

## **JOINT FEDERAL, STATE, LOCAL PUBLIC NOTICE**

The Federal Emergency Management Agency and Alabama Emergency Management Agency hereby notify interested parties of the following proposed hazard mitigation project to be financed through Federal and State grant funds:

**Applicant:**

City of Huntsville, Madison County  
308 Fountain Circle  
Huntsville, AL 35801

**Project Title:**

FEMA HMGP-DR-AL-1605-0217, DALLAS BRANCH/PINHOOK CREEK - FLOOD HAZARD MITIGATION PROJECT

**Purpose for Environmental Assessment:**

In accordance with Title 44 of the Code of Federal Regulations (CFR), Part 10.9 (Agency Implementing Procedures), FEMA prepared a “Draft Environmental Assessment” (EA) pursuant to National Environmental Policy Act (NEPA) Section 102, as implemented by the President's Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508). FEMA prepared a draft EA to evaluate the probable effects on the natural and human environment of the Proposed Action (i.e., the Dallas Branch/Pinhook Creek Flood Hazard Mitigation Project), as well as the effects of taking any viable alternative action or taking no action. FEMA will also use the EA to determine whether to prepare a “Finding of No Significant Impact” (FONSI) or an “Environmental Impact Statement” (EIS).

**Purpose for Executive Order 11988 and 11990:**

Presidential Executive Orders 11988 and 11990 require federal agencies to review all federal actions in or affecting the floodplain or wetlands to assess opportunities to relocate the project elsewhere and to evaluate social, economic, historical, environmental, legal and safety considerations.

**Proposed location and scope of work for the Environmental Assessment and E.O. 11988:**

The proposed Dallas Branch/Pinhook Creek flood mitigation project will mitigate the risk of flooding through the reduction of overflows along Dallas Branch and Dallas Branch Bypass. It will also reduce damage along the lower portions of Dallas Branch and Pinhook Creek. The proposed project includes three stream crossing improvements along Dallas Branch at Dement Street (culvert removal), Andrew Jackson Street (three 10 feet wide x 6 feet height culverts), and Russell Street (three 10 feet wide x 5 feet height culverts). The proposed project will impact a total of 122 properties and will include the acquisition of approximately 105 properties. Structures will be removed from those properties. On the 17 properties for which only easements will be acquired, the acquisition will involve only enough property for the project easement; structures will remain on these 17 properties. The project location is in a Special Flood Hazard Area (i.e. AE flood zone). The southwest limits of the project are located at latitude 34.731304, longitude -86.595653. The northeastern-most portion of the project is located at latitude 34.746022, longitude -86.574083.

The Environmental Assessment provides further details on the process for reviewing alternatives for this project. No practicable alternatives outside of the floodplain have been identified. The proposed project will also benefit the City by helping to facilitate construction of a planned greenway along Pinhook Creek and part of Dallas Branch. Together these projects will improve the City’s quality of life and provide a catalyst for future reinvestment in the downtown area.

**Comment Period:**

Comments are solicited from the public; local, state or federal agencies; and other interested parties in order to fully consider and evaluate the impacts of the proposed project and to identify alternatives and analyze their impacts. The draft EA is available for public review - at the City of Huntsville, Planning Division, located at 308 Fountain Circle, Huntsville, AL 35801 and at <http://www.fema.gov/environmental-planning-and-historic-preservation-program/environmental-documents-public-notices-1>

Comments should be made in writing within 15 days of this notice and addressed to the Alabama Emergency Management Agency, 5898 County Road 41, Clanton, AL 35046-2160. The State will forward comments to applicable regulatory agencies as needed. Further information about the project, including project drawings, is available by calling:

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Draft Environmental Assessment

**DALLAS BRANCH/PINHOOK CREEK  
FLOOD HAZARD MITIGATION PROJECT**

City of Huntsville, Madison County, Alabama

*December 2014*



**FEMA**

**U.S. Department of Homeland Security  
Federal Emergency Management Agency -  
Region IV**

3003 Chamblee Tucker Rd - Hollins Building  
Atlanta, Georgia 30341-4112

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## List of Acronyms

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AEMA	Alabama Emergency Management Agency
FEMA	Federal Emergency Management Agency
EA	Environmental Assessment
CEQ	Council on Environmental Quality
EIS	Environmental Impact Statement
FONSI	Finding of No Significant Impact
CFS	Cubic Feet per Second
CH	Inorganic clays of high plasticity, fat clays
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
GC	Clayey gravels, gravel-sand-clay mixtures
SC	Clayey sands, sand-clay mixtures
ESRI	Environmental Systems Research Institute
NAVTEQ	Navigation Technologies Corporation
USGS	United States Geological Survey
NRCAN	Natural Resources Canada
METI	Management and Engineering Technologies International
iPC	Increment P Corporation
USDA	United States Department of Agriculture
AEX	Aerials Express
IGN	Institut géographique national
IGP	Institute of Geology and Paleontology
TVA	Tennessee Valley Authority
N	Standard Penetration Test value
FIRM	Flood Insurance Rate Map
DFIRM	Digital Flood Insurance Rate Map
DNL	Day-Night Average Sound Level
PTAN	Part Time As Needed
ALDOT	Alabama Department of Transportation
RR	Railroad
EPA	Environmental Protection Agency

EDR	Environmental Data Resources
NEPA	National Environmental Policy Act
NPS	Non-point source
BMP	Best Management Practices
HTRW	Hazardous, Toxic and Radiological Waste
PAS	Preliminary Assessment Screening
FINDS	Facility Index System
RCRA	Resource Conservation and Recovery Act
UST	Underground Storage Tank
AST	Aboveground Storage Tank
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
NFRAP	No Further Remedial Action Planned
ESA	Expedited Site Assessment
USFWS	U.S. Fish and Wildlife Service
EMA	Emergency Management Agency
USACE	U.S. Army Corps of Engineers
NWI	National Wetlands Inventory

## **1.0 INTRODUCTION**

The City of Huntsville, through the Alabama Emergency Management Agency, has requested financial assistance from Federal Emergency Management Agency (FEMA) to implement mitigation measures to reduce the flood hazard associated with Dallas Branch and Pinhook Creek. The assistance would be provided under FEMA's Hazard Mitigation Grant Program (HMGP). The HMGP's purpose is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during immediate recovery from disasters. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

This Draft Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) President's Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Parts 1500-1508) and FEMA NEPA regulations (44 CFR Part 10). FEMA and AEMA must consider potential environmental impacts before funding or approving actions. This EA evaluates the potential impacts of the project alternatives on the natural and human environment. FEMA and AEMA will use the findings herein to determine whether to prepare an "Environmental Impact Statement" (EIS) or "Finding of No Significant Impact" (FONSI).

The study area includes properties adjacent to Pinhook Creek and Dallas Branch, north of downtown Huntsville (Figure 1.1). Pinhook Creek enters the study area from the southwest and extends first in a northeasterly direction, turns to the east and then again to the northeast in the central section of the study area. The creek then turns east and exits the northern portion of the study area as Dallas Branch. The southern portion of the study area generally contains a mix of commercial and industrial uses, and the northern portion includes a mix of residential, commercial, and industrial uses. Interstate 565 divides the study area in a generally northeasterly direction.

The southern portion of the study area was historically primarily residential with scattered businesses and small-scale industrial facilities. Historically, Dallas Branch and Pinhook Creek meandered through the study area with most street crossings occurring over wooden bridges. A system of concrete diversion canals and concrete bridges was installed in the late 20th century. Aerial photographs indicate that the construction was performed in approximately 1965.

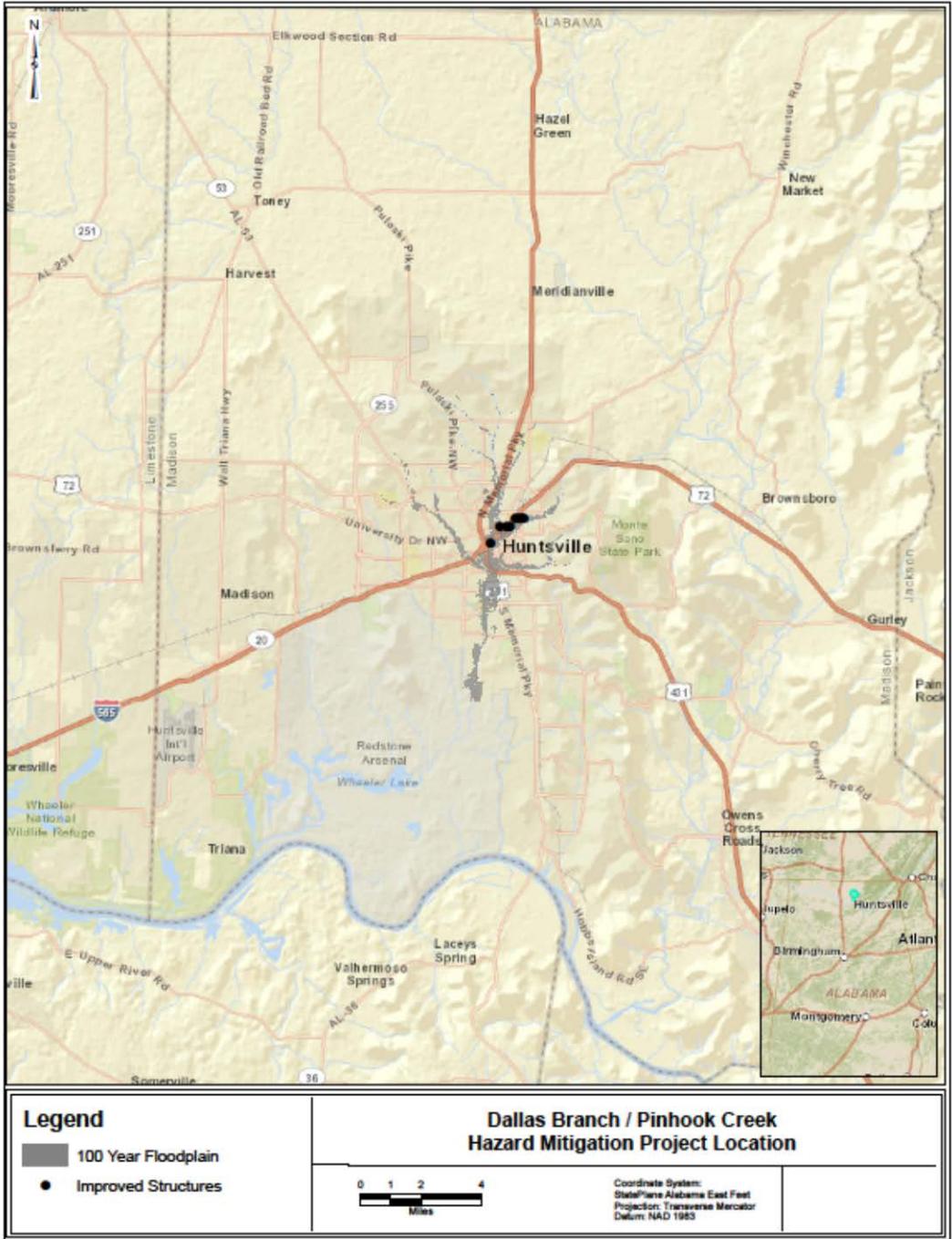


Figure 1.1 Dallas Branch/Pinhook Creek Hazard Mitigation Project Location Map (Sources: ESRI, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, ESRI Japan, METI, ESRI China (Hong Kong), ESRI (Thailand), TomTom, 2013)

## **2.0 PURPOSE AND NEED**

Flooding in the Pinhook Creek watershed has occurred on numerous occasions over the years. Significant flooding occurred in the Huntsville area on Pinhook Creek in 1912, 1963, 1973, 1990, 2003 and 2005. A catastrophic flood event occurred in Huntsville in 1912 when Pinhook Creek and Big Spring Creek flooded, and the city's electric plant and gas plant were inundated. During the 1912 flood event numerous properties, including homes and businesses, were damaged. In 1963, flooding caused widespread damage throughout the city, including miles of fencing and secondary roads, and also caused minor damage to crops. The flood of 1973 generated record discharge for most of Huntsville's small streams, but channel improvements lowered the stages at several locations from the 1963 flood. The Huntsville Times reported that nearly 150 new cars were flooded at the Royal Chevrolet car dealership at Washington and Pratt streets when Pinhook Creek flooded. The 1973 flood damaged more than 1,200 homes and caused \$17.9 million in damage in today's dollars. The flood of 1990 was responsible for massive property damage throughout the basin. The worst regional flooding Huntsville has experienced since the 1973 flood occurred on May 6, 2003. Flooding in Huntsville during 2003 was so severe that the Huntsville area was covered under the Presidential declaration 1466-DR-AL. During this flood event numerous businesses near the Meridian St. Culvert on Pinhook Creek were damaged. In August 2005 flooding occurred again in the Pinhook watershed. Several downtown streets (Meridian, Cleveland, Washington, Pratt Avenue, and Oakwood) flooded during the August 2005 storm. Approximately 951 structures are located within the floodplain of the study area. The proposed project reduces damages to structures from the 2- through 500-year events.

The project is needed to reduce flooding damages through the reduction of overflows along Dallas Branch and Dallas Branch Bypass. This proposed project will significantly reduce overflows from Dallas Branch into the Dallas Branch Bypass, as shown in Figure 2.1, while also reducing damages along the lower portions of Dallas Branch and Pinhook Creek.



Figure 2.1 Dallas Branch Bypass (ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community)

During the 100-year flood event, more than 3,500 cubic feet per second (cfs) of water spilled over from Dallas Branch into Dallas Branch Bypass (Bypass) causing significant damage to properties within the bypass. Under the proposed project, spillage to the bypass from Dallas Branch will be reduced by more than 90 percent as indicated in Figure 2.2.

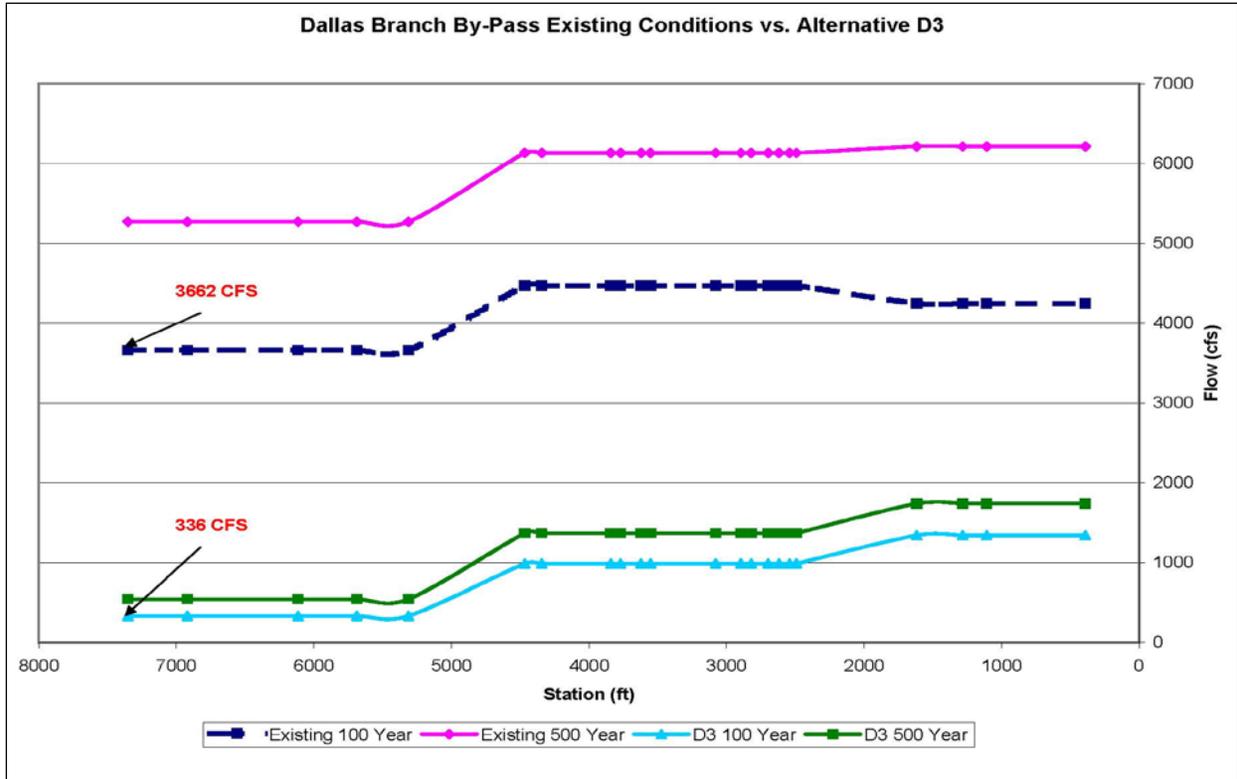


Figure 2.2 Existing -vs.- Proposed: By-Pass Flows

The proposed Dallas Branch/Pinhook Creek Flood Hazard Mitigation project will greatly reduce future flood damages in the downtown and adjacent areas. The project provides an additional benefit to the City by helping to facilitate construction of a planned greenway along Pinhook Creek and part of Dallas Branch. Together these projects will greatly improve the City’s quality of life and provide a major catalyst for future reinvestment in the downtown area.

In addition to the above mentioned benefits, the City has already implemented complementary programs to these flood projects in conjunction with the Alabama Department of Transportation (ALDOT) through the design of five new road bridges in the downtown area. All projects are funded and one is in the bid process now. All of these bridge replacement projects include expansions on the bridges to accommodate increased flood flows.

### 3.0 ALTERNATIVES

#### 3.1 No Action Alternative

The no-action alternative would have resulted in continued exposure to flooding for several properties. Inherently unsafe living and working conditions as well as damages to

personal and real property would be expected. Flooding of major highways and roads poses dangerous conditions that would have continued if no action was taken.

### **3.2 Proposed Action**

The proposed project involves constructing a hazard mitigation project along Dallas Branch and Pinhook Creek that will include; Channel widening and culverts at major roadways, a detention basin, a culvert underneath the Norfolk Southern Railway and a high flow diversion channel. A “stream crossing” as used within this EA is a location at which a stream passes under a roadway or railroad through a culvert or as an open channel.

The proposed project includes three stream crossing improvements along Dallas Branch at Dement Street (culvert removal), Andrew Jackson Street (three 10W x 6H culverts), and Russell Street (three 10W x 5H culverts), Figure 3.1 depicts the proposed project features.

A total of 122 properties will be impacted by the proposed project. Property acquisition is part of the proposed FEMA funded project. Approximately 105 properties will be acquired (totally) for the proposed action. Structures will be removed from those properties. On the properties for which easements will be acquired (17 properties), the acquisition will involve only enough property for the project easement. Structures will remain on these 17 properties.

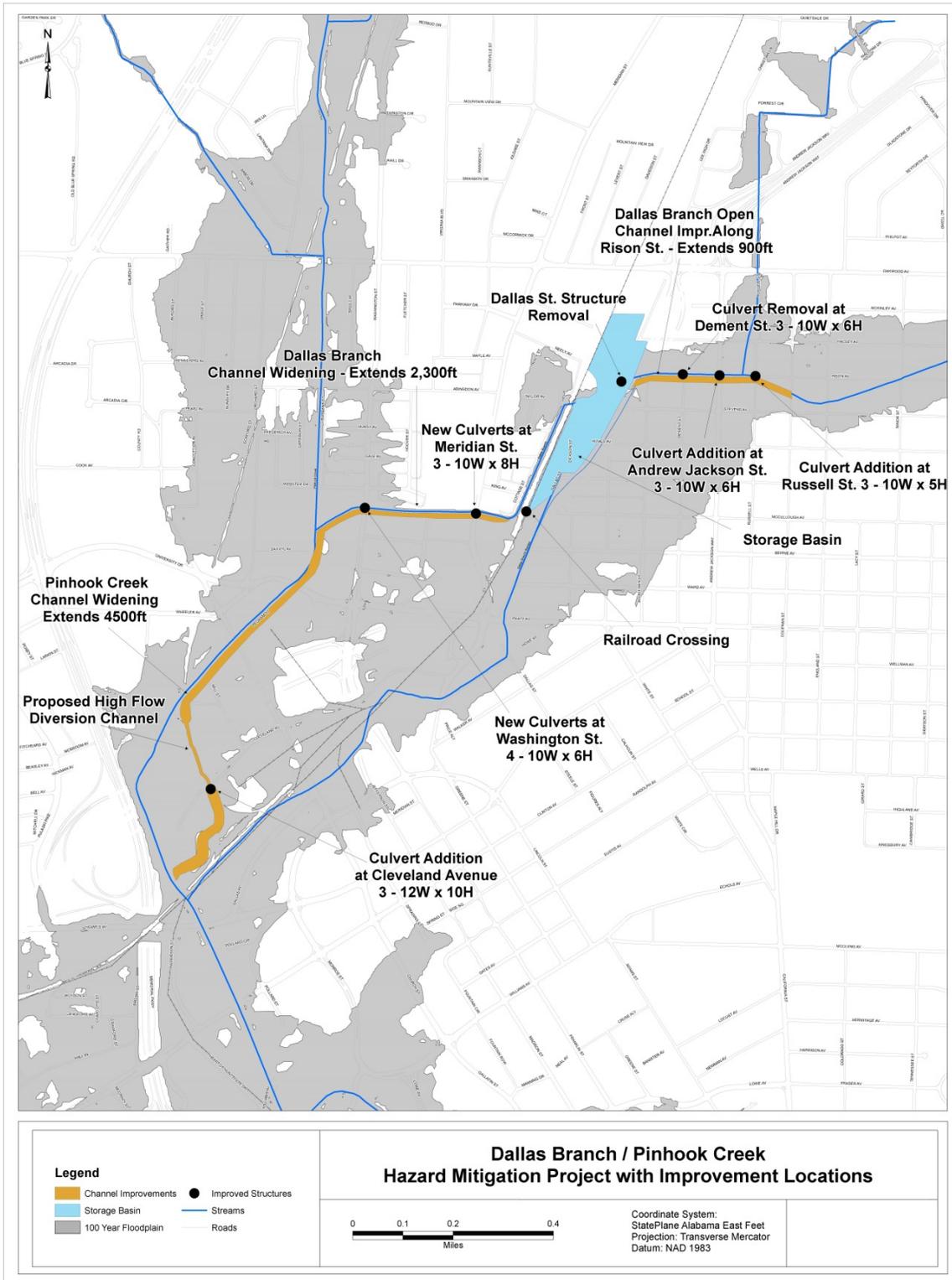


Figure 3.1 Location of Improvements for D3 (proposed project)

In addition to the stream crossing improvements, the Dallas Branch channel will be improved along Rison Street. The channel will be widened to the south bank of Dallas Branch along Rison Street from Russell Street west past Schiffman Street. Under this proposed project, several properties along Rison Street will have to be purchased to accommodate the wider channel.

This alternative significantly reduces over bank spillage from Dallas Branch into the Dallas Branch Bypass versus existing conditions.

A basin on Dallas Branch has been proposed in this project alternative which would extend from Halsey Street south to McCullough Avenue on the west side of I-565. The basin will be approximately 13 acres and will provide over 108 acre-feet of storage. A low flow channel will be constructed through the basin to allow for continuous low flow in Dallas Branch during the dry season. A bridge span railroad crossing will be constructed to convey water back into Dallas Branch at the south end of the basin.

The Washington Street crossing is also proposed for modification. Currently, Washington St. has undersized box culverts. This proposed project calls for the addition of four 10W x 6H culverts which will allow unrestricted flow within this section of Dallas Branch.

The Meridian Street crossing is proposed for modification. Currently, Meridian Street has undersized box culverts. This proposed project calls for the addition of four 10W x 8H culverts for Meridian Street.

Cleveland Avenue Crossing is proposed for modification. Currently, Cleveland Avenue has undersized box culverts. This proposed project calls for the addition of three 12W x 10H which will allow unrestricted flow within this section of Dallas Branch.

Dallas Branch runs west from the proposed basin to the confluence with Pinhook Creek, and this section will be widened. Pinhook Creek will also be widened from the confluence of Dallas Branch down to the railroad crossing near Holmes Street.

### **3.3 Other Action Alternatives**

Several alternative projects were considered before selecting the proposed project. Other alternative projects include combinations of inline detention, channel widening along Pinhook Creek and Dallas Branch, and bridge improvements. General descriptions of the alternatives considered are provided in Table 3.1.

**Table 3.1 Project Alternatives**

<b>Alternative</b>	<b>Description</b>
A	Enlarge USACE Project (wider railroad opening than proposed by USACE, overflow channel as proposed by USACE, wider culvert at Dallas Branch, limited channel improvement upstream and downstream of Dallas Street to transition water into and out of the Dallas Street crossing.
B	Alt. A + hi-flow culvert from Coleman Street to Dallas Street
C1	Alt. A + channel improvement along Dallas Branch and Pinhook Creek including the widening of all stream crossings except Washington Street over Dallas Branch.
C2	Alt. A + channel improvement along Dallas Branch and Pinhook Creek including the widening of all stream crossings.
D1	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street + channel improvement along Dallas Branch and Pinhook Creek including the widening of all stream crossings except Washington Street over Dallas Branch.
D2	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street + channel improvement along Dallas Branch and Pinhook Creek including the widening of all stream crossings.
D3	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street + an open channel notch above the basin along Rison Street with stream crossing improvements and channel improvements along Dallas Branch and Pinhook Creek.
D4	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street + channel improvements along Dallas Branch and Pinhook Creek.
E	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street.
F	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street + plus new overflow channel conveyance from Dallas Branch to Pinhook Creek via the Pratt Avenue transportation corridor.
G	Alt. A + in-line detention on Dallas Branch upstream of the RR and downstream of Dallas Street + plus new overflow channel conveyance from Dallas Branch to Pinhook Creek via the Pratt Avenue transportation corridor. + channel improvement along Pinhook Creek from the Pratt Avenue crossing downstream to the twin RR trestle.

The D4 alternative would be located in the same general location as the current project and include two stream crossing improvements along Dallas Branch at Dement Street and Andrew Jackson. These improvements would be an additional three (8H x 7W) box culverts installed alongside the existing box culverts at these crossings. In addition to the stream crossing improvements, Dallas Branch channel would be improved along Rison Street. The channel would be widened on the south bank of Dallas Branch along Rison Street from Russell Street west past Schiffman Street. To avoid purchasing properties along Rison, a channel notch was proposed that would traverse under Rison Street, parallel with Dallas Branch. This proposal significantly reduces overbank spillage from Dallas Branch and into the bypass versus existing conditions.

A basin on Dallas Branch was proposed for a project alternative, which would extend from Halsey south to McCullough Avenue on the west side of I-565. This basin would be

approximately 11 acres in size and provide a significant amount of storm water storage along Dallas Branch. A low flow channel would be constructed through the basin to provide adequate flow in Dallas Branch during the dry season. A culvert outfall structure would be constructed under the railroad to convey water from Dallas Branch at the south end of the basin. Modification of the Washington Street crossing was also proposed in this project. Washington Street box culverts would be expanded with two new (10H x 8W) culverts that would allow unrestricted flow of Dallas Branch in this section. The D4 alternative called for Dallas Branch to be widened between the basin and the confluence with Pinhook Creek. Under the D4 proposal Pinhook Creek would be widened from the confluence of Dallas Branch down to another railroad crossing.

### **3.4 Alternatives Considered and Dismissed**

During the early planning phases of this project, a number of alternatives were evaluated as potential solutions to the flooding in the area. Those alternatives are summarized in Table 3.1. The H&H models indicated that alternatives A, B, C1 and C2 caused increased water surface elevations downstream beyond the project so those alternatives were removed from further consideration. Alternative E was eliminated because it did not include any channel improvements. Alternatives F and G were eliminated due to the Pratt Avenue conveyance channel not being a practical project.

It was concluded that Alternatives D1, D2, D3, and D4 should be evaluated further. Alternative D3 significantly reduced the over bank spillage that was occurring in Alternatives D1 and D2 along Rison Street. Approximately 1,000 cfs of flood waters was still getting into the Dallas Branch Bypass in Alternatives D1 and D2. Alternatives D3 and D4 became the final two models that the City evaluated during this process. The City decided to pursue Alternative D3 (proposed alternative) because it was more cost effective than D4.

## **4.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS**

The study area includes properties adjacent to Pinhook Creek and Dallas Branch north of downtown Huntsville. Pinhook Creek enters the study area from the southwest and extends first in a northeasterly direction, turns to the east and then again to the northeast in the central section of the study area, and then turns east and exits the northern portion of the study area as Dallas Branch. The southern portion of the study area generally contains a mix of commercial and industrial uses and the northern portion includes a mix of residential, commercial, and industrial uses. Interstate 565 divides the study area in a generally northeasterly direction. The southwest limits of the project are located at latitude 34.731304, longitude -86.595653. The northeastern-most portion of the project is located at latitude 34.746022, longitude -86.574083. Legal descriptions of each of the properties to be acquired can be found in the project plans in Appendix A in a table. The proposed project would not have any significant, adverse effects on the natural or human environment. The project would improve the human environment by reducing flood-related risks of loss of life and property losses.

The primary factors influencing development of this flood damage reduction project are (1) the proximity of the local communities to Pinhook Creek and Dallas Branch and (2) the needs and desires of the communities adjacent to Pinhook Creek and Dallas Branch to maintain the existing community cohesiveness. Additionally, to ensure development of a comprehensive and cohesive document, various government agencies played an integral part in the development of this document.

Several rounds of coordination with agencies and the affected public have taken place throughout this entire project. Letters were sent to the Alabama Department of Environmental Management, the US Army Corps of Engineers, the US Fish and Wildlife Service, the Tennessee Valley Authority, the US Environmental Protection Agency, the Alabama Department of Conservation and Natural Resources, and the Alabama Historical Commission. All of the coordination letters and responses are provided in Appendix B.

Table 4.1 summarizes potential impacts of the Proposed Action Alternative and impacts offsetting the mitigation measures. Following the table, any resources for which potential impacts were identified and high priority resources are discussed in greater detail.

**Table 4.1 Summary of Environmental and Potential Impacts**

Affected Environment/ Resource/Concern	Impacts	Agency Coordination/ Permits/Conditions	Best Management Practices/Mitigation
Geology/Topography	No Action: Low impact	Coordinated with AMEC Earth & Environmental, Inc. on April 6, 2009	Recommended BMPs include:
	Proposed Action: Low impact	No permit required	Channel enhancement
	Alternative Action: Low Impact	Conditions: The soils have firm to stiff consistency; however, some of the higher blow counts indicate the presence of large chert fragments	Use water quality state BMPs
Climate	No Action:  No Impact	Coordinated with City of Huntsville in March 2009  No permit required  During construction conditions are high in air pollution; after construction air quality will be restored to pre-project conditions.	N/A
Water	No Action:  No Impact	Coordinated with the U.S. Army Corps of Engineers	Recommended BMPs Include:
	Proposed Action: Low Impact	EDR NEPA Check run to identify location of wetlands  Permit required	Silt fences and other approved BMPs during construction phase.
	Alternative Action: Low Impact	Pre-Project conditions: High peak flows and degraded water quality  During constructions: Construction activities may temporarily increase non-point source (NPS) pollutant loads, primarily sediments, in surface runoff entering the Dallas Branch and Pinhook Creek.	
Plant communities	No Action:  No Impact  Proposed Action:  Low Impact	No permit required  Conditions: will negatively impact existing herbaceous groundcover; Areas that will be cleared for the project will be re-stabilized with grasses and other	Recommended BMPs include:  Reintroduction of herbaceous groundcover after construction

Affected Environment/ Resource/Concern	Impacts	Agency Coordination/ Permits/Conditions	Best Management Practices/Mitigation
	Alternative Action:  Low Impact	selected herbaceous groundcover.	
Fish	No Action:  No Impact	Conditions: Per USFWS there are no federally listed species/critical habitat known to occur in the project area. During construction there may be some minor and short-term turbidity impacts. However design of construction best management practices will ensure that there are no significant impacts to fisheries in the project area.	BMP plans will be designed and implemented to minimize erosion and sedimentation issues during and after construction.
	Proposed Action:  Low Impact		
	Alternative Action:  Low Impact		
Wildlife	No Action:  No Impact	No permit required  Conditions: During construction, it is expected that wildlife within the immediate vicinity of the work area will be displaced as a result of increased noise and human activity.	Recommended BMPs include:  Reduction of concrete  Re-vegetation
	Proposed Action:  Low Impact		
	Alternative Action:  Low Impact		
Cultural Resources	No Action:  No Impact	Coordinated with Alabama Historical Commission  No permit required  No conditions  Correspondence attached	Recommended BMPs include:  Re-vegetation
	Proposed Action:  Low Impact		
	Alternative Action:  Low Impact		
Aesthetics	No Action:  No Impact	Coordination with the Alabama Historical Commission  No permit required	N/A
	Proposed Action:		

Affected Environment/ Resource/Concern	Impacts	Agency Coordination/ Permits/Conditions	Best Management Practices/Mitigation
	Low Impact	will be minor, short-term and insignificant.	
	Alternative Action: Low Impact	Correspondence attached	
Socio-Economic Concerns	No Action: No Impact	No Permit Required Conditions:  The negative socioeconomic impacts resulting from historical flooding to the communities located within the project area will be lessened by construction of the proposed channel improvements and basin construction.	N/A
	Proposed Action: Low Impact		
	Alternative Action: Low Impact		
Environmental Justice for Low Income and Minority Populations	No Action: No Impact	Coordinated with USEPA	N/A
	Proposed Action: Low Impact	No Permit Required Conditions: Proposed project would have beneficial impacts on environmental justice areas since flooding would be reduced.	
	Alternative Action: Low Impact		
Hazardous, Toxic and Radiological Waste (HTRW)	No Action: No Impact	No Hazardous, Toxic, or Radioactive Waste (HTRW) concerns were identified within a 500 foot radius of the project area.	Recommended BMPs: Dispose of and handle hazardous wastes/materials in accordance with applicable local, state, and federal regulations.
	Proposed Action: Low Impact	No Permit Required	
	Alternative Action: Low Impact	Report attached	

## **4.1 Site Description**

Most of the project area is largely residential and commercial land use. Dallas Branch consists of a concrete channel and large portions of Pinhook Creek are stabilized with riprap. Areas adjacent to the Dallas Branch and Pinhook Creek consist of grass and some local residential yards consisting of various species of trees common to the area.

## **4.2 Earth Resources**

### **4.2.1 Geology/Topography**

An exploratory program revealed a relatively uniform subsurface profile consisting of an upper interval of fill underlain by a thick interval of residual soil and bedrock beneath the residuum. Surface materials consist of pavements (asphalt or concrete), gravel, or topsoil with vegetation. The fill material underlying the surface is generally native, silty clay with varying amounts of chert. The fill ranges in depth from 1 foot to 11 feet and averages about 5.2 feet deep where detected. The residual soil, formed by the in-place weathering of the underlying bedrock, is composed of a mixture of cherty clay and silt and clayey chert fragments. The percentage of chert fragments varies greatly in both the fill and residuum. Occasionally, the soil is comprised of an interlocking chert fragment matrix with soft clay in the inter-fragment spaces. The residuum is predominately reddish-brown and brown, cherty clay or clayey chert and is classified as CL and CH or GC and SC, depending on the amount and size of chert fragment sand in accordance with the Unified Soil Classification System. The soils have firm to stiff consistency; however, some of the higher blow counts (i.e., “N” values) possibly indicate the presence of large chert fragments. The soils’ consistencies typically become soft to very soft, ranging to firm with increasing depth below the ground water table and near the top-of-rock. Figure 4.1 illustrates the locations of exposed rock formations throughout the Huntsville area.

These soils are similar to other soils in the project area and should not pose a problem in the construction of the proposed project. The project will involve mostly cuts. Fill will be utilized to a small extent around the detention area. Best Management Practices (BMPs) will be utilized to the extent possible in order to control erosion and sedimentation.

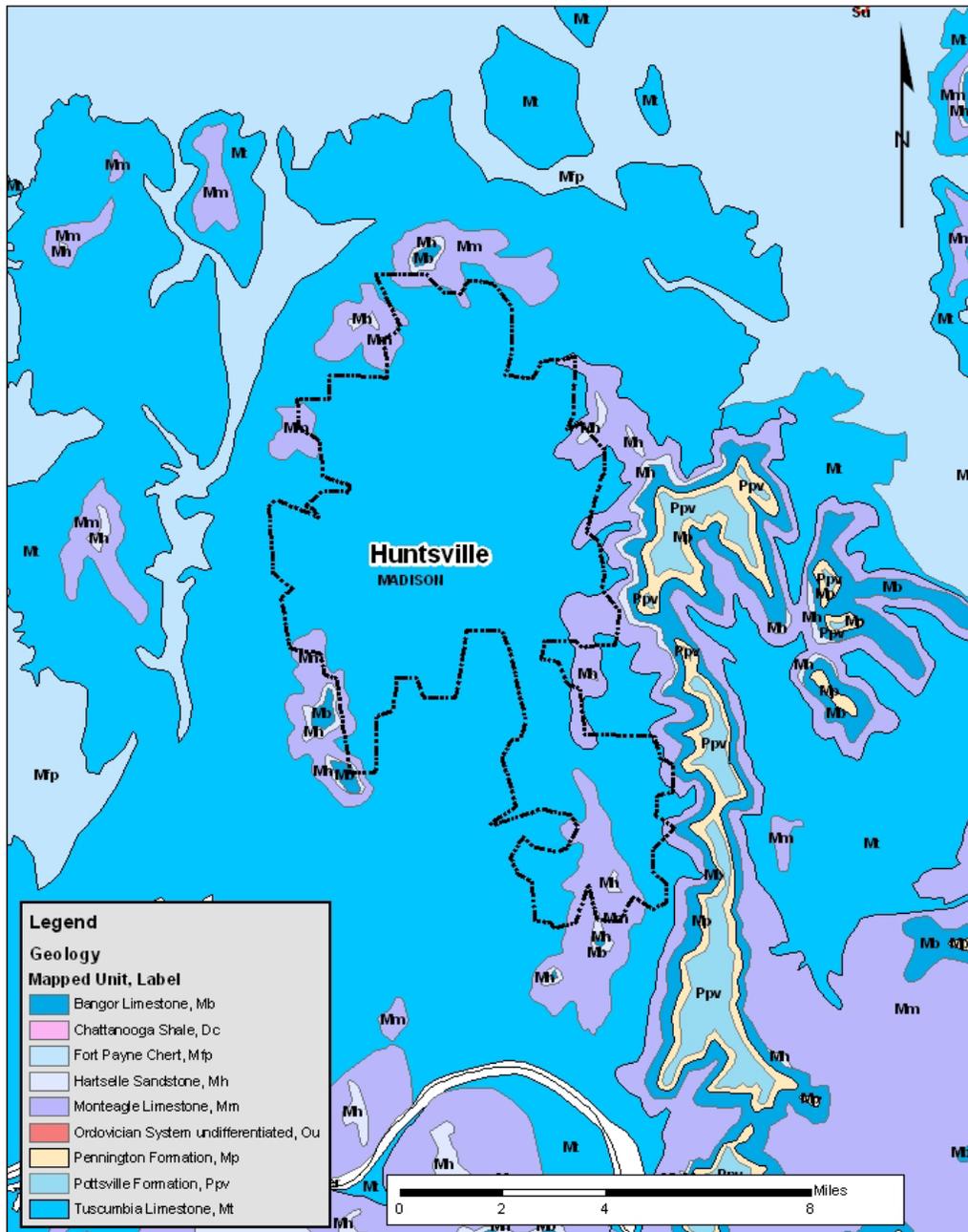


Figure 4.1 Exposed Rock Formations

An exploratory program revealed a relatively uniform subsurface profile consisting of an upper interval of fill underlain by a thick interval of residual soil and bedrock beneath the residuum. Surface materials consist of pavements (asphalt or concrete), gravel, or topsoil with vegetation.

The primary risk from damage due to geologic hazards in the Huntsville area is land subsidence due to sinkhole formation. Construction activity, removal of trees and

vegetation, or alteration of topography could enhance and accelerate the manifestation of sinkhole and solution features. Sinkhole formation can also be accelerated by natural events such as floods.

If sinkholes are discovered during preconstruction activities, preventative measures and engineering controls will be implemented in addressing sinkholes in order to prevent contamination and/or collapse during or after construction. If sinkholes are found, more detailed reconnaissance and subsurface drilling will be conducted in the area of the sinkholes to determine the extent of the sinkhole issues and to develop remediation plans. These remediation plans may include excavation, filling with rock, or collapsing the sinkhole into the cavity beneath.

Published geologic literature of Madison County, Alabama, shows that proposed channel improvements are underlain by the Fort Payne Chert and Tusculumbia Limestone. This bedrock type usually produces a discontinuous interval of cherty, cohesive soil overlying an irregular bedrock surface. Further, occasional voids are found within the limestone bedrock system and at the soil-bedrock interface. However, site borings did not encounter significant voids, and no apparent sinkholes were noted within the immediate vicinity of the project. Therefore, in general, the risk of future sinkhole development at the proposed site is no greater than that of the regional area of Huntsville, Alabama. Sinkhole development will likely be reduced in the project area due to the reduction of flooding events.

Based upon the exploration data, it is expected that the site is suitable for the proposed project, although modification of the existing water channels is expected to face challenges. Challenges identified may include old fill materials, including the possibility of old foundations and other construction debris present within the subsurface, cherty soils, and high plasticity clays. Procedures for site preparation, engineered fill, drainage, excess material handling, slopes, seismic design, revetments, scour, and construction monitoring are provided in the geotechnical study conducted for the project (Appendix C).

### **4.3 Climate**

Huntsville, Alabama has a moderate climate. Average annual precipitation is about 52 inches. The heaviest rains usually occur between December and April with the period during August and September being the driest of the year. Due to the nature of the proposed action, there will be no impacts to climate because it will help control flooding resulting from intense and frequent storms.

#### **4.3.1 Air Quality**

Based on reported data in the City of Huntsville's 2012 Air Quality Report (See Appendix L), the City is in attainment for all standards and the City is presently designated as an attainment area for all criteria pollutants. Stationary emission sources in and around the project areas are limited to a few manufacturing facilities located several miles from the project area. In addition to the stationary sources of air pollutants near the proposed

project area, vehicle traffic associated with residential and commercial activities also makes a large contribution to total emissions.

During the construction period, emissions from construction vehicles are expected to increase because of the activity associated with construction of the project. The increase in emissions would be extremely small relative to the areas air quality. Upon completion of the work, ambient air quality in the immediate vicinity of the project would be restored to pre-project conditions.

## **4.4 Water**

### **4.4.1 Wetlands**

An EDR NEPA Check report (Appendix D) was run on the project area to determine the relative location of wetlands to the subject area. Based on data provided in the EDR report which is based on US Fish and Wildlife Service National Wetland Inventory maps, no wetlands were identified in the project area. The NWI is found in Appendix D.

### **4.4.2 Floodplains**

The project would involve work in the floodplains of Dallas Branch and Pinhook Creek. As previously noted, this work is being accomplished to decrease the flood potential within the project area. The proposed project will not pose a substantial risk or potential for interruption or termination of a transportation facility, which is needed for emergency vehicles or provides a community's only evacuation route. In addition, the project will not pose an adverse impact on natural and beneficial flood-plain values. This project has been reviewed by the City of Huntsville's Flood Plain Manager (Mr. Gary Gleason, PE) and all requirements have been met. The FIRM maps illustrating the project's location in relation to the above mentioned floodplains are located in Appendix E.

### **4.4.3 Water Quality**

The existing Dallas Branch and Pinhook Creek channels have been highly impacted by urban land uses. In the upper sections of the project along Dallas Branch, the stream flows through a concrete-lined channel and is classified as medium to low value for aquatic species. The lower section of the project is located on Pinhook Creek, which has steep eroding channel banks that have been stabilized with riprap. Water quality in the lower section is similar to the upper section. The watershed as a whole is highly urbanized resulting in high peak flows and degraded water quality. The primary water quality impact during construction results from sediment that is eroded from the construction site, transported to local surface watercourses, and then dispersed or deposited. Construction activities may temporarily increase non-point source (NPS) pollutant loads, primarily sediments, in surface runoff entering the Dallas Branch and Pinhook Creek.

However, prior to construction, development of a detailed stormwater management plan will be required that when implemented will utilize silt fences and other approved BMP's to ensure that sediment laden runoff would not enter the waterways.

#### **4.4.4 Plant Communities**

Land clearing, especially those methods associated with heavy equipment use, will negatively impact existing herbaceous groundcover. Areas along the channel and the basin will be cleared of all shrubs, thickets, and trees. Areas that will be cleared for the project will be re-stabilized with grasses and other selected herbaceous groundcover.

#### **4.5 Biological Resources**

##### **4.5.1 Threatened and Endangered Species**

The US Fish and Wildlife Service indicated in their correspondence dated October 14, 2009, that no federally listed species or their critical habitats are known to exist within the project area. In addition, the Alabama Department of Conservation and Natural Resources, Wildlife and Freshwater Fisheries Division stated that the project is unlikely to impact any state-protected species. Currently, there is very poor habitat available along Dallas Branch and Pinhook Creek to support any kind of aquatic wildlife species. The proposed project will improve habitat conditions by removing a significant portion of the concrete in Dallas Branch and stabilizing slopes along Pinhook Creek. In addition, Best Management Practices will be implemented in order to reduce sedimentation during construction in order to reduce impacts to water quality and any aquatic resources that may be present at the time construction.

##### **4.5.2 Fish**

Dallas Branch and Pinhook Creek and their tributaries can be classified as lower perennial riverine habitat. The creek and its tributaries support minimum diversity and moderate populations of small fish due to the poor water quality which exists within the creek and the lack of adequate aquatic habitat needed to support a thriving fish environment. Due to past channelization projects in the area in the proposed project area, the fishery resource of Dallas Branch (concrete lined channel) tends to be limited to those species which are able to survive under eutrophic and otherwise noxious conditions such as mosquito fish (*Gambusia affinis*) and the green sunfish (*Lepomis cyanellus*).

Nevertheless, in order to reduce the any temporary impacts from sedimentation during construction, the contractor will be required to develop and implement construction BMPs that meet or exceed State water quality standards. Consequently the proposed project poses no significant impacts to fishery resources.

### **4.5.3 Wildlife**

In a dense urban area such as this proposed project area, high quality habitat does not exist. Consequently, the only type of wildlife typically found in this area includes gray squirrels (*Sciurus carolinensis*), fox squirrels (*Sciurus Niger*), and raccoons (*Procyon lotor*).

During construction, it is expected that wildlife within the immediate vicinity of the work area will be displaced as a result of increased noise and human activity. However, it is expected that these impacts will be minimal due to the already highly urbanized nature of the existing site. Moreover, the project as planned will replace existing concrete in the channel with vegetation resulting in improved habitat for most wildlife in the project area.

## **4.6 Cultural Resources**

A Phase I Historic Resource Survey was completed for the project in September of 2009. The survey report is entitled “Pinhook Creek and Dallas Branch Historical Resources Survey in Huntsville, Madison County, Alabama”. The survey report is included in Appendix F. The report listed 14 properties that should be avoided or require additional investigation. Of the 14 properties listed, only one would be directly impacted by the proposed project. This property (labeled No. 22 in the Historic Survey) consists of a culvert and diversion canal constructed circa 1920. Although not listed on the National Register of Historic Places, Resource No. 22 is considered a possible contribution resource to the Lincoln Mill and Mill Village Historic District. This historic district is pending listing on the National Register of historic Places. The Dallas Mill site is located north of the project area north of Rison Ave. The other sites of concern are located along the south side of Rison Avenue south of the project.

After reviewing the historic survey for the proposed project, the Alabama Historical Commission requested additional information on Resource No. 22. The additional information was sent to the Alabama Historical Commission in October 2009, and in November 2009, the Alabama Historical Commission sent a letter concurring with the project. The project was re-coordinated with the Alabama Historical Commission, and the Commission stated that they continue to concur that no historic properties will be adversely impacted by the proposed project. This coordination is included in Appendix B. No actions will be taken to reduce the impacts to the sites noted above.

### **4.6.1 American Indian/Native Hawaiian/Native Alaskan Cultural/Religious Sites**

In compliance with Section 106 of the NHPA, a consult request of concurrence with FEMA’s determination of no historic properties affected was sent on July 10, 2014 to the following Tribal Historic Preservation Officers (THPO): Eastern Shawnee Tribe of Oklahoma, Alabama-Coushatta Tribe of Texas, Coushatta Tribe of Louisiana, Chickasaw Nation, Jena Band of Choctaw Indians, Kialegee Tribal Town, Mississippi Band Choctaw, Alabama-Quassarte Tribal Town, Muscogee (Creek) Nation, Poarch Band of Creek

Indians, Eastern Band of Cherokee Indians, Shawnee Tribe, United Keetoowah Band of Cherokee Indians in Oklahoma, Seminole Tribe of Oklahoma, and Thlopthlocco Tribal Town. Within the 45 day tribal consultation period, a response was received from the United Keetoowah Band of Cherokee Indians in Oklahoma in a letter dated 07/14/2014, Muscogee (Creek) Nation in a letter on 07/22/2014, and Jena Band of Choctaw Indians in a letter dated 07/29/2014:

“The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed this project under Section 106 of the NHPA, and at this time, have no comments or objections. However, should any human remains be inadvertently discovered, please cease all work and contact us as soon as possible.”

“The Muscogee (Creek) Nation has received notice of FEMA project HMGP 1605-0217, Creek channel modification project in Huntsville, Madison County, Alabama. At this time the Muscogee Nation is unaware of any culturally significant properties within the project area. We concur with the determination “no adverse effect” to historic properties.”

“Regarding the above-mentioned projects, the Jena Band of Choctaw offers the following concurrences:

- 1609-0142 Concur-No Properties
- 1605-0217 Concur-No Effect

Should any inadvertent discoveries occur, please contact our office immediately.”

Based on the results of historic property identification efforts and the THPO determination, no properties listed in or considered eligible for listing in the National Register were located within the APE of the proposed project. Therefore, FEMA has determined a finding of “no historic properties affected” for the undertaking, as defined. The agency has no further Section 106 obligations.

#### **4.6.2 Aesthetics**

During construction of the project, structures along the channel and in the footprint of the basin will be removed, roads will be temporarily closed, and large areas will be exposed. However, immediately after construction, the construction area will be re-vegetated to reduce erosion and to ensure that the pre-project aesthetics are restored. Therefore, the impacts to aesthetics will be minor, short-term and insignificant.

#### **4.7 Socioeconomic Concerns**

The City of Huntsville’s population in 2006 was 168,132 and the number of residents had increased by 5.5 percent since 2000.

According to the US Census Bureau website, the median household income in 1999 was approximately \$41,534 while the per capita income was \$26,736 during the same period.

On the downside, in 2005 there were still approximately 20,685 individuals who lived below the poverty level in Huntsville.

Ethnic and racial diversity is apparent in the City of Huntsville and Madison County as a whole. According to the 2000 Census, there were 101,914 individuals that identified themselves as white. This number represents approximately 64.3 percent of the total population at the time while approximately 46,581 individuals indicated black as their race, or 29.4 percent of the total. The 6.3 percent of the population that make up the remainder of the city's residents are of other racial groups (U.S. Census Bureau website, 2005). Within the project area, 70.74 percent of the population is white, 24.71 percent is black, and 2.41 percent are Asian and American Indian making up the remainder.

While manufacturing companies employ the majority of people, other major employers have been and continue to be state and local governments and the retail trade and service sectors (U.S. Census Bureau, 2005). Census and economic data signify a reasonably diverse economic base with evidence of employers capable of avoiding heavy up and down swings. The southern portion of the study area generally contains a mix of commercial and industrial uses and the northern portion includes a mix of residential, commercial, and industrial uses. Interstate 565 divides the study area in a generally northeasterly direction.

Several floods in the Pinhook Creek/Dallas Branch watershed have had devastating effects on the citizens living in the area. Hundreds of homes and numerous businesses have been damaged, resulting in considerable economic and emotional hardship for affected citizens. Publicly owned facilities such as police stations and emergency response facilities are also in the affected floodplain.

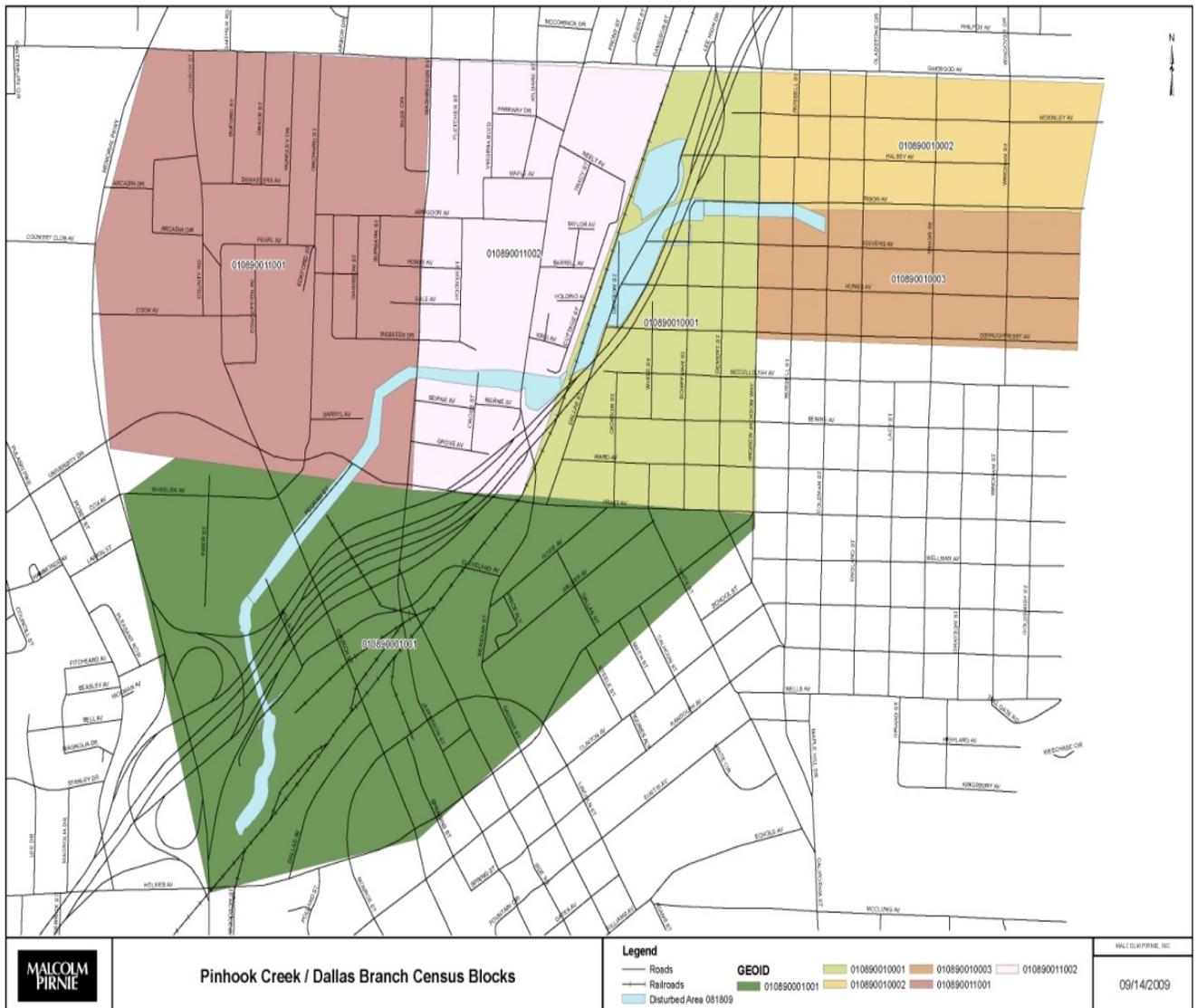
The negative socioeconomic impacts resulting from flooding to the communities located within the project area will be lessened by construction of the proposed channel improvements and basin construction. Once operational, the proposed channel improvements and basin would afford residents the opportunity to obtain lower insurance premiums and provide them with a greater sense of security from future flooding.

#### **4.7.1 Environmental Justice for Low Income and Minority Populations**

Based on the 2000 census the racial makeup of the City of Huntsville was 64.47% White, 30.21% Black or African American, 0.54% Native American, 2.22% Asian, 0.06% Pacific Islander, 0.66% from other races, and 1.84% from two or more races. Based on our assessment of the census blocks from the 2000 census, five of the six census blocks affected by this project are predominately white as shown in Table 4.2. A map of the project area with referenced census blocks is provided in Figure 4.2. The average household income in the project area is considerably lower when compared to the total population of the City of Huntsville.

**Table 4.2 Census Blocks within Project**

<b>Census Blocks Impacted by Project</b>	<b>Percent Minority</b>	<b>Population Total</b>	<b>White</b>	<b>Black</b>	<b>American Indian</b>	<b>Asian</b>	<b>Other</b>
10890011001	0.762	717	171	532	14	0	0
10890011002	0.336	381	245	83	0	45	0
10890010001	0.226	376	291	62	0	23	0
10890010002	0.046	651	621	0	20	0	10
10890010003	0.013	553	546	7	0	0	0
10890001001	0.346	738	478	255	0	0	0
City of Huntsville	0.355	158,216	102,002	47,797	854	3,512	4,051



**Figure 4.2 Project Area within Census Blocks**

As discussed in the 2000 census, the racial makeup of the City of Huntsville, the average household income in the project area is sizably lower than that of the residents who live in the higher income areas of Huntsville.

As stated earlier, significant flooding has occurred in the project area, causing property damage and disruption to local businesses. The Pinhook Creek/Dallas Branch project will significantly reduce these flood damages in the project area and therefore have positive impacts on minorities and economically deprived areas near the project.

#### **4.7.2 Noise and Traffic Impacts**

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL descriptor is accepted by Federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses. EPA guidelines state that outdoor sound levels in excess of 55 dB DNL are “normally unacceptable” for noise-sensitive land uses such as residences, schools, or hospitals. The southern portion of the project is comprised of commercial and industrial land uses. These land uses would not be considered sensitive in nature. The northern portion of the project is comprised of commercial and residential land uses with some residential.

Presently, the majority of the proposed project area is residential (with limited commercial) with a variety of local streets providing access from the creekside. Other than the Jackson Way Baptist church (Rison Street), there is very little traffic outside of local residents.

Under the Proposed Action, temporary short-term increases in noise levels are anticipated due to construction activities and the use of heavy equipment. This may create some temporary noise impacts to residences living in the northern portion of the project. However, the proposed project does not readily create noise. Furthermore, there are no noise sensitive land uses within the area of potential effect that will be affected by the proposed project after construction.

During construction, impacts to traffic would be minimal since multiple routes exist along the entire length of the proposed project. In the vicinity of Rison Street, construction would require the development of alternative ingress/egress for properties immediately adjacent to the channel widening project. However, following construction, this would no longer be an issue and property owners would revert back to their normal way of entering their properties.

#### **4.7.3 Hazardous, Toxic and Radiological Waste (HTRW)**

A Phase I Preliminary Assessment Screening (PAS) (Appendix G) was conducted in November 2008 to determine if there is an existing or potential environmental contamination from either present or past releases of hazardous substances used, stored or disposed of within the project area, or on adjacent properties. Interviews concerning recognized environmental conditions and past uses of the project area were conducted to identify any known or suspected areas of environmental concern within the project area.

A listing of Federal and State environmental databases identifying sites located in the vicinity of the project area was obtained. A private database management firm, Environmental Data Resources, Inc. (EDR) of Milford, Connecticut, was contracted to

provide this information. The Federal and State lists included in the EDR Database Report are compiled from government agency sources and presented in a consolidated format. The following is a brief description of EDR resources that were reviewed.

- EDR NEPACheck® - Assists in determining what environmental effects a site may have in combination with an action.
- The EDR Radius Map™ Report with Geospatial® – Tool used to assist in meeting the search requirements for EPA’s Standards and Practices for All Appropriate Inquiries.
- The EDR Aerial Photo Decade Package – Screening tool used to evaluate potential liability of properties from past activities. EDR provides one aerial photo per decade where available. Aerial photos for the years 1979, 1985, 1998, and 2006 were reviewed.
- The EDR Historical Topographic Map Report – Includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s. Historic topographic maps for the years 1892, 1964, 1975, and 1991 were reviewed.
- Certified Sanborn® Map Report – Provides fire insurance maps of target parcels for available years. Sanborn maps for the years 1928, 1949 and 1966 were reviewed.

The EDR Report provided information that included regulatory records through 2008. A search of regulatory databases was conducted for potentially contaminated sites within 500 feet or adjacent to the project corridor, where contaminated sites may have the potential to impact the project. A total of twelve (12) sites were identified within 500 feet of the project area. In summary, no Hazardous, Toxic, or Radioactive Waste (HTRW) concerns were identified within a 500-foot radius of the project area (within the project corridor) during this search. Table 4.3 summarizes the findings of the database searches for identified sites within 500 feet of the project. Figure 4.3 shows each site location.

**Table 4.3 Summary of Identified Sites within 500 Feet of Site**

Current Name	Address	Distance	Site Type1	Status
1201 Dallas Avenue	1201 Dallas Avenue	< 0.1 mile	FINDS	No Violations
Servicetune Automotive LLC	918 Meridian Street	< 0.1 mile	FINDS, RCRA-Non-Generator	No Violations
General and Automotive Machine	701 Dallas Street	< 0.1 mile	RCRA-CESQG	No Violations
Sherman Huntsville	100 Pegram NW	< 0.1 mile	UST, AST	No Violations

<b>Current Name</b>	<b>Address</b>	<b>Distance</b>	<b>Site Type1</b>	<b>Status</b>
Ready Mix Plant				
Southern Railway Company	330 Church Street	< 0.1 mile	UST	No Further Action
Bulk Plant	608 Church Street	< 0.1 mile	UST, AST	No Further Action
Huntsville Dodge Inc.	705 Wheeler Ave	< 0.1 mile	UST, RCRA-NonGen, FINDS	No Violations
The Spencer Companies Inc. Bulk Plant	612 Wheeler Ave	< 0.1 mile	AST	No Further Action
Chevron USA Inc. 2060	608 Church Street	< 0.1 mile	FINDS, RCRA-NonGen	No Violations
Sinclair Oil Distributor	514 Factory Street	< 0.1 mile	LUST	No Further Action
The Lambardo Building	Monroe Street and Jefferson Street	< 0.1 mile	CERCLA-NFRAP	Active Site- No Further Action
L.E.J. Warehouse	433 North Memorial Parkway	< 0.1 mile	UST	No Further Action

1 Site Type:

FINDS – Facility Index System. The Finds is an inventory of sites or facilities regulated by EPA.

RCRA – Resource Conservation and Recovery Act. Sites that generate hazardous waste and regulated by EPA.

UST – Underground Storage Tank. Sites with underground storage tanks.

AST – Aboveground Storage Tank. Sites with aboveground storage tanks.

CERCLA NFRAP – Comprehensive Environmental Response Compensation and Liability Act. NFRAP - No Further Remedial Action Planned.

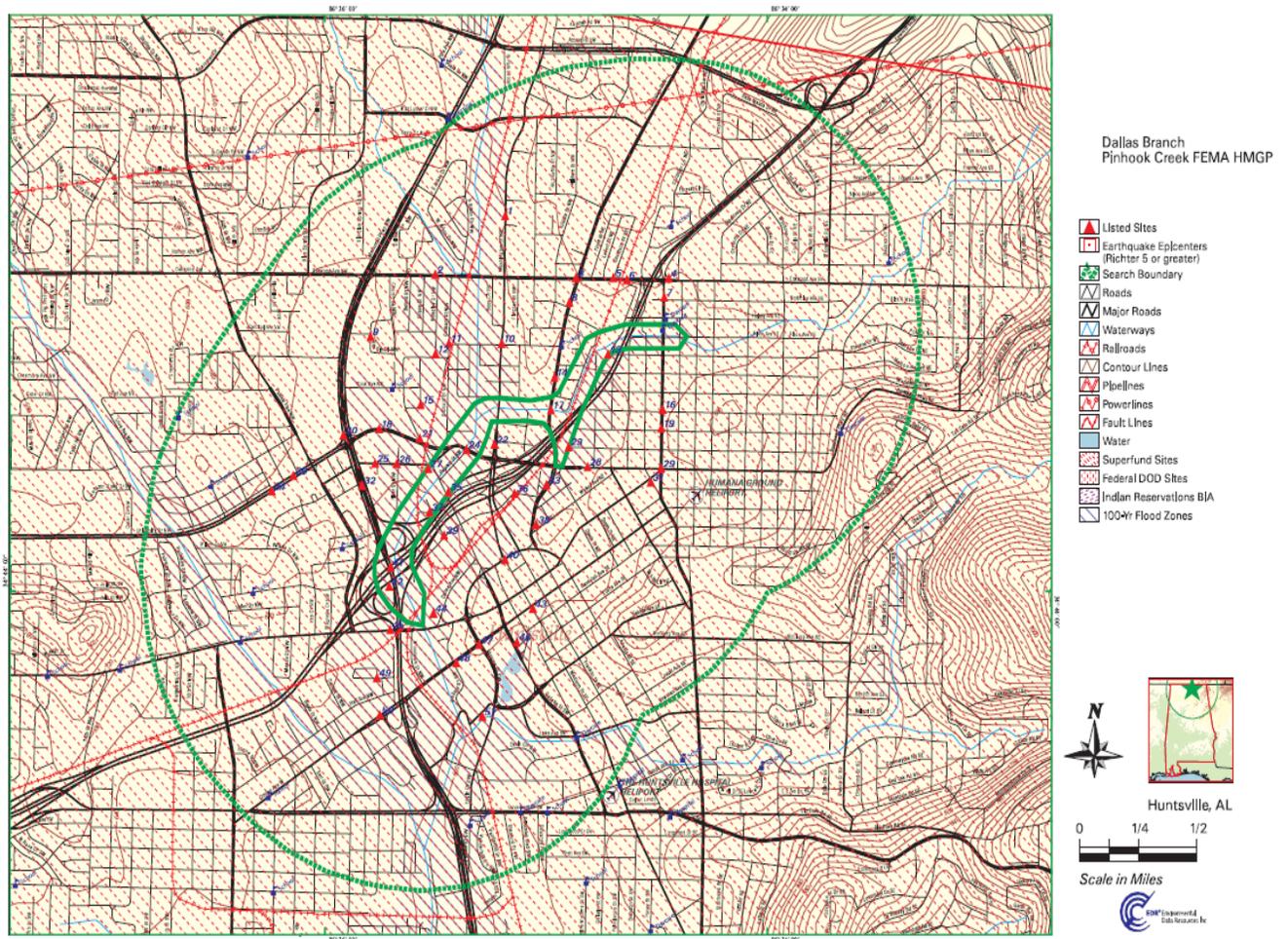


Figure 4.3 Location of Identified Sites near Project

The results of Phase I and II ESAs were negative for hazardous wastes and/or hazardous materials at the proposed project area. Under proposed alternatives, no impacts from hazardous materials or wastes are anticipated. Excavation activities could expose or otherwise affect previously unknown subsurface hazardous wastes or materials; any hazardous materials discovered, generated, or used during construction will be disposed of and handled in accordance with applicable local, state, and federal regulations.

#### 4.8 Cumulative Impacts

The proposed Dallas Branch/Pinhook Creek Flood Hazard Mitigation project will greatly reduce future flood damages in the downtown and adjacent areas. Many homes that sit within the floodplains of Dallas Branch and Pinhook Creek would be underwater during a 100-year storm. (Appendix I – Newspaper Clipping) The proposed basin, which would extend from Halsey Street South to McCullough Avenue on the west side of I-565, would help reduce the threat of flooding along Dallas Branch by collecting storm water during

heavy rainfall. It is not going away completely, but many houses will be out of the floodplain.

Presently, approximately 931 structures are located within the floodplain of the study area. The project as designed significantly reduces damages from the 2- through 500-year events. The following information below indicates in more detail the number of structures that the project would protect under the various flood frequencies.

- Damages reduced in over 217 structures during the 2-year event.
- Damages reduced in over 359 structures during the 5-year event.
- Damages reduced in over 469 structures during the 10-year event.
- Damages reduced in over 534 structures during the 25-year event.
- Damages reduced in over 572 structures during the 50-year event.
- Damages reduced in over 594 structures during the 100-year event.

Note that during the analysis the 1998 FIRM for the 100-year floodplain was used to determine the impacts. When comparing the 1998 FIRM to the 2010 FIRM it was discovered that there were some additional areas included in the floodplain in the 2010 FIRM, which were not a part of the floodplain in the 1998 FIRM. These areas are also benefitting from this project. See Figure 4.4 below.

As noted in Section 3.02, approximately 105 properties will be acquired for the proposed action. Structures will be removed from those properties that will be fully acquired. On the properties from which easements will be acquired (17 properties), the acquisition will involve only enough property for the project easement. Structures will remain on these properties. As for the homes and businesses that would remain, these residents and businesses would be afforded the benefits of increased flood protection.

The project provides an additional benefit to the City by helping to facilitate construction of a planned greenway along Pinhook Creek and part of Dallas Branch. Together, these projects will greatly improve the City's quality of life and provide a major catalyst for future reinvestment in the downtown area. Figure 4.4 provides a visual floodplain comparison for existing conditions verses proposed project conditions. Appendix J contains tables illustrating the proposed projects impact of water surface elevation and discharge for the 10-year, 50-year, 100-year and 500-year events in Pinhook Creek.

This project is funded through the Alabama Emergency Management Agency (AEMA) and Federal Emergency Management Agency (FEMA). Funds will not be received from any other federal agencies or initiatives.

# Floodplain Comparison for Existing Conditions

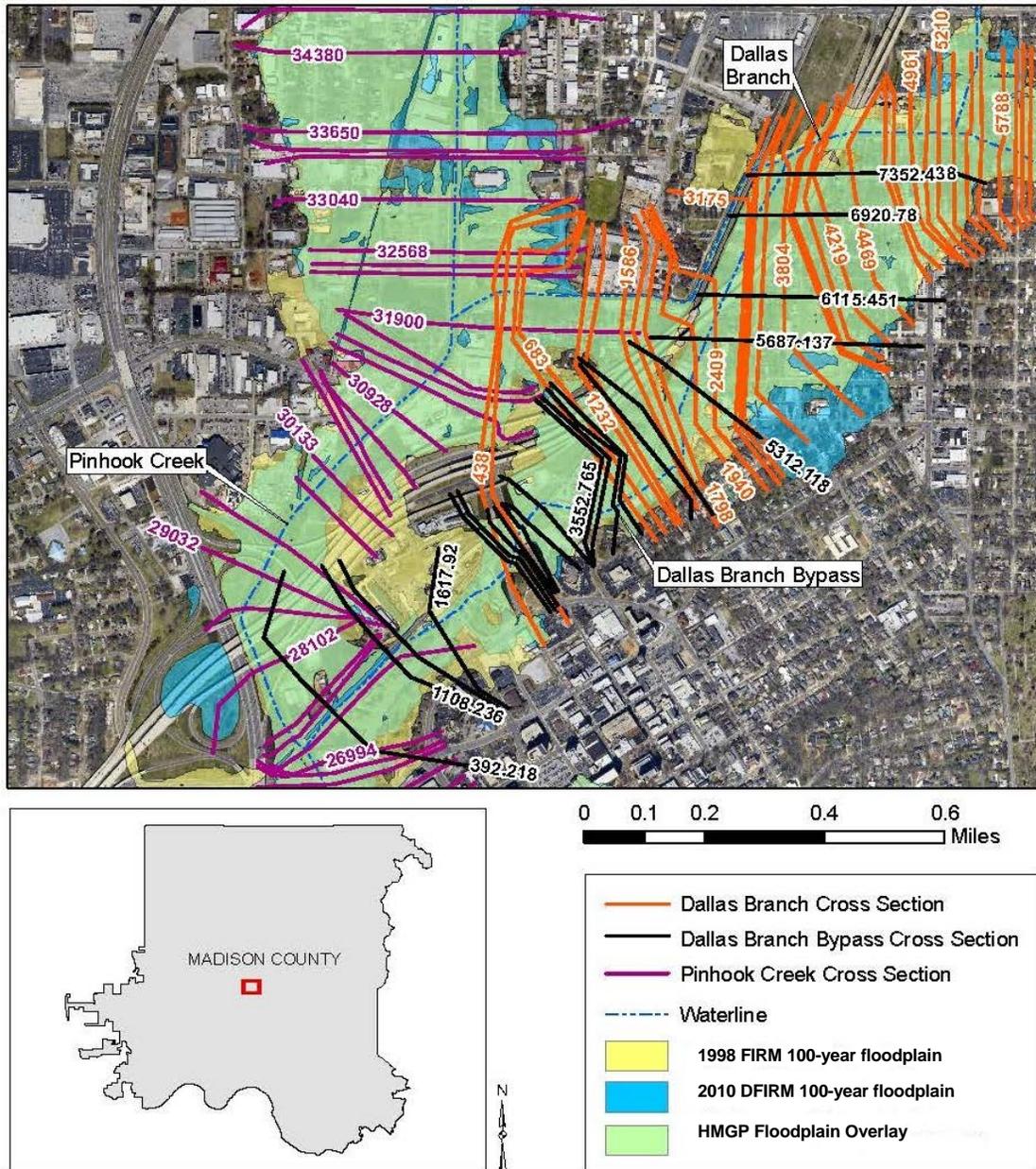


Figure 4.4 Dallas Branch/Pinhook Creek Floodplain Comparison (ESRI, DigitalGolbe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community)

## **5.0 AGENCY COORDINATION, PUBLIC INVOLVEMENT, PERMITS AND CONDITIONS**

As required by the National Environmental Protection Act (NEPA), the City of Huntsville has coordinated this project with various local, state and federal agencies as well as the general public. During the early stages of development, the USACE, ADEM, Alabama Historical Commission, USFWS, and local EMA, were solicited for their comments and/or concerns regarding this proposed project. Agency responses are located in Appendix B

In addition to the agency coordination discussed above, a public meeting was held on June 22, 2009, at the City of Huntsville Public Service Building. Thirty-four citizens attended the meeting. A memo of the meeting entitled “City of Huntsville Dallas Branch/Pinhook Creek Flood Damage Reduction Project – Public Comment Meeting – June 22, 2009” is provided in Appendix I along with notices that were placed in the local and regional advertisements.

The following comments were received at the public meeting:

**Comment 1:** Will the project include green space and pocket parks.

**Response 1:** The project may include a pedestrian walking trail if feasible. However, this will be determined during final design.

**Comment 2:** A citizen wanted to know what the post project flood elevations are for Cleveland Avenue and Meridian Street.

**Response 2:** These details will be available at the public hearing.

**Comment 3:** One citizen expressed concerns regarding the meeting format.

**Response 3:** The following maps were displayed for public viewing: (1) areal maps of the project area, (2) overview map of the project area, (3) map of existing and anticipated floodplains and (4) the typical section of channel improvements. Attendees were able to view these maps and discuss the project with City Officials and project consultants.

**Comment 4:** A meeting attendee was concerned about trees falling into a tributary to Pinhook Creek.

**Response 4:** The City of Huntsville will carry out normal maintenance activities to remove debris from drainage ways on City property.

The comments below were received by email:

**Comment 5:** A citizen lives in a house that is currently not in the regulated floodplain, but recent modeling depicts a regulated floodplain that includes his property. They question

why the City would show his house in the regulated floodplain then take his property out of the regulated floodplain with the project.

**Response 5:** Survey information may have proven his house to be outside of the regulated floodplain area.

**Comment 6:** A meeting attendee stated that his family owns quite a number of properties in the Lincoln Mills area including most of King Avenue, Cottage Street, and Holding Avenue, and wanted clarification on the project details such as location of channel improvements and land use changes.

**Response 6:** These details will be made available at the public hearing for the project.

## 6.0 LIST OF PREPARERS/REVIEWERS

**Table 6.1 List of Preparers/Reviewers**

<b>Name</b>	<b>Company</b>	<b>Position</b>
Jerry Jones	ARCADIS, Malcolm Pirnie, Inc.	Vice President
Brian Ruggs	ARCADIS, Malcolm Pirnie, Inc.	Senior Water Resources Engineer-WR Planning East (WATER PLANNING)
Jim Scholl	ARCADIS, Malcolm Pirnie, Inc.	Technical Expert (Eng.) - PTAN
M.N. Corky Pugh	Alabama Department of Conservation and Natural Resources	Director –Wildlife and Freshwater Fisheries Division
Bill Pearson	US Fish and Wildlife Service- Alabama Ecological Field Office	Field Supervisor
Ron Gatlin	US Army Corps of Engineers-Nashville District	Branch Chief
Lisa R. Morris	US Army Corps of Engineers-Nashville District	Project Manager-Operations Division
William R. Cann	Tennessee Valley Authority, Pickwick-Wheeler Watershed Team	Manager
Elizabeth Ann Brown	Alabama Historical Commission	Director, Deputy State Historic Preservation Officer
Aubrey H. White III	Alabama Department of Environmental Management SRF, Certification, General Services Branch Permits and Service Division	Chief
Ron Johnson	SRF, Certification, General Services Branch Permits and Service Division	
Matthew D. Marshall	Alabama Department of Conservation and Natural Resources	Environmental Coordinator- Wildlife and Freshwater Fisheries Division
Lisa C. Baker	United Keetoowah Band of Cherokee Indians in Oklahoma	Acting THPO
Emman Spain	Muscogee (Creek) Nation	THPO
Alina J. Shively	Jena Band of Choctaw Indians	JBC Deputy
Cynthia Bailey	Federal Emergency Management Agency-FEMA	Environmental Protection Specialist
Angelika H. Phillips	FEMA	Environmental Protection Specialist
Stephanie Madson Ph.D.	FEMA	Deputy Regional Environmental Officer

## **7.0 LIST OF REFERENCES**

See **Appendix K**.

If you are experiencing issues accessing any of the information contained in this document or the appendices, please contact the FEMA R4 Environmental Planning and Historic Preservation Office at 770-220-8786 or [FEMA-R4EHP@fema.dhs.gov](mailto:FEMA-R4EHP@fema.dhs.gov).