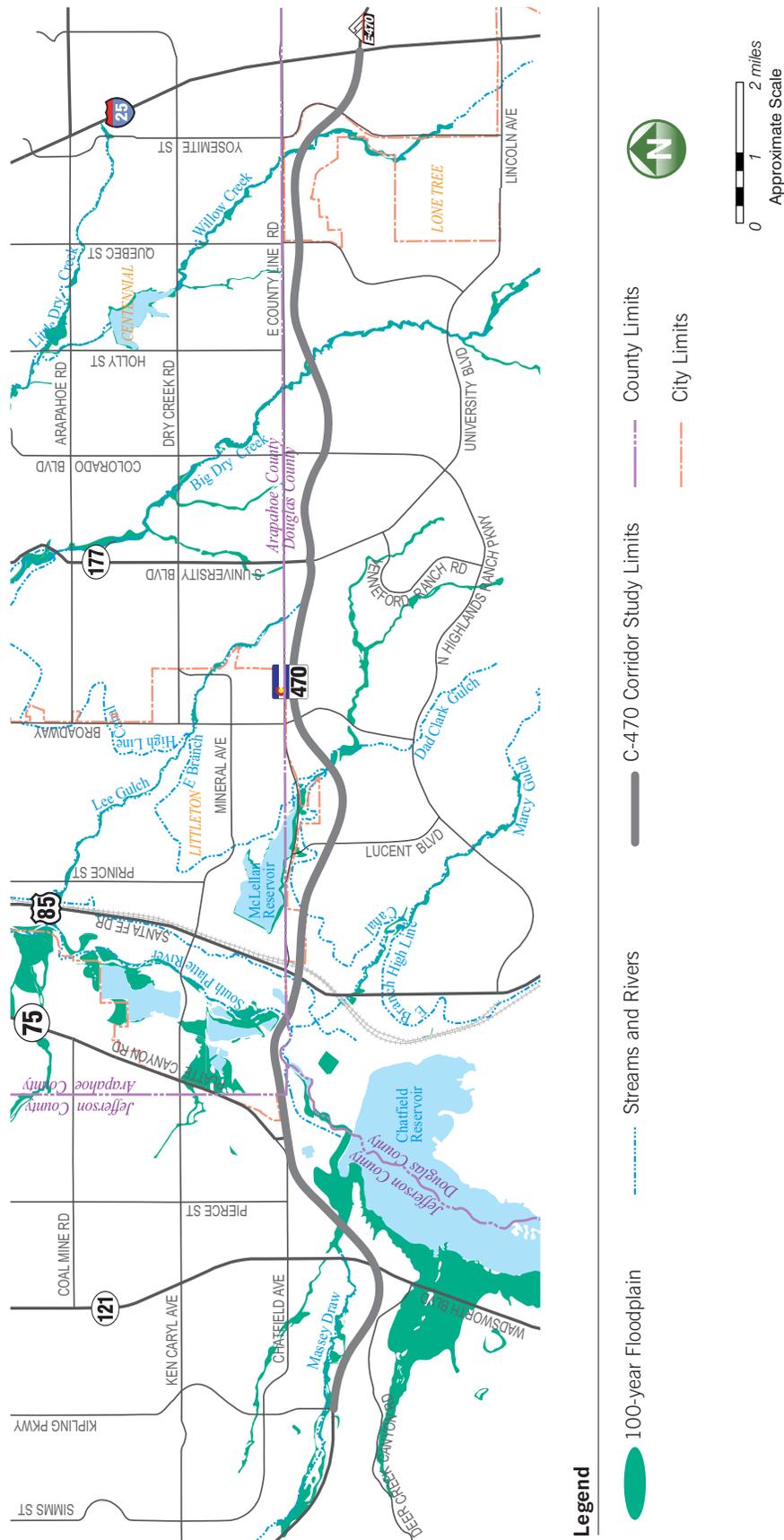


**Figure 3-19  
Floodplain Locations**



Source: Federal Emergency Management Agency Flood Insurance Rate Maps

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there would still be some rise in the water surface elevation, as shown in **Table 3-36**.

Widening the typical section for the GPL Alternative causes a slight rise in floodwater surface elevations above existing conditions for the regulated floodplains. The rise in floodplain water surface is a result of extending existing cross culverts for the wider typical section. These extensions, projected at the existing grade of the culvert, minimally raise the invert elevation, and the headwater is raised accordingly. However, because the flood elevations would not be raised or lowered more than one foot as a result of the GPL Alternative, it is anticipated that FEMA would not require changes to the FIRMs.

**Express Lanes Alternative (Preferred Alternative)**

Based on the evaluations undertaken, and with proper hydraulic design, the effects to the floodplains that cross C-470 would be within acceptable limits (within one foot of existing conditions). No changes to insurance rates are anticipated for properties within the flood zone near the project area.

Willow Creek has the potential for the water surface to rise as a result of study improvements. The creek generally runs parallel to the roadway for approximately 1,500 feet upstream of the crossing. Retaining walls have been designed into the alternative to minimize encroachment into the floodplain; however, there will still be a minor rise in the water surface elevation. This

effect is the same as demonstrated for the GPL Alternative, as shown in **Table 3-36**.

Widening the typical section for the EL Alternative would cause a slight rise in floodwater surface elevations above existing conditions for the regulated floodplains. The rise in floodplain water surface is a result of extending existing cross culverts for the wider typical section. These extensions, projected at the existing grade of the culvert, minimally raise the invert elevation and the headwater is raised accordingly. However, because the flood elevations would not be raised or lowered more than one foot as a result of the EL Alternative, it is anticipated that FEMA would not require changes to the FIRMs.

**3.3.6.3 Mitigation**

Although the FIRM shows floodplains as Zone A for four of the five drainages crossing C-470, studies have been approved since the maps were produced that have elevations for the floodplains. Zone A is the flood insurance rate Zone that corresponds to the 100-year floodplain, as determined by approximation methods. Therefore base flood elevations are not shown on the FIRM for Zone A. Once preliminary design and floodplain analysis is completed, this information would be presented to the floodplain administrator to determine if the FEMA regulatory process is necessary to change the FIRMs.

Retaining walls were included in the alternatives at Dad Clark Gulch and Willow Creek to keep

**Table 3-36  
Forecasted Flood Elevations**

FEMA Floodplain	Anticipated Change in 100-year Floodwater Elevation
Massey Draw	No rise. Culvert would not to be extended if retaining walls are used
South Platte River	0.17 foot drop (with additional 2,000 cfs release + new bridge)
Dad Clark Gulch	No rise. Water quality outlet would remain undisturbed
Big Dry Creek	0.68 foot rise
Willow Creek	0.57 foot rise

the roadway fill out of this drainage. The existing water quality structure on Dad Clark Gulch would remain intact without change.

### 3.3.7 Historic Resources

Section 106 of the National Historic Preservation Act (NHPA), as amended on August 5, 2004, regulations set forth by the Advisory Council on Historic Preservation, and the State Register Act (CRS 24-80.1) require that federal actions must consider any effects to state or federally listed or eligible properties to the National or State Register of Historic Places. A historic resource inventory and eligibility determination was completed as part of this EA.

#### 3.3.7.1 Affected Environment

Historic resources were inventoried and evaluated for the Area of Potential Effect (APE), as defined by the FHWA and CDOT with concurrence from the State Historic Preservation Officer (SHPO). The APE was defined as approximately 150 feet on either side of the existing

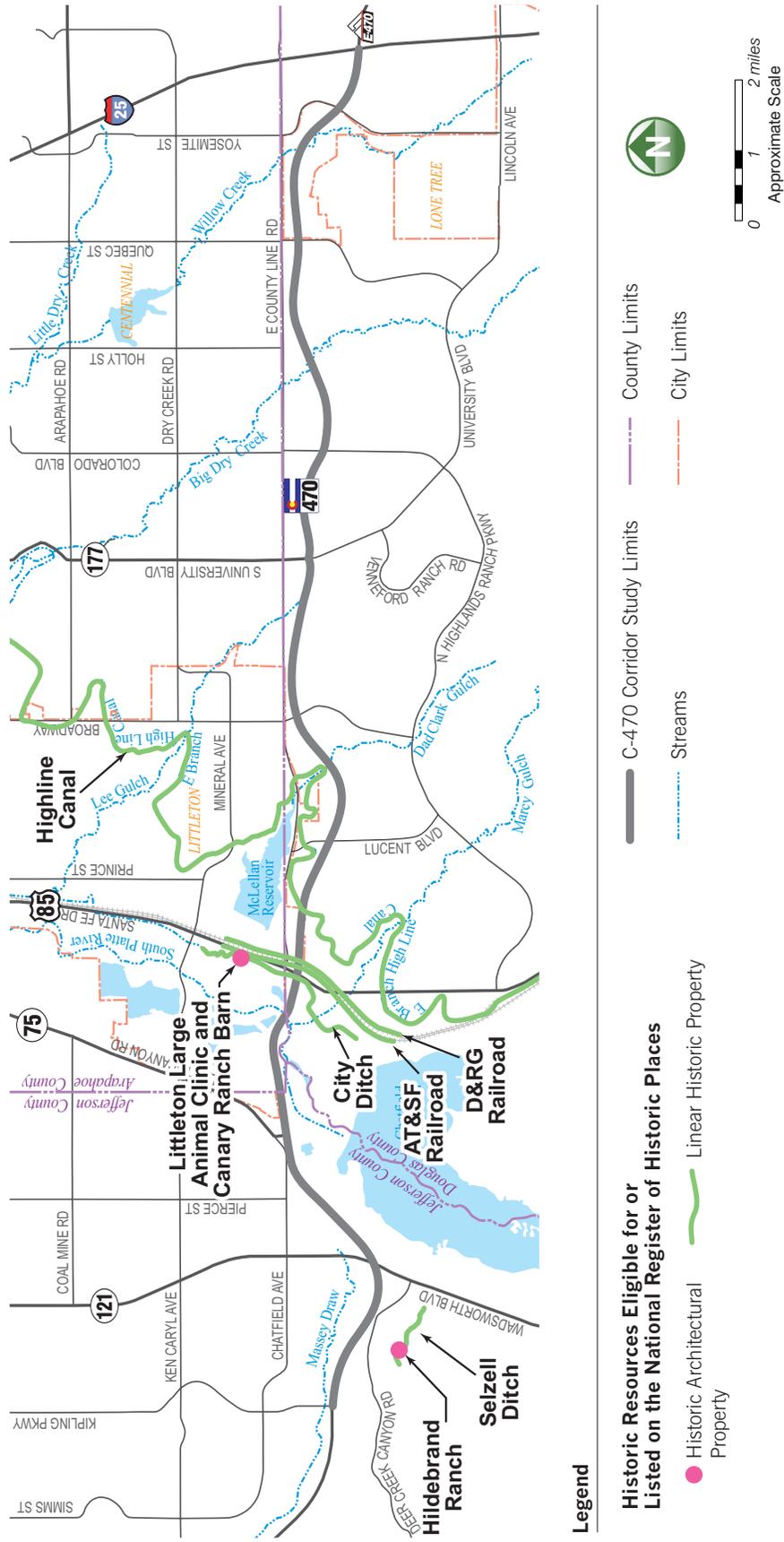
C-470 centerline from Kipling Parkway to I-25, with additional width identified at interchanges, and locations where historic resource property boundaries were known to occur within the project area. In August 2003, a file search was conducted at the Colorado Historical Society's Office of Archaeology and Historic Preservation (OAHP) to identify historic resources. Field surveys were also conducted to identify historic properties in the project area. The *Historic Resource Survey: C-470 Kipling Parkway to I-25* (August 2004) contains details regarding the historic context and all historic resources within the project area. This documentation was submitted to the SHPO in August 2004. The SHPO concurred in September 2004 with Determinations of Eligibility for historic resources in the project area. **Table 3-37** lists properties identified as officially eligible or on the National Register of Historic Places (NRHP) according to their location from west to east along C-470. Locations of these historic resources are shown in **Figure 3-20**.

**Table 3-37**  
**Officially Eligible or Listed Historic Properties within the Project Area**

Site Number	Site Name	Location	NRHP Eligibility and Date Determined
5JF188	Hildebrand Ranch	8500 Deer Creek Road	National Register (1975)
5JF2613	Selzell Ditch	8500 Deer Creek Road	Officially Eligible (2004)
5AH254.7	City Ditch	Arapahoe County	Officially Eligible (1979)
5DA987.1	City Ditch	Douglas County	Officially Eligible (1979)
5AH732	Littleton Large Animal Clinic and Canary Ranch Barn	8025 Santa Fe Drive, Littleton	Officially Eligible (2004)
5AH255.5	D&RG Railroad	Arapahoe County	Officially Eligible (2004)
5AH256.4	AT&SF Railroad	Arapahoe County	Officially Eligible (1995)
5DA922.1	AT&SF Railroad	Douglas County	Officially Eligible (1990)
5DA922.2	AT&SF Railroad	Douglas County	Officially Eligible (1995)
5AH255.2	D&RG Railroad	Arapahoe County, Littleton	Officially Eligible (1995)
5DA921.1	D&RG Railroad	Douglas County	Officially Eligible (1990)
5AH388	High Line Canal	Arapahoe County	Officially Eligible (2000)
5DA600.3	High Line Canal	Douglas County	Officially Eligible (2004)

Source: *Historic Resource Survey: C-470 Kipling Parkway to I-25* (August 2004)

**Figure 3-20  
Historic Resources**



Source: C-470 Corridor Historic Resource Survey, August 2004