

# Schram Park Redesign & Improvement



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## Objective

Connect Schram Park to bike path along S. Brewer street with a pedestrian bridge and adjoining trail while improving Schram Park to meet current and future needs.

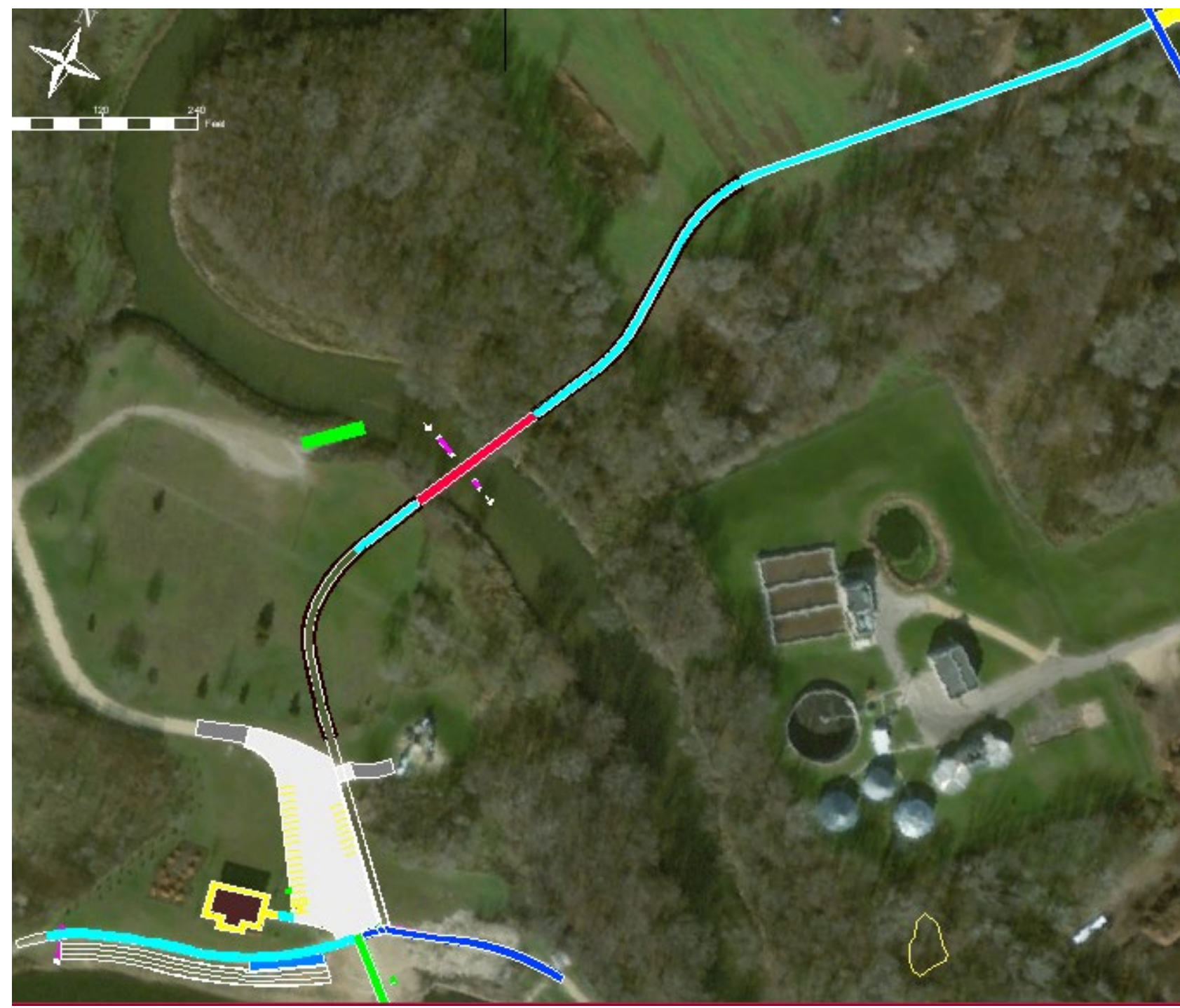


Figure 1. Aerial view of the site

## Bridge & Trail

Steel bridge elevated by abutments and attached to trail by a retaining wall to meet USACE requirements and be ADA compliant.

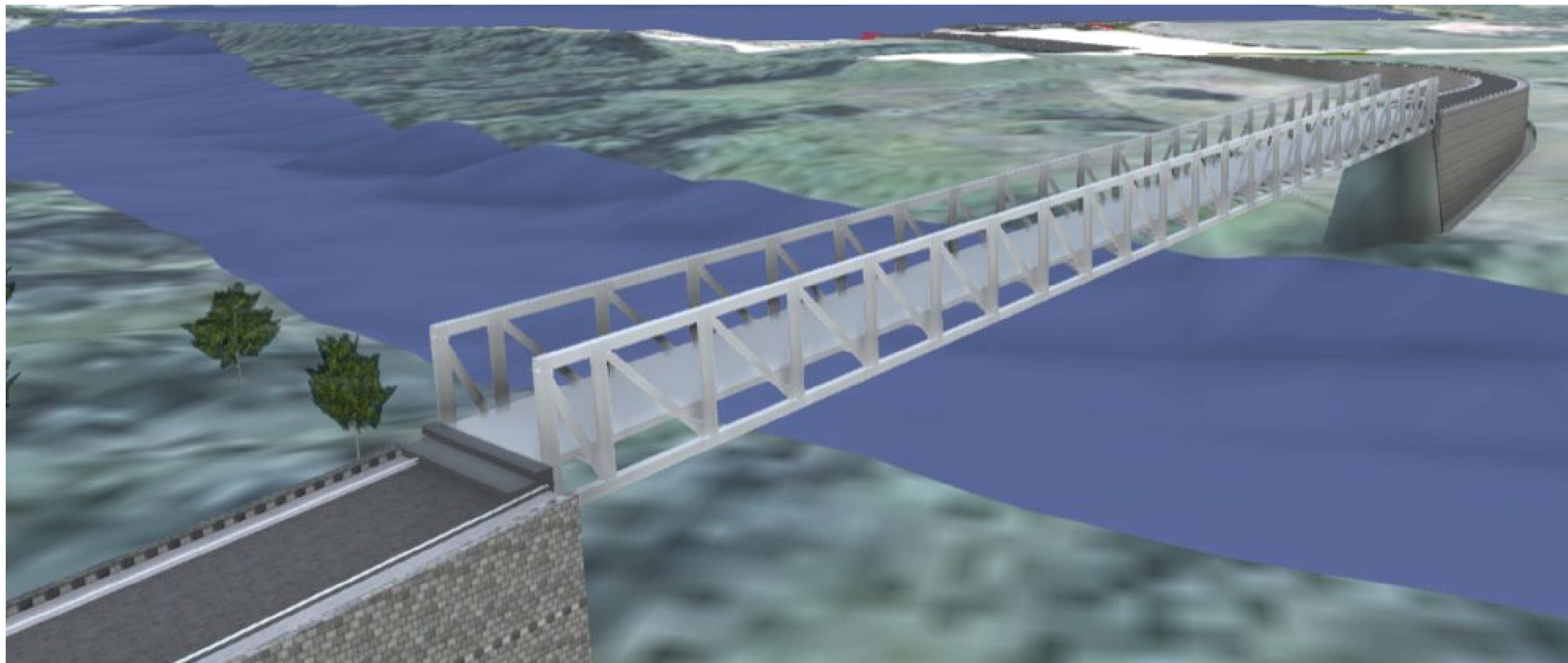


Figure 2. A 184-foot bridge attached to 1545 feet of trail connects Schram Park to S. Brewer street

## References

- Barker, R. M., and Jay Alan. Puckett. Design of Highway Bridges an LRFD Approach. Wiley, 2013.
- Iowa DOT Design Manual. (n.d.). Retrieved November 19, 2020, from [iowa.dot.gov/design/Design-manual](http://iowa.dot.gov/design/Design-manual)
- Hydrologic Engineering Center (2016). "HEC-RAS River Analysis System: User's Manual." US Army Corps of Engineers.

## Water Analysis

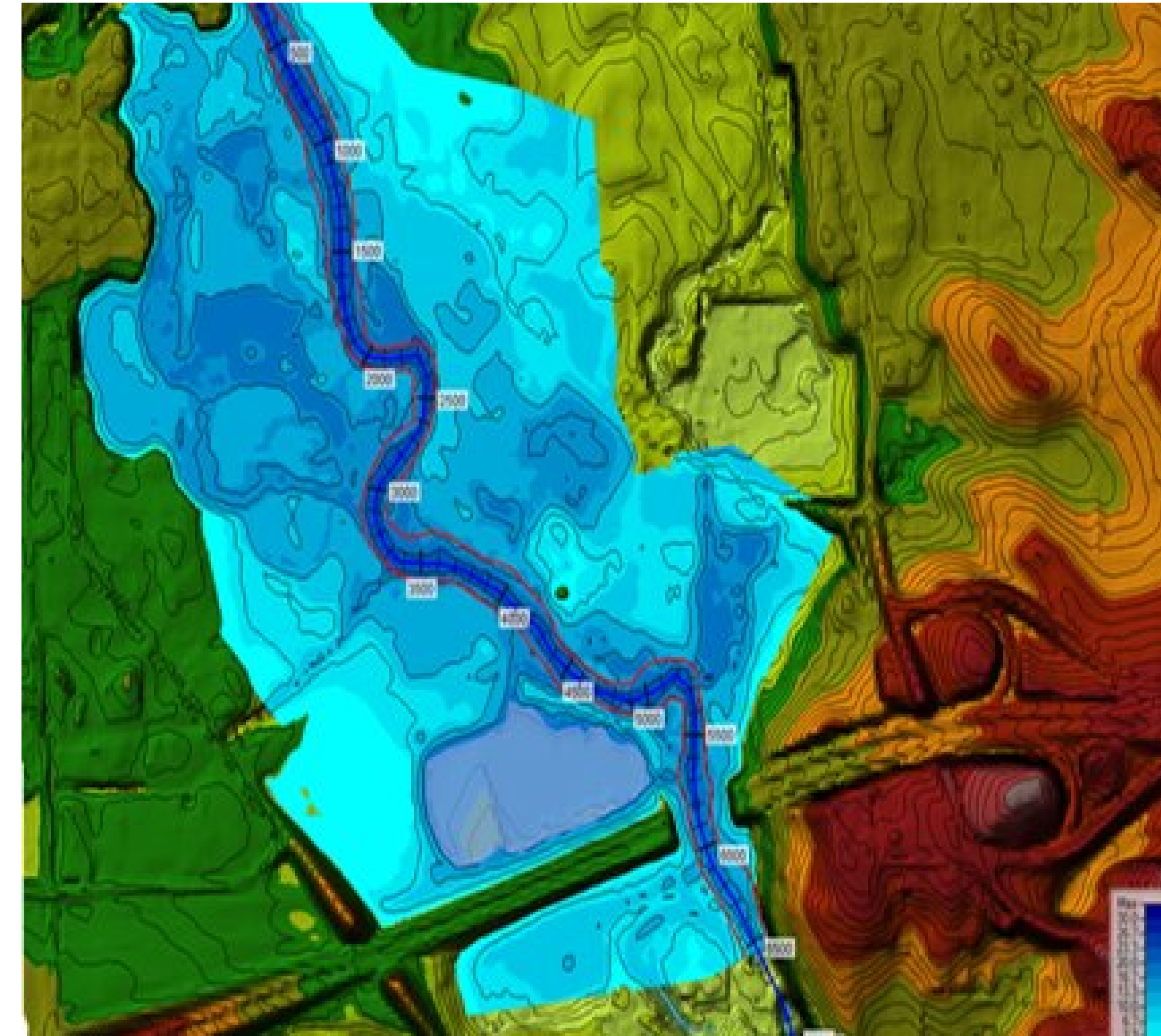


Figure 4. 1-D flood performed to assess various flood events

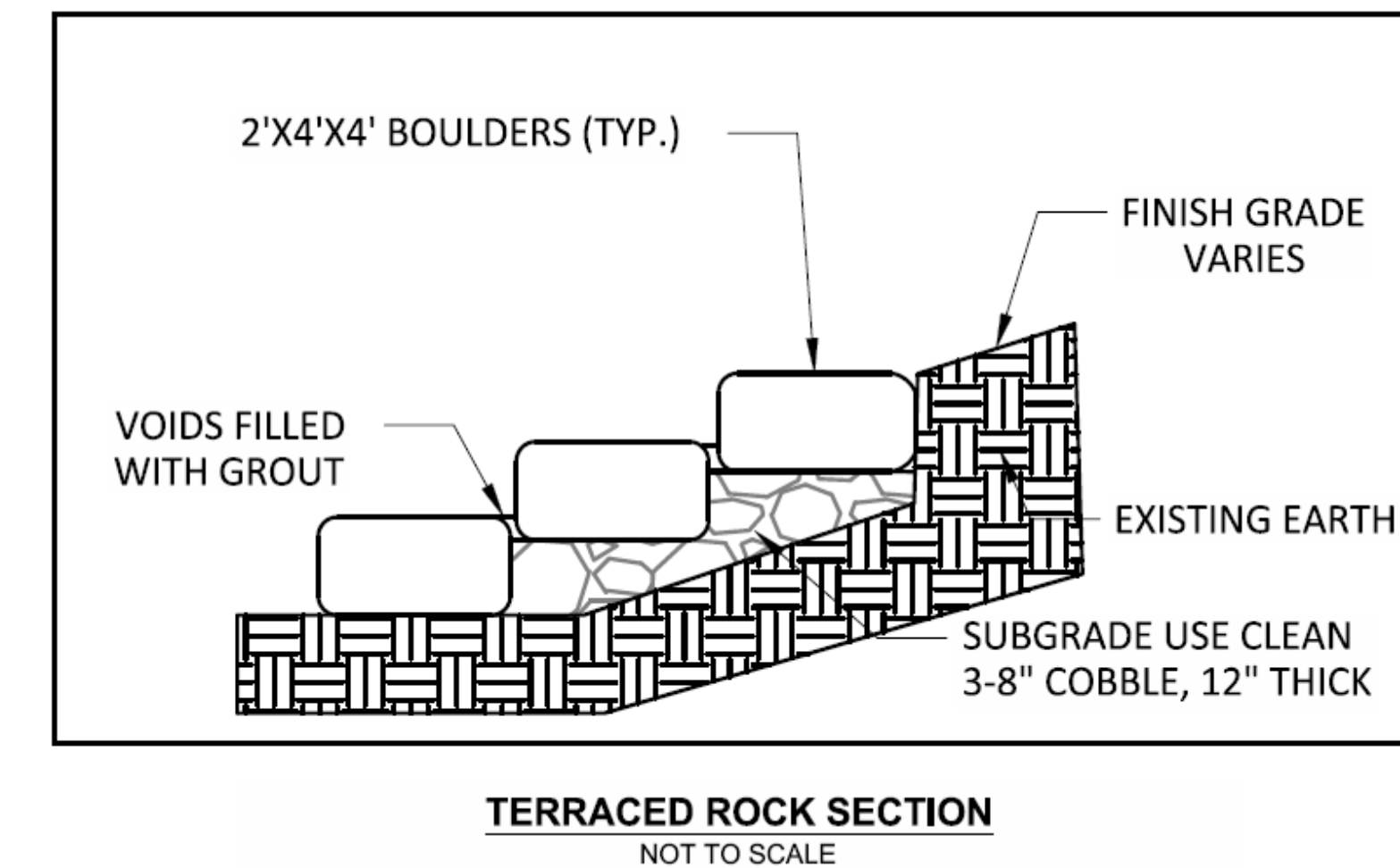


Figure 5. Stone steps reduce erosion along the bank of the pond and simultaneously providing extra seating

## Erosion Control

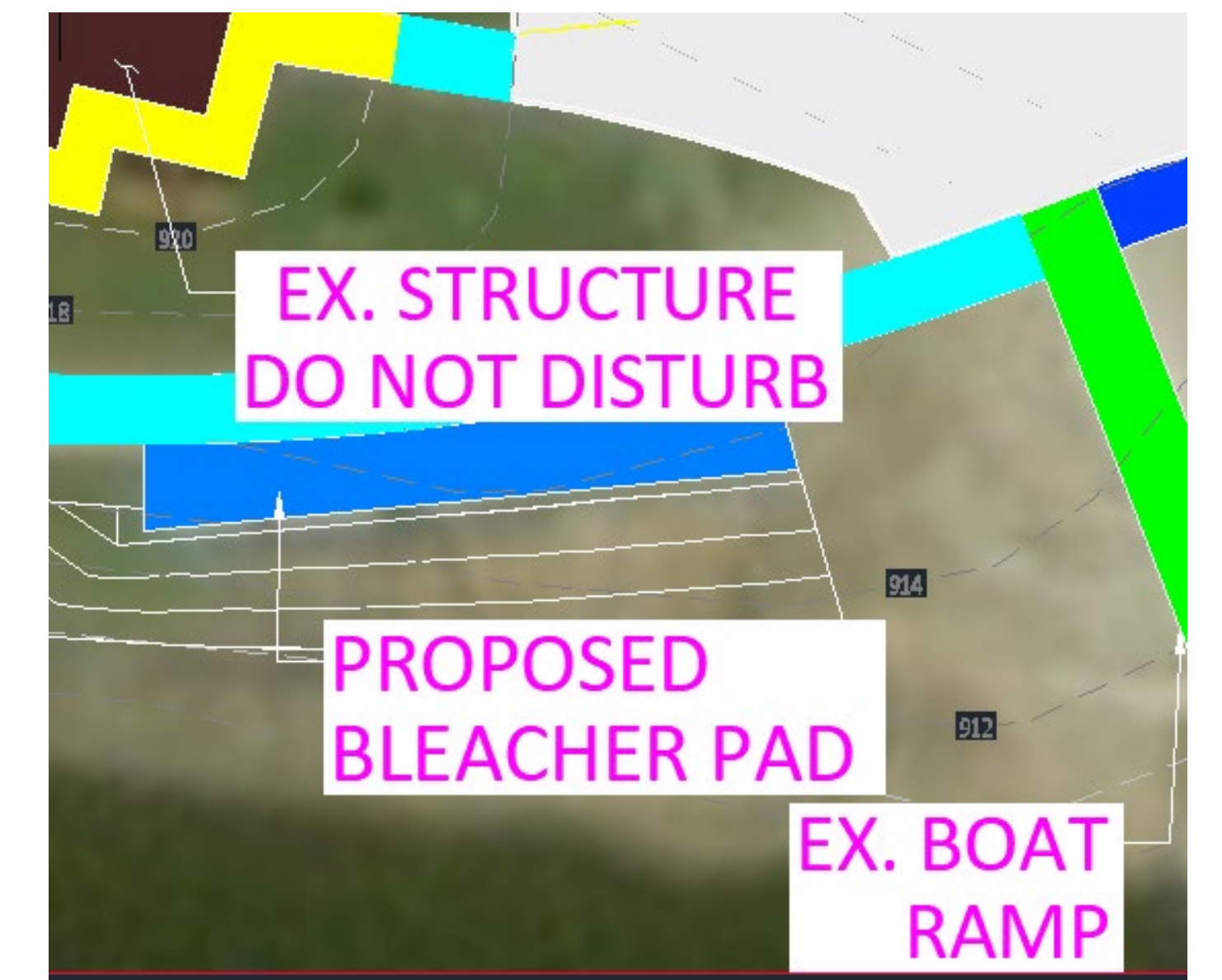


Figure 6. Concrete pads under bleachers to provide a stable base that's safe from being washed out

## Parking Lot



Figure 7. parking lot contains 23 spaces and 1 ADA space with ample room for a truck and boat trailer to truck around

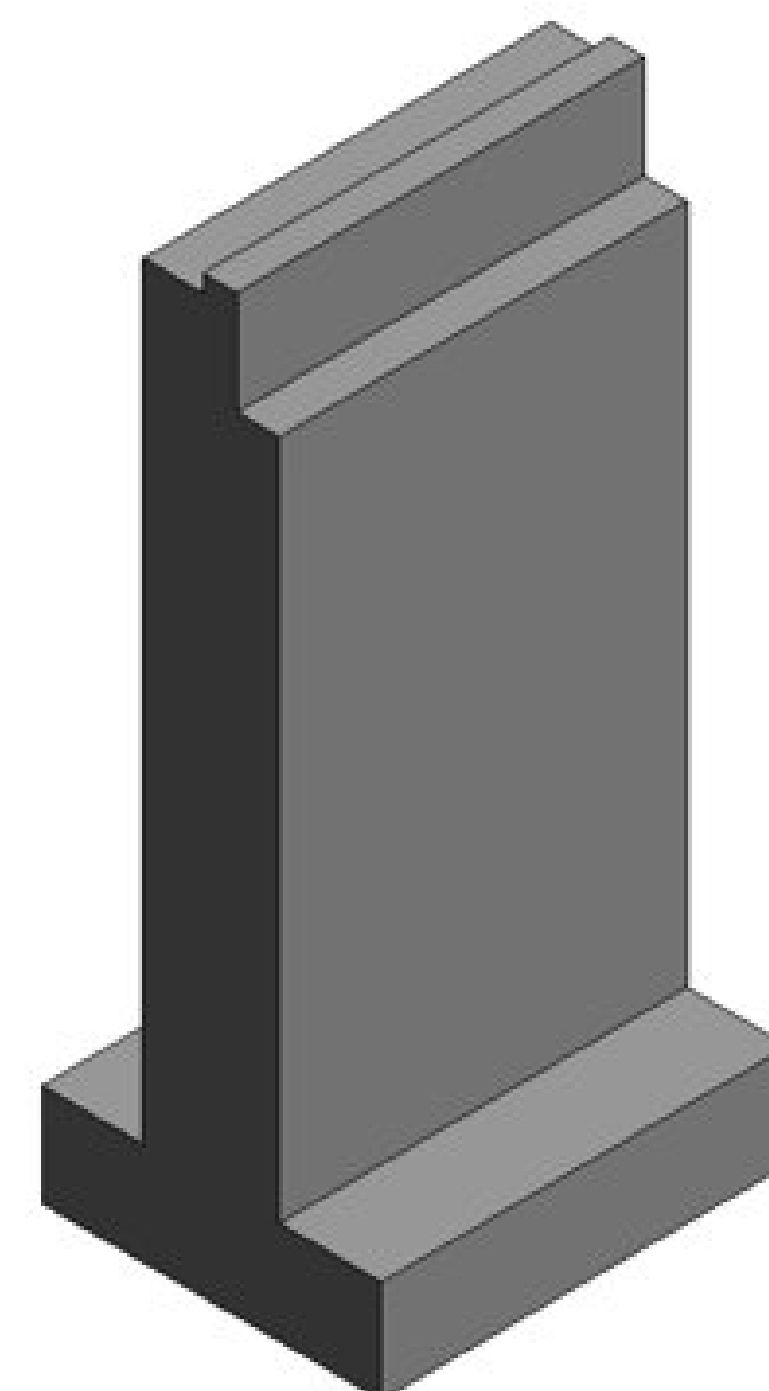


Figure 3. Stub abutment

## Conclusion/ Recommendation

The bridge is designed to accommodate pedestrian traffic and occasional emergency and maintenance vehicles. A trail that leads connects S. Brewer St. To Schram Park is elevated by retaining walls to keep the bridge outside of potential floods. Then a stone terrace was designed along the pond bank, upgrade of the parking lot and a bleacher pad to mitigate the effects of flood events to the park.