

The BC-16 solution to the localized problem along Lindsey Street between College Avenue and Tributary A consists of adding capacity to the roadway's storm sewer system. Unless more detailed design suggest otherwise, the added storm sewer will parallel the existing system along Lindsey Street and remove the excess flow from the street for the design event. The basic design and cost estimate for this solution was developed by the City staff in the past and supplied for the SWMP.

Brookhaven Creek

Solutions for the ten problems in the Brookhaven Creek watershed are provided in Table 6-2 and Exhibits 6-3, 6-4a, and 6-4b. Solution BHC-1 addresses the most significant problem along the mainstem that includes stream flooding and erosion by removing 266 of the 276 homes (including numerous mobile homes) located in the baseline (100-year) floodplain. This solution will prevent flows from overtopping the Main Street pipe arch opening and spreading out over a large area on the west side of the creek by increasing capacity of the opening and the downstream creek channel. BHC-1 also removes all of the homes from the baseline floodplain located east of the creek.

The BHC-1 solution also stabilizes the stream erosion that has been occurring below Main Street for a distance of about 2,000 ft by utilizing mechanically stabilized earth structures and slope layback techniques where possible as discussed in Section 6.2 below. Similar solutions were developed for the three other stream erosion problems (BHC-2, BHC-3, and BHC-4) which are located between Main Street and 36th Avenue NW.



Erosion halted, stream stabilized



Typical stream erosion beginning

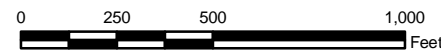
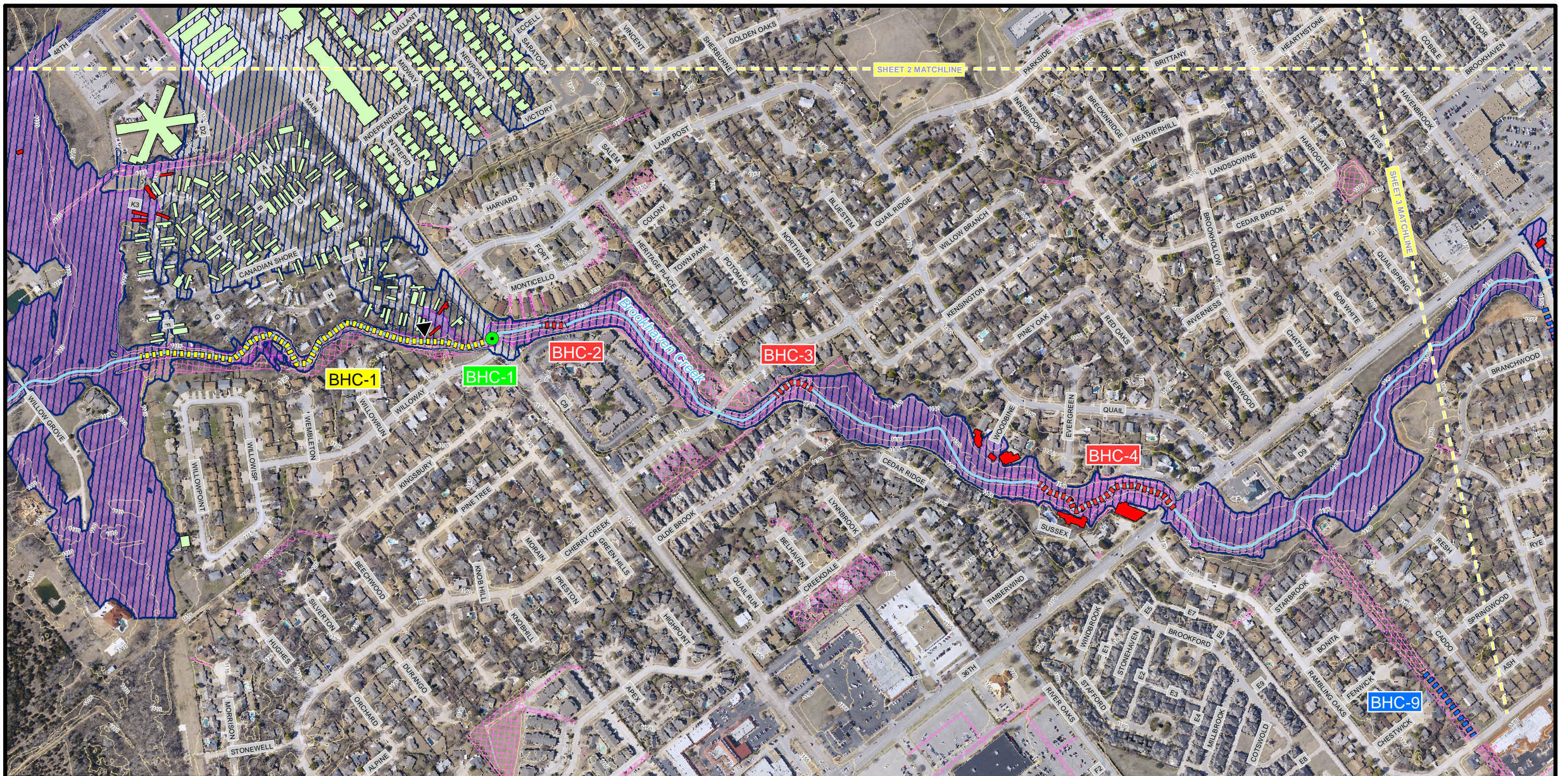
Clear Creek

The CC-1 solution was developed to provide protection for a 10-year flood event since using a larger event would require that 120th Avenue SE be raised by several feet over a distance of approximately 1,500 to 2,000 ft and very large culverts would be required to pass the flows below the raised roadway without raising upstream water levels. The recommended solution requires that the roadway be raised by 2.5 ft at its lowest elevation over approximately 1,800 ft and larger culverts as specified in Table 6-2.

Canadian River

No solutions were developed along the Canadian River as the investigation of problems along the Canadian River was not considered for this SWMP. Floodplains developed by FEMA form the basis of describing flooding along the river with that floodplain being reflected in Exhibit 4-4 located in a map pocket in this report.

A solution to one local problem area near Westbrooke/Terrace Road and Hollywood Street intersection was developed to rectify flooding in the intersection that is at least partially caused by an existing traffic calming circular island that was previously installed. The solution includes a custom-designed, low-profile (7-x-2-ft) box in order to convey the runoff from the inlets, under the street, and to the outfall channel in the flat street area. Additional inlet capacity was added to the system in order to carry the storm water generated from the developed areas that flows into the intersection from the north, west, and south and floods the area.



Aerial Photography: 2007
 Coordinate System: Oklahoma State Plane,
 South Zone
 Horizontal Datum: NAD 1983
 Vertical Datum: NAVD 1988

Legend

- City Boundary
- Existing Drainage Easement
- Stream Centerlines**
- Level 1 and 2 (Detailed)
- Level 3 and 4 (General)

- Floodplains**
- 100-year Baseline
- 100-year Solution
- Buildings in Floodplain**
- 100-year Baseline
- 100-year Solution

Recommended Solutions

- Road Crossing Upgrade
- Property Buyouts
- Floodwall
- Channel Stabilization
- Channel Improvements
- Storm Sewer Improvements
- Storm Water Detention



Storm Water Master Plan

Exhibit 6-3 Baseline Floodplain and Recommended Solutions Overview Brookhaven Creek Plus Tributaries A and B

Sheet 1 of 3

Job No.: 044194100 | Date: 12-11-08 | Scale: 1 inch = 500 Feet

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