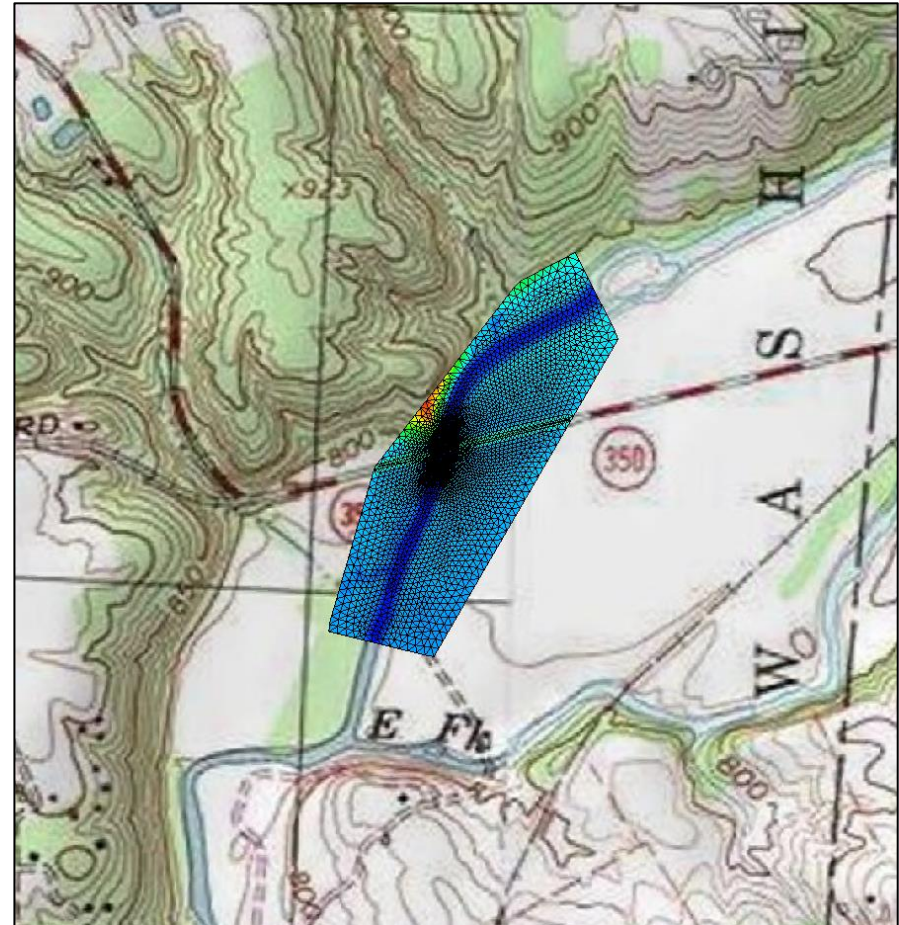
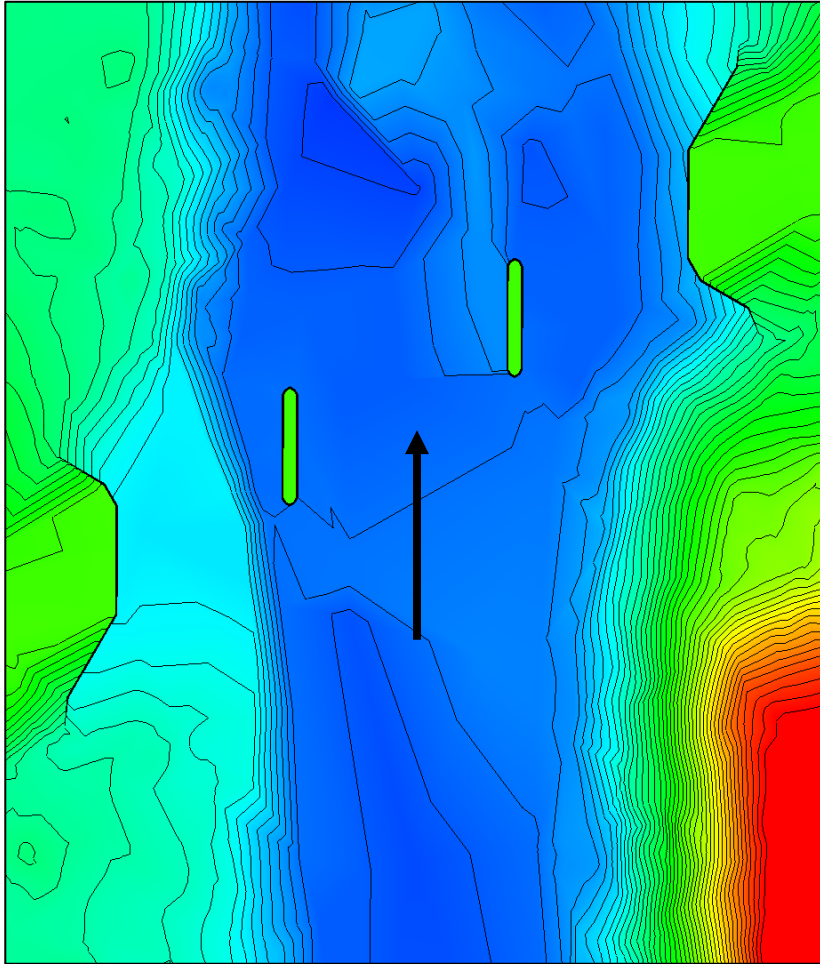


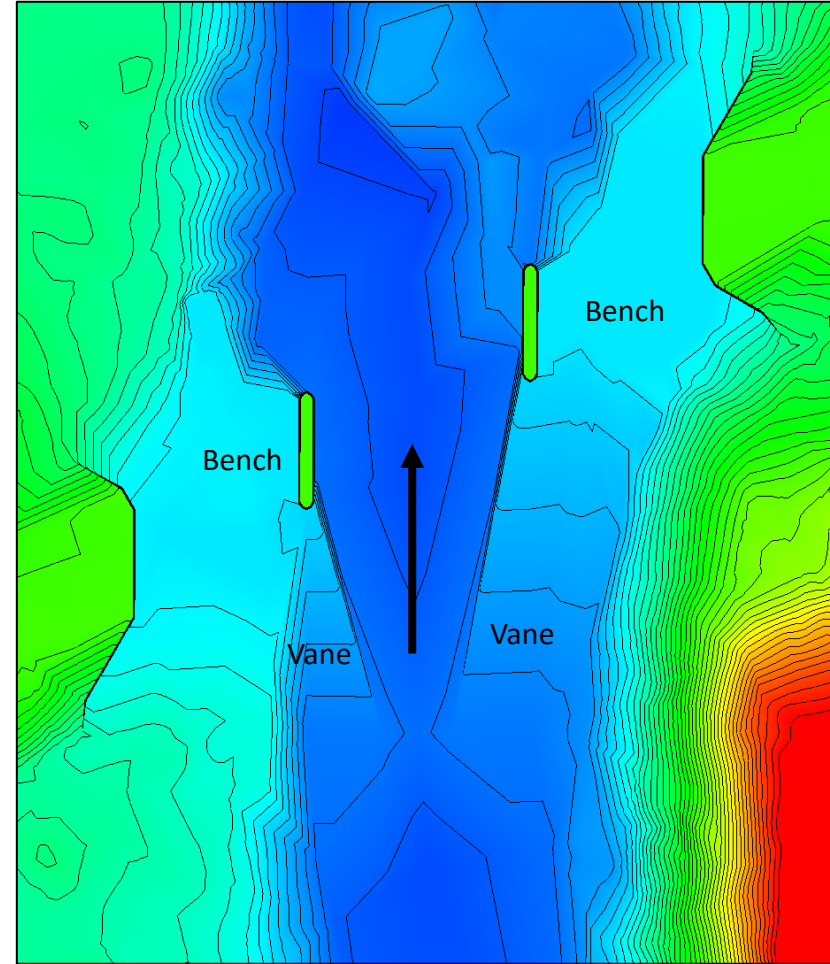
WAR 350 Todd Fork Bridge



Vane and bench proposal to alleviate debris accumulation on piers

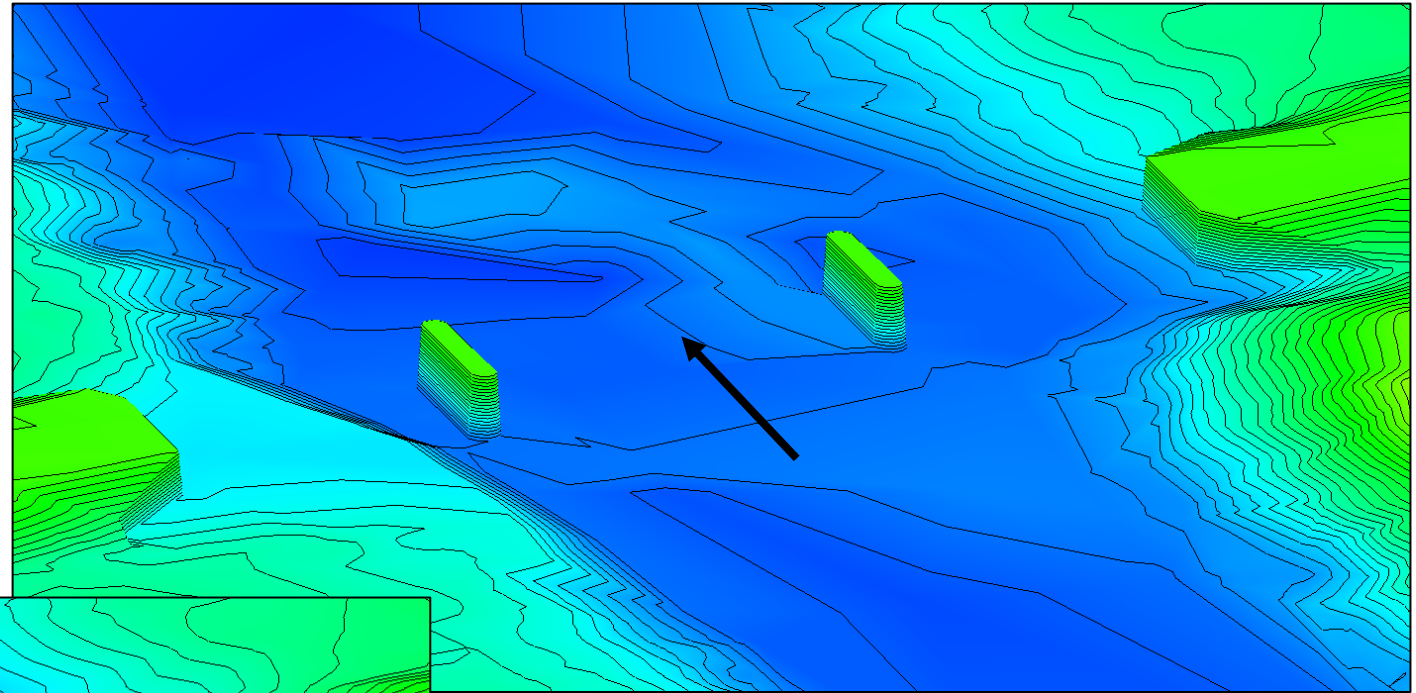


Existing

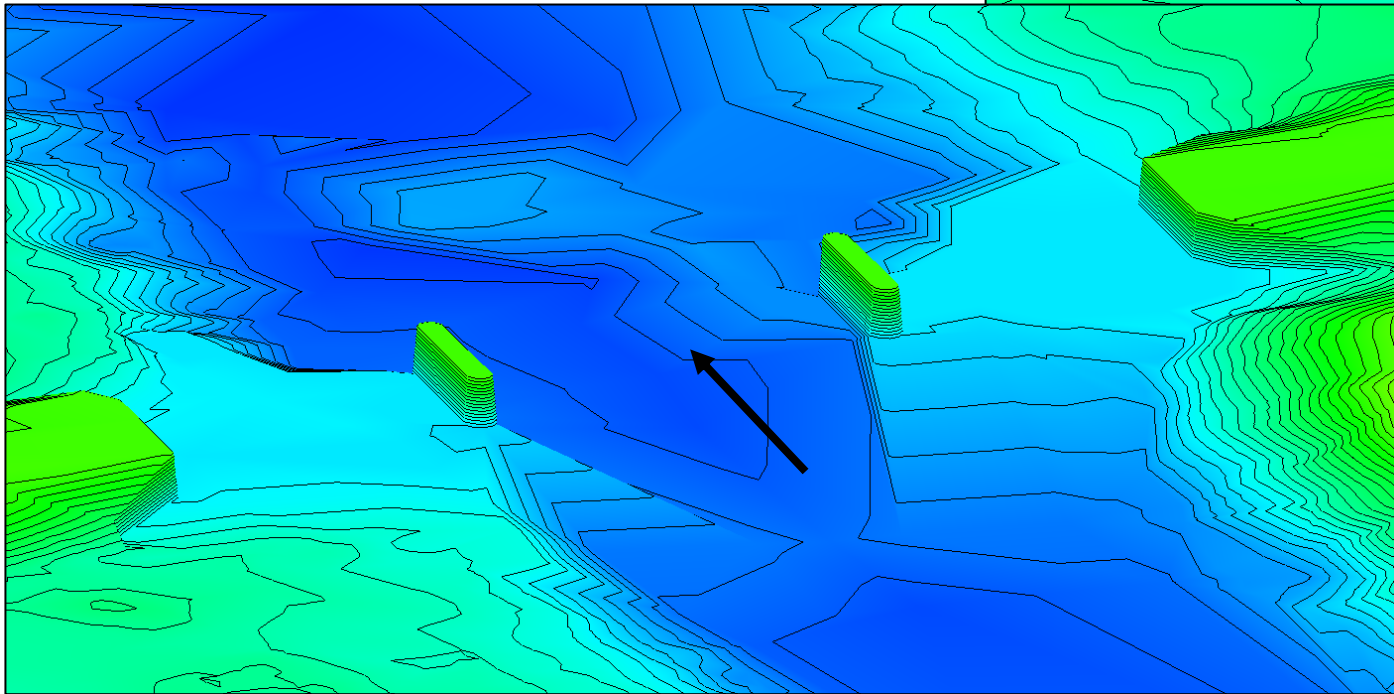


Proposed

Bathymetry

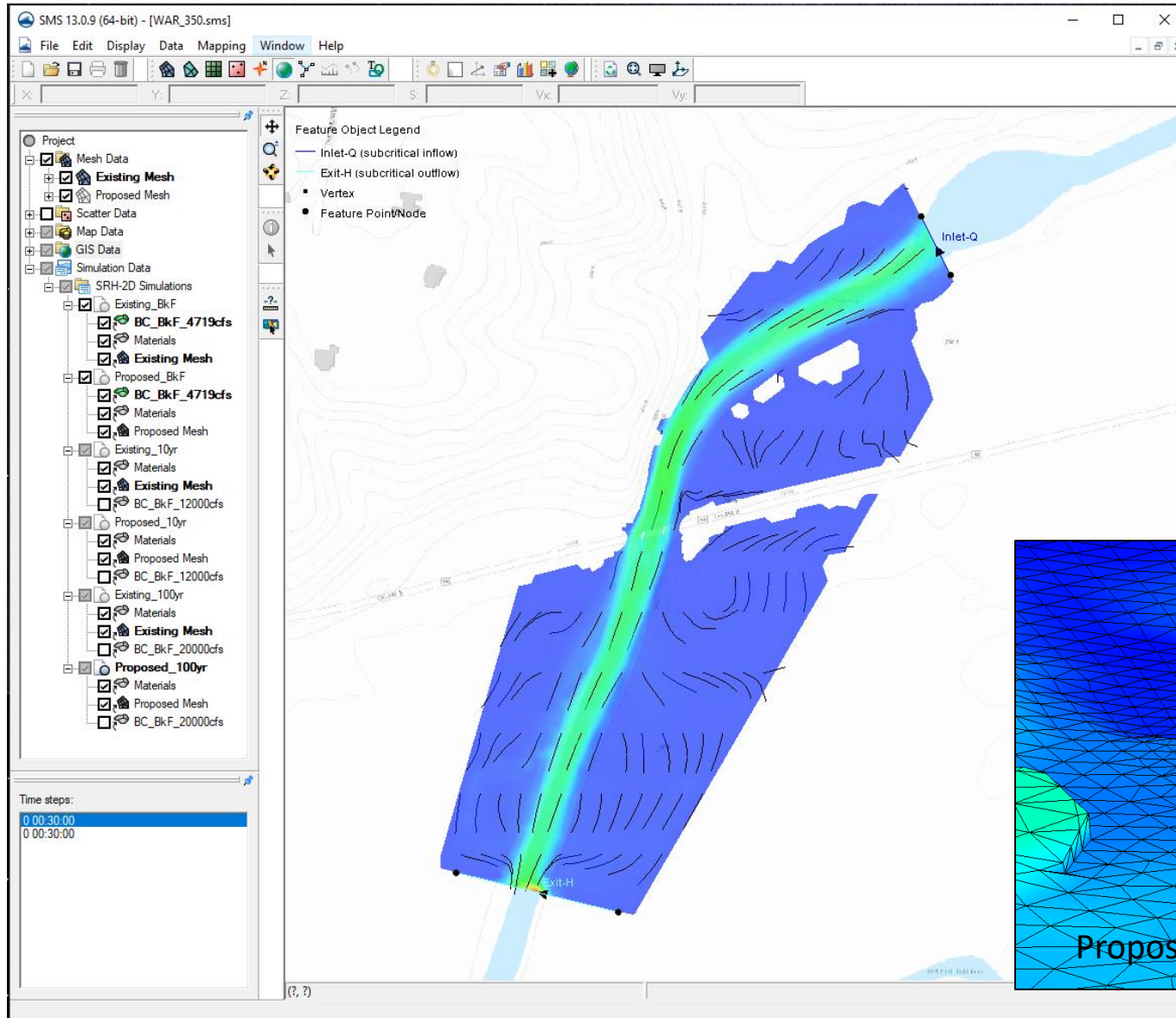


Proposed



Existing

WAR 350 SMS Model

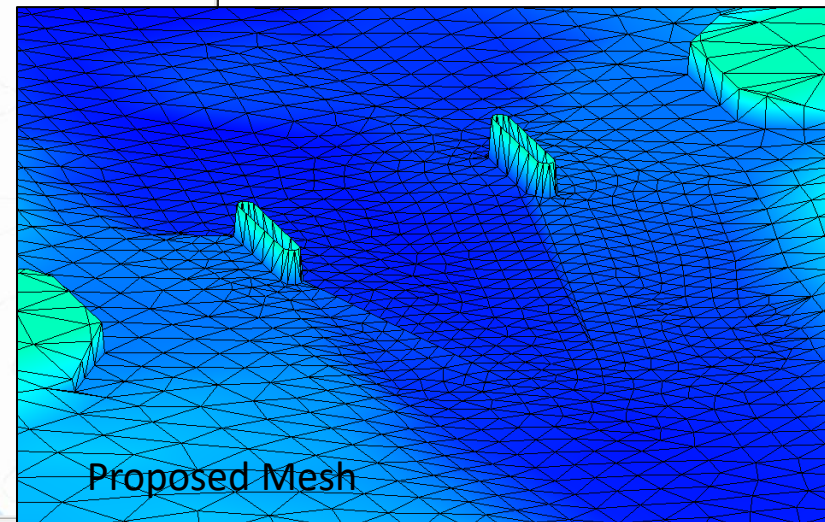


Simulations - Existing and proposed conditions

Bankfull flow, 4719 cfs – unit flow rate used for flow distribution as proxy for debris transport path.

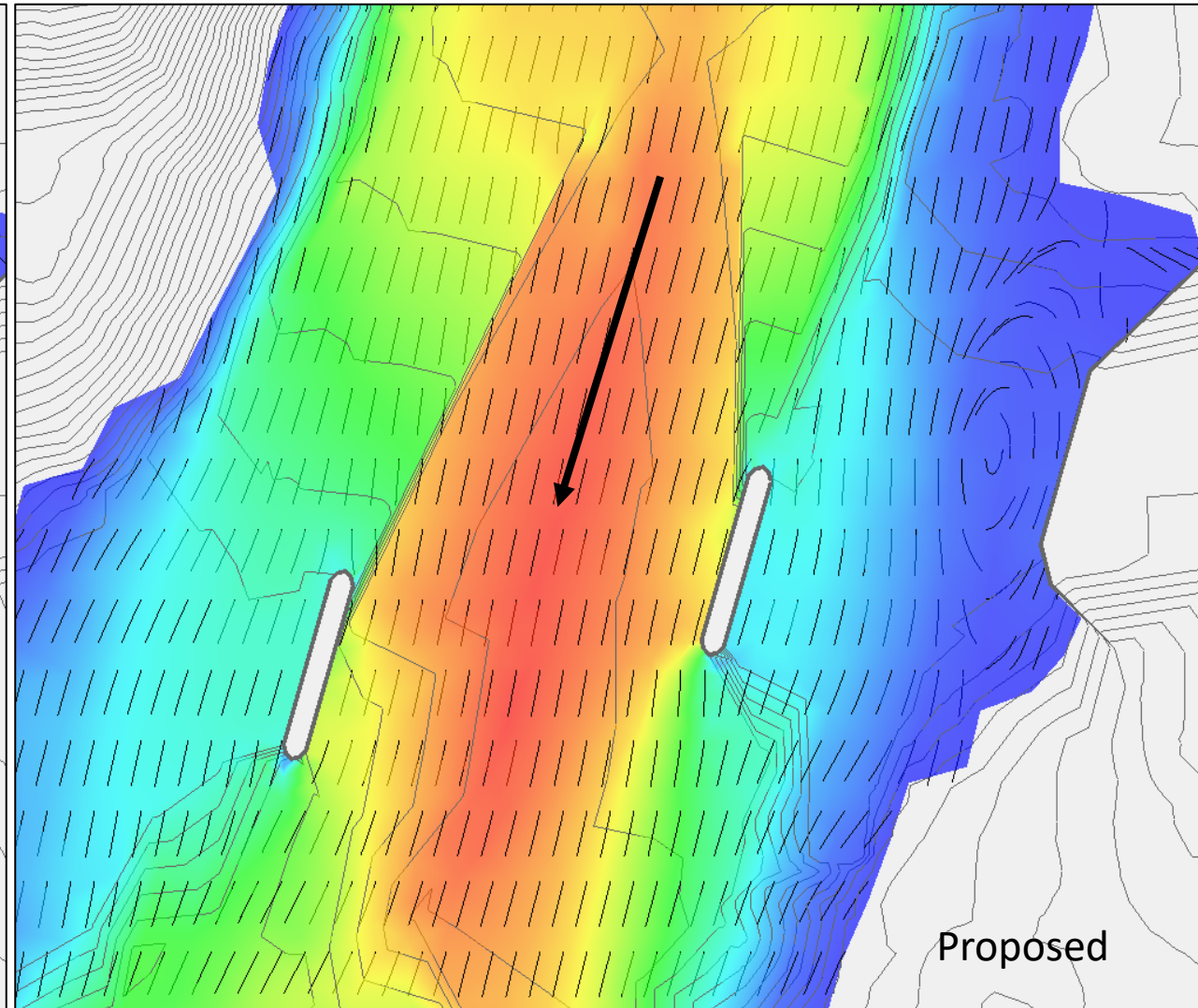
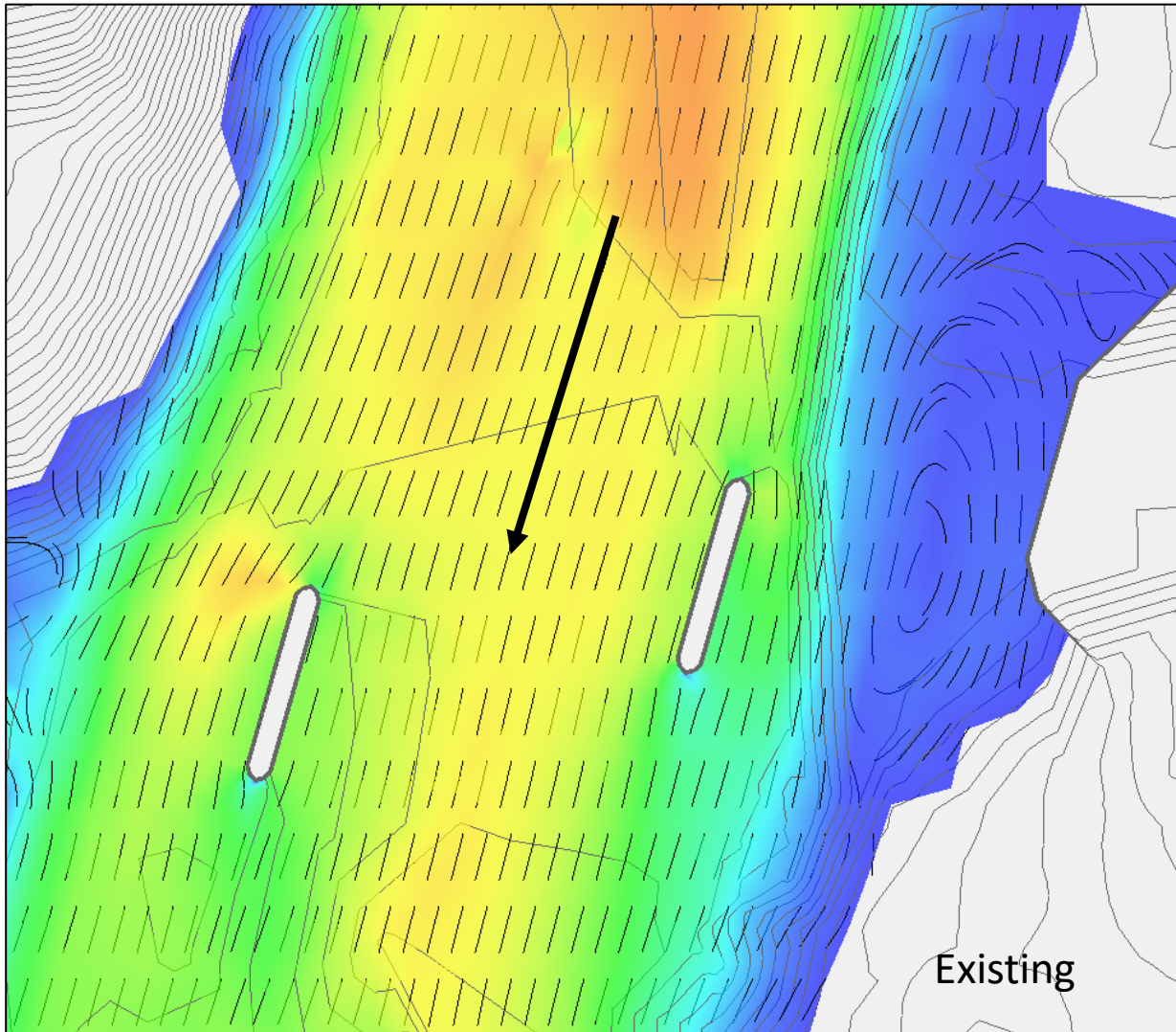
100 yr RI, 20,000 cfs – water surface elevations used for flood flow capacity.

10 yr RI, 12,000 cfs - shear stress used as proxy for sediment transport, accumulation and scour.



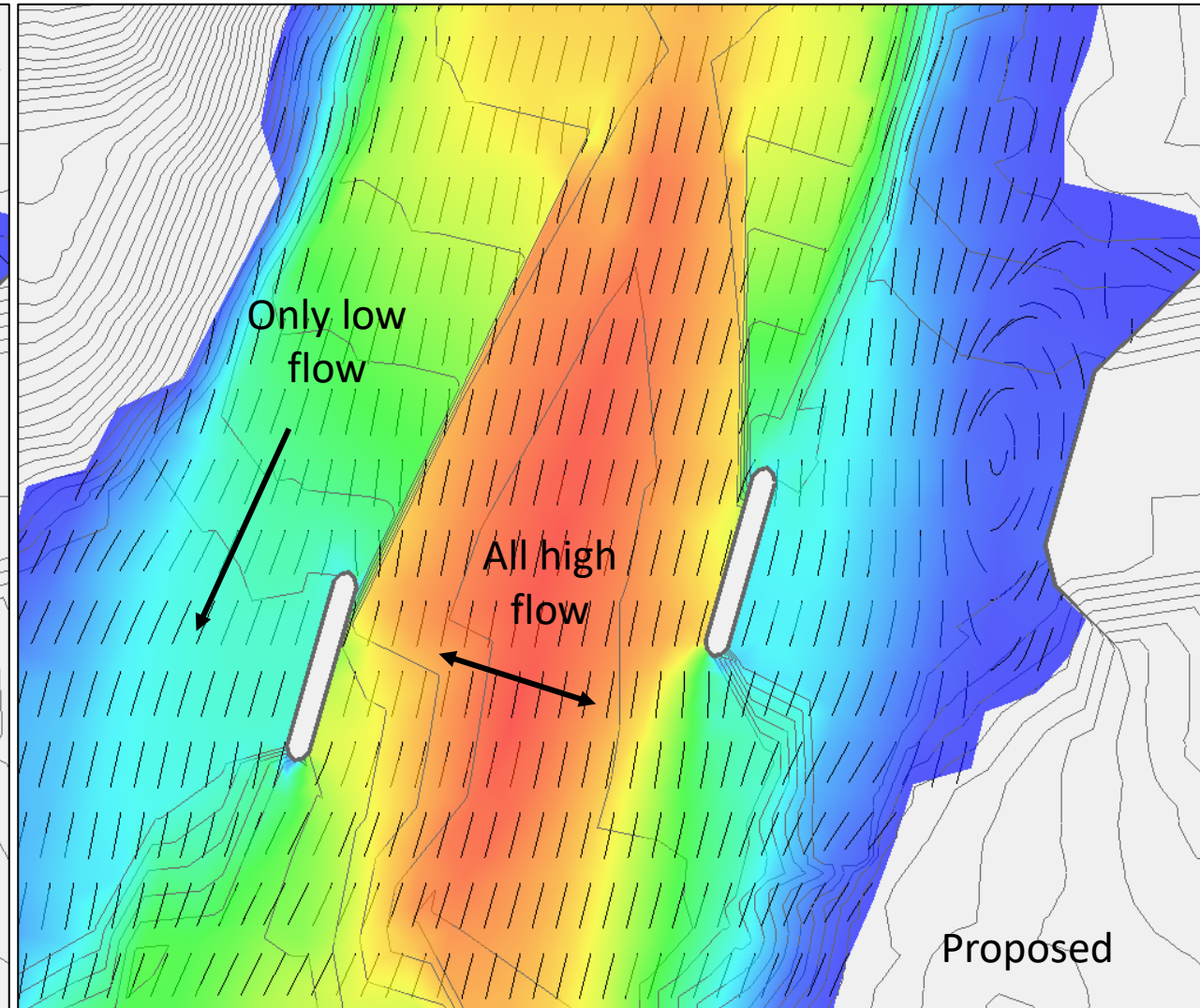
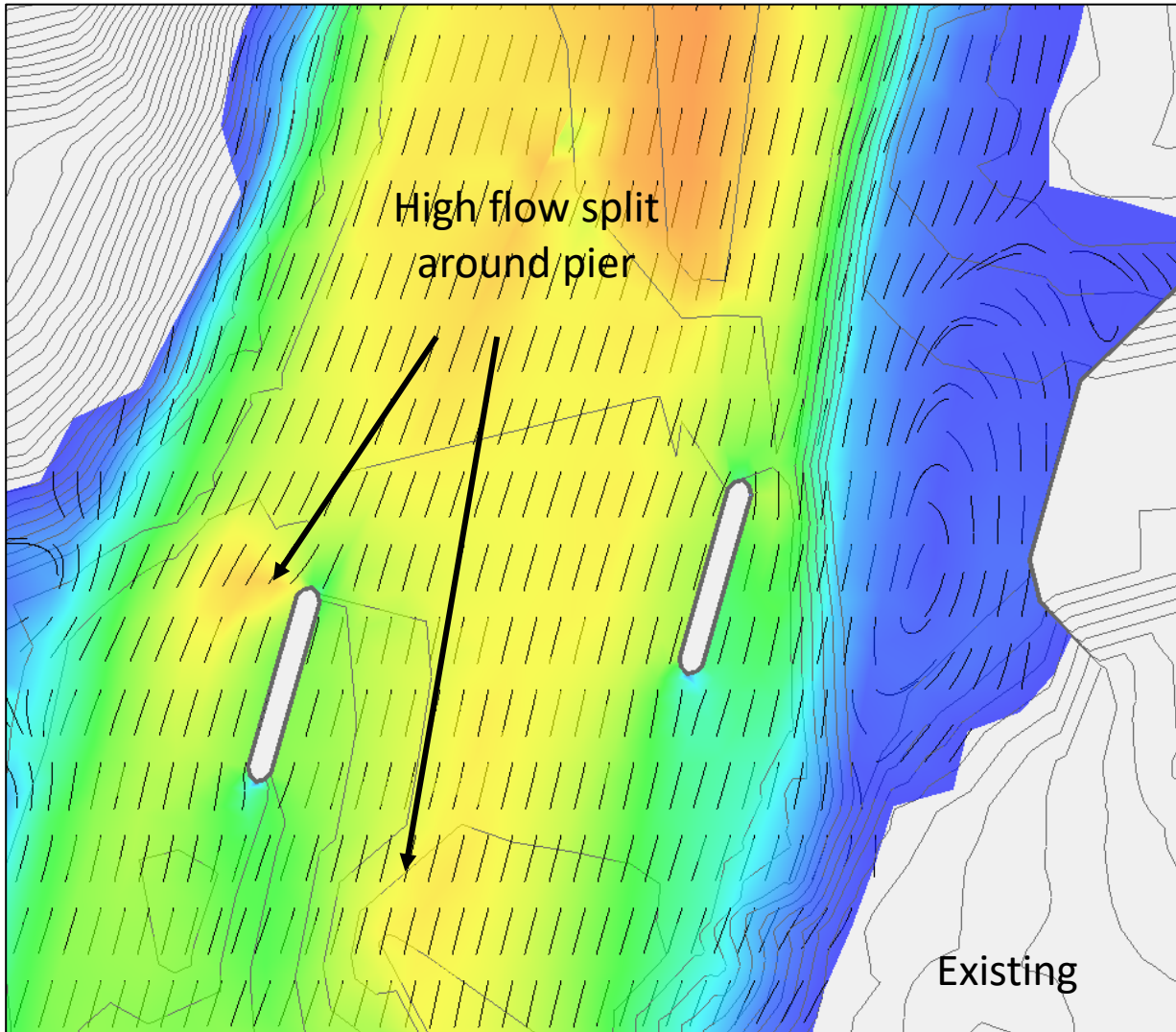
Flow Distribution

Bankfull flow, 4719 cfs – unit flow rate used for flow distribution as proxy for debris transport path.



Flow Distribution

Bankfull flow, 4719 cfs – unit flow rate used for flow distribution as proxy for debris transport path.

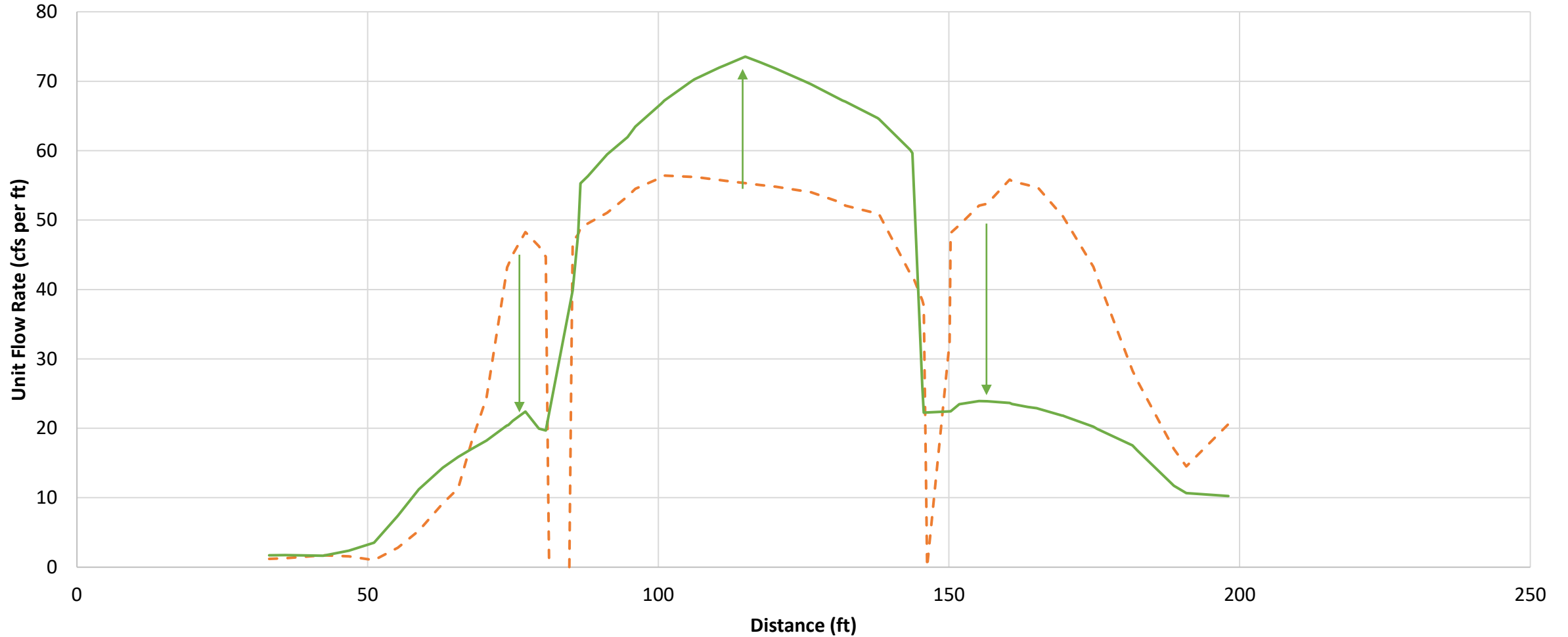


Flow Distribution

Bankfull flow, 4719 cfs – unit flow rate used for flow distribution as proxy for debris transport path.

Bankfull Flow At Bridge

Existing Proposed

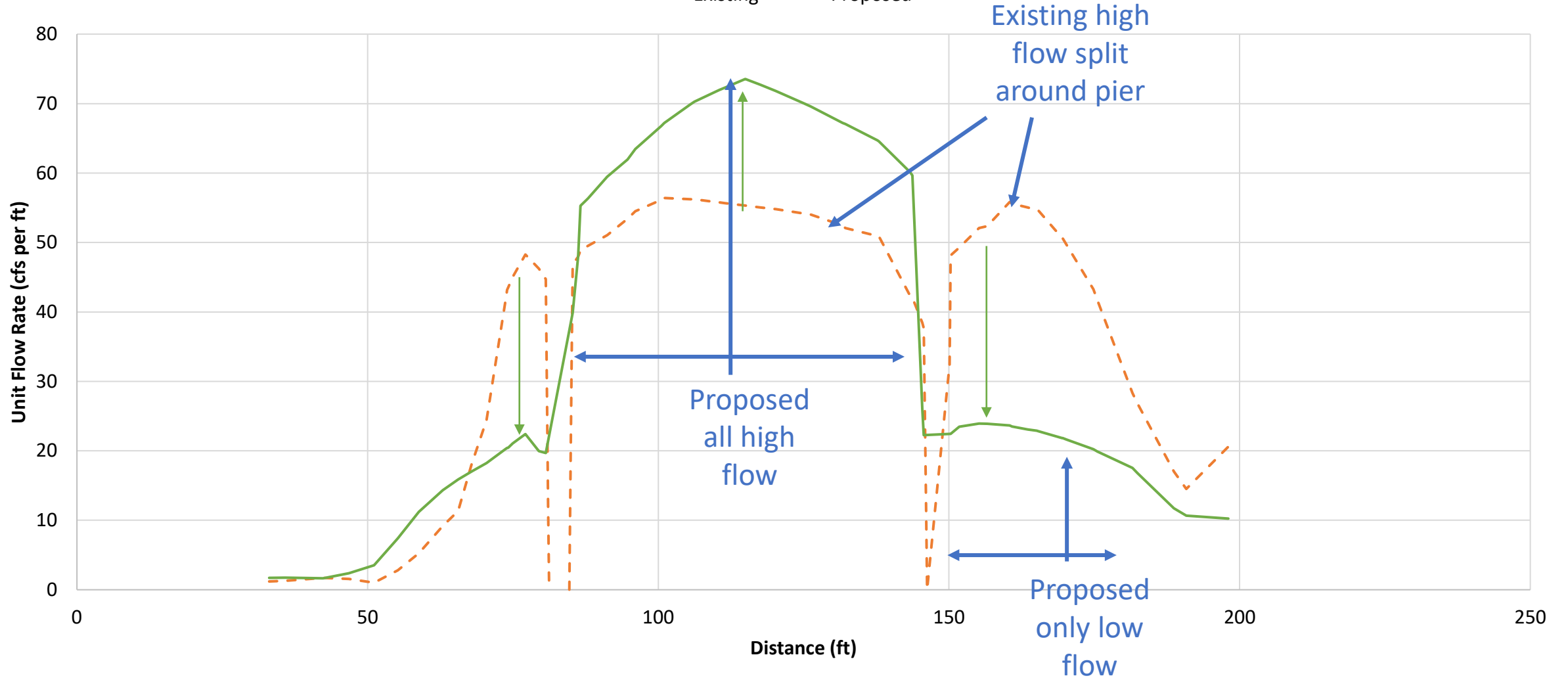


Flow Distribution

Bankfull flow, 4719 cfs – unit flow rate used for flow distribution as proxy for debris transport path.

Bankfull Flow At Bridge

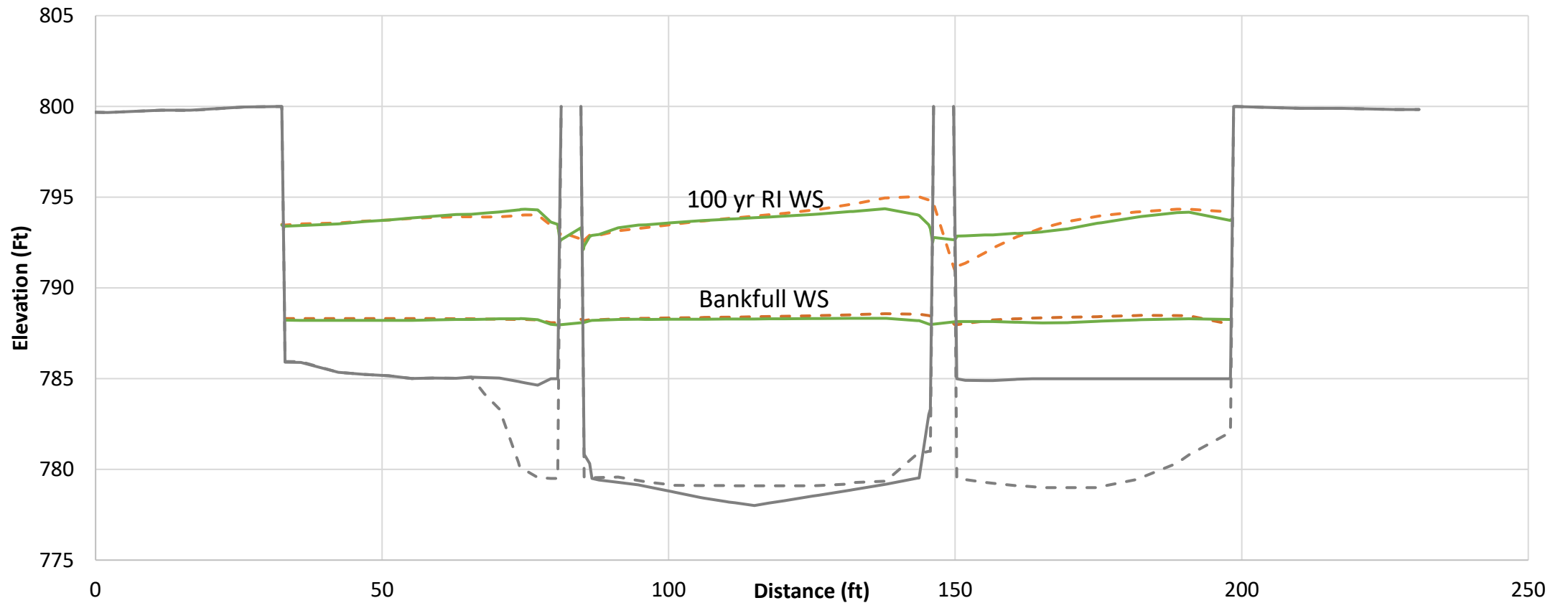
Existing Proposed



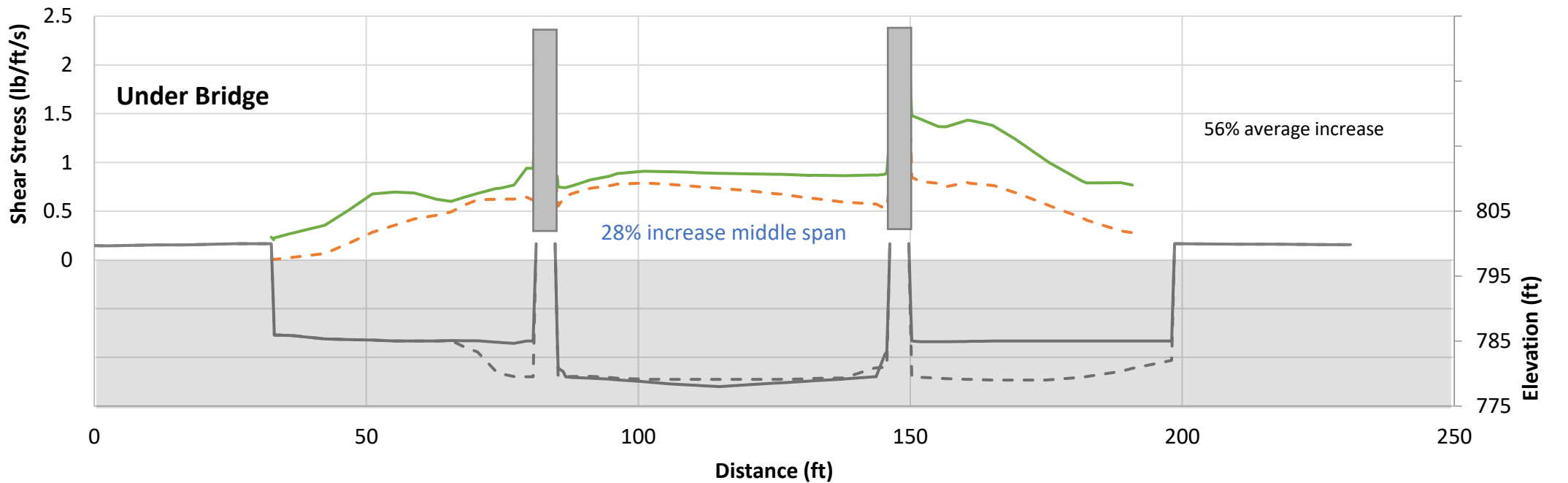
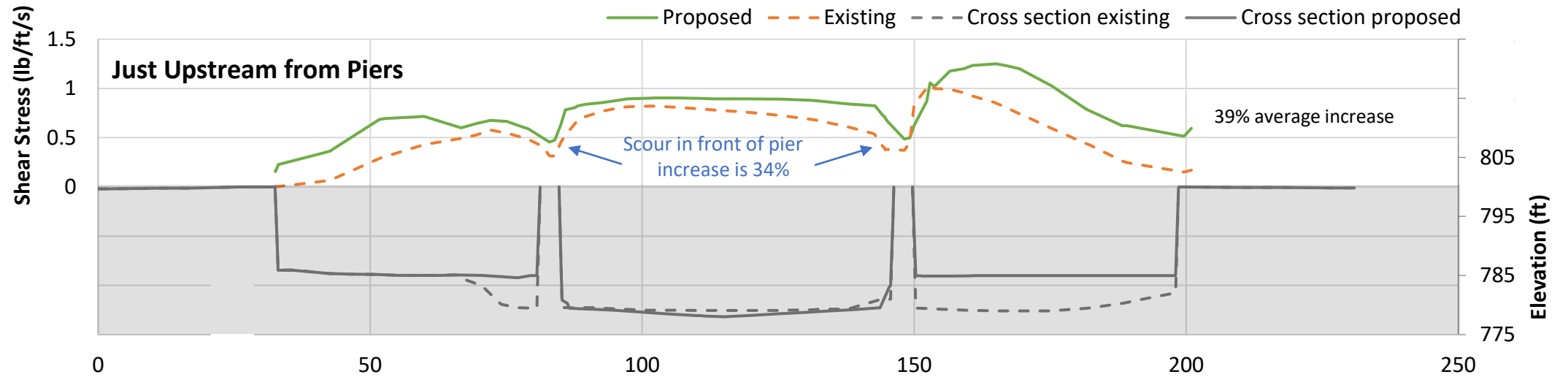
Water Surface

100 year RI and Bankfull Water Surfaces

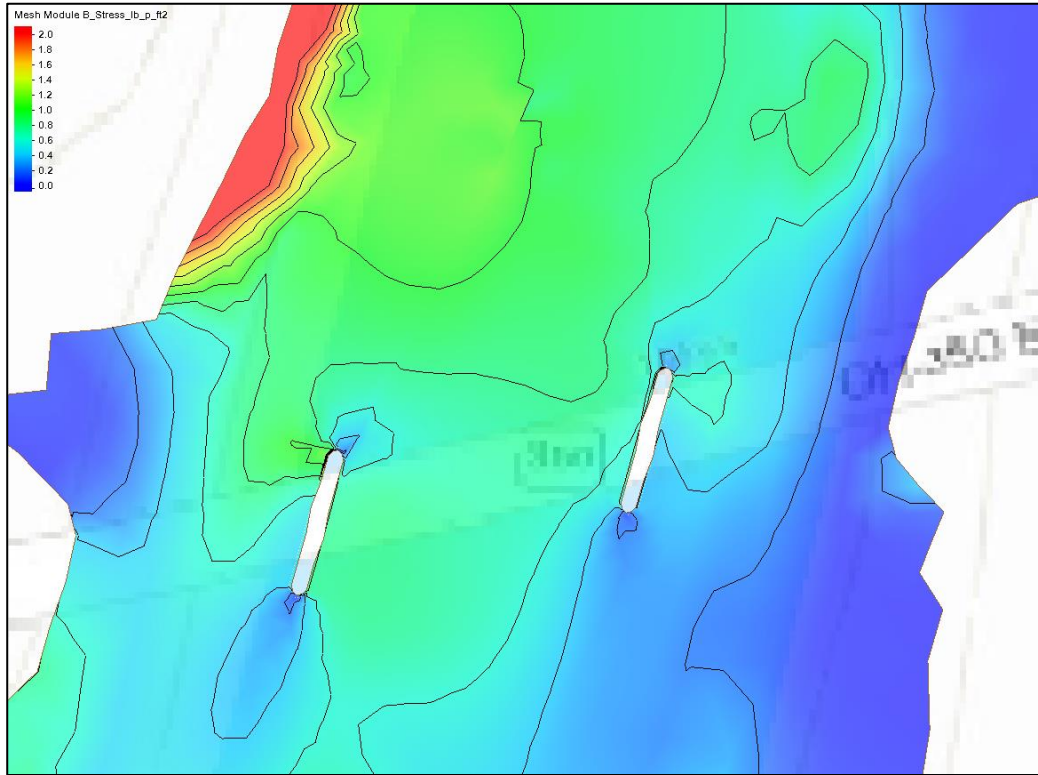
Existing Proposed Cross section existing Cross section proposed



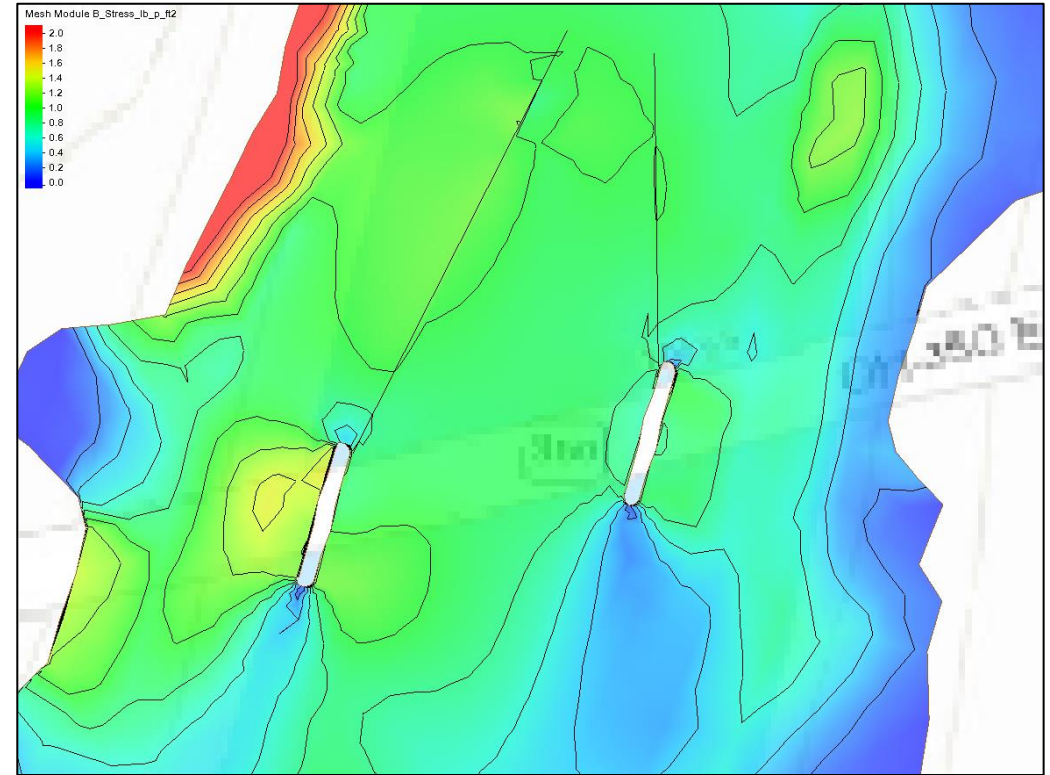
Shear Stress of 10 yr RI



Shear Stress of 10 yr RI



Existing



Proposed

Layout Process

