

**Cooper Slough at Vine Drive
Floodplain Analysis and Floodwall Certification
Fort Collins, Colorado**

Client: Mr. Ken Crumb
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This project hydraulically evaluated a 5,360-foot reach of the Copper Slough and Boxelder Overflow Path floodplains during the widening of Vine Drive. Floodplain and 1-foot floodway modeling and mapping was provided to ensure improvements to the Vine Drive did not adversely impact flooding conditions on neighboring properties. The study incorporated the following physical improvements within the project reach:

1. two 42-inch culverts on Cooper Slough at Vine Drive;
2. a conveyance channel for Boxelder Creek overflows constructed along the north side of Vine Drive;
3. two 3-foot high by 25-foot wide box culverts on the Boxelder Creek Overflow Channel at Waterglen Drive;
4. a **floodwall** along the Boxelder Creek Overflow Channel upstream of Waterglen Drive; and
5. a revised profile and cross section for Vine Drive.



Waterglen Drive over Boxelder Overflow Channel

The purpose of the study was to provide the analysis and documentation required by FEMA and the City of Fort Collins to implement the following changes to the effective regulatory floodplain:

1. extend the effective floodplain from the upstream side of the pre-project Vine Drive to the upstream side of the as-built Vine Drive;
2. adjust the effective floodway from the downstream side of the pre-project Vine Drive to the downstream side of the as-built Vine Drive; and
3. **as-built and certify a floodwall** which prevents 100-year flows splitting across Vine Drive.

Anderson Consulting Engineers, Inc. (ACE) was responsible for: (a) hydraulic analysis; (b) floodplain mapping; and (c) the overall certification of the floodwall. ACE provided FEMA with a Conditional Letter of Map Revision (CLOMR) and a Letter of Map Revision (LOMR), the latter of which upon approval provided accreditation of the floodwall.



Waterglen Floodwall, Fort Collins, Colorado