

FINDING OF NO SIGNIFICANT IMPACT

**PROJECT ST-045-053-001
STATE ROUTE 53 FROM HUNTSVILLE
TO INTERSTATE 65 IN ARDMORE,
MADISON AND LIMESTONE COUNTIES, ALABAMA**

PREPARED BY:

**US DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
ALABAMA DEPARTMENT OF TRANSPORTATION**

IN COOPERATION WITH:

**US ARMY CORPS OF ENGINEERS
AND
TENNESSEE VALLEY AUTHORITY**

**FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT
FOR**

**PROJECT ST-045-053-001
STATE ROUTE 53 FROM HUNTSVILLE
TO INTERSTATE 65 IN ARDMORE,
MADISON AND LIMESTONE COUNTIES, ALABAMA**

The Federal Highway Administration (FHWA) has determined that the recommended alternate as described in the attached Environmental Assessment (EA) will have no significant impact on the human environment. This Finding of No Significant Impact (FONSI) is based on the attached EA and additional reports listed in the EA, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an EIS is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

6-21-99

Date

Bill Van Luchne

For FHWA

The Environmental Assessment (EA) for the referenced project was approved by FHWA on December 23, 1998. The project consists of adding two lanes to the existing two-lane section of SR 53 from the terminus of the existing four-lane SR 53 in Huntsville, northwestward to a point south of Ardmore, Alabama. The additional lanes will be added to the west side of existing SR 53 and cover a distance of approximately 25.6 kilometers (15.9 miles). The project will then turn west from existing SR 53 and bypass the town of Ardmore to the south. The bypass will consist of approximately 7.7 kilometers (4.8 miles) of divided, four-lane roadway on new location linking SR 53 to I-65 at the existing I-65/SR 53 interchange. The selected alternate was comprehensively evaluated in the Environmental Assessment.

The Alabama Department of Transportation presented public involvement meetings during the course of the study to notify the public of the project and to receive input from local residents. Two public involvement meetings for the project were held on August 28, 1997. The meetings were held in the vicinity of the project at the University of Alabama in Huntsville and at Ardmore High School in Ardmore. The meetings were conducted by the Alabama Department of Transportation in an open house format. The total attendance was 181. Forty-five people attended the meeting in Huntsville and 136 people attended the meeting in Ardmore. Overall, attendees were in favor of the project. Forty-eight written comments were received following the public involvement meetings. Eighty-five percent of the comments were in favor of the project.

The Alabama Department of Transportation presented the selected alternate during two public hearings on March 4, 1999. The public hearings were held at the same locations as the earlier public involvement meetings. The meetings were conducted by the Alabama Department of Transportation in an open house format. The total attendance was 189. Fifty-three people attended the meeting in Huntsville and 136 people attended the meeting in Ardmore. Overall, attendees were in favor of the project. Twenty-six written comments were received following the public hearings. One hundred percent of the written comments were in favor of the project.

Of those individuals commenting, eighty-eight percent were in favor of the selected alternate and twelve percent suggested minor alignment shifts. No comments were received in opposition to the project. The public hearing transcript is enclosed under separate cover.

Environmental Impacts

The project impacts 3.84 hectares (9.48 acres) of wetlands and acquires right-of-way from eight potential hazardous materials sites. The project will involve relocating 81 residences, 24 businesses, and two non-profit organizations. No active farms will be relocated. The US Fish and Wildlife Service has concurred that the selected alternate avoids impacts to protected species. The State Historic Preservation Officer has concurred that the selected alternate avoids impacts to cultural resources determined eligible for the National Register of Historic Places and archaeological sites eligible for preservation in place. Project area of effect for site 1Ma672 (archaeological site noted in the table below) will be established as right-of-way plans are further developed. The State Historic Preservation Officer (SHPO) has determined that site 1Ma672 is not eligible for preservation in place. The Alabama Department of Transportation has committed to conduct additional research and, if required, conduct data recovery, should the final design of the proposed project affect site 1Ma672. The selected alternate is projected to carry 32,844 cars per day. Total cost of the selected alternate is estimated at \$108.8 million. Total environmental and engineering aspects of the selected alternate are shown as follows:

	Selected Alternate
Roadway kilometers (miles)	31.8 (19.7)
Bridge kilometers (miles)	1.1 (0.7)
Total Length kilometers (miles)	32.9 (20.4)
Construction Cost (Thousands)	\$78,011
Utility Cost (Thousands)	\$538
Right-of-Way (Thousands)	\$30,333
Total Costs (Thousands)	\$108,882
Wetlands Hectares (acres)	3.8 (9.5)
Potential Hazardous Materials Sites	8
NRHP* Eligible Structures	0
NRHP* Eligible Archaeological Sites	1
Residential Relocations	81
Business Relocations	24
NPO Relocations**	2
Farm Relocations	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

Wetland Finding

In accordance with Executive Order 11990, "Protection of Wetlands," impacts to wetlands are to be avoided where practicable. If avoidance is not possible, then impacts should be minimized and, finally, mitigated. Several alternatives including the No-Build Alternative were considered for the proposed action. As discussed in Section 3.13.2 of the EA, the determination has been made that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

The mitigation proposed for this project will come from a wetland mitigation bank area or wetland restoration. The Alabama Department of Transportation proposes to debit a number of credits from a wetland bank to mitigate for that number of acres of wetlands filled by the project in accordance with the "Memorandum of Agreement of a Wetland Bank" or conduct compensatory mitigation through restoration. The actual number of credits to be debited or acres to be restored, will be determined after final plans are

completed and when the Alabama Department of Transportation makes application for Section 404 Permits from the Corps of Engineers.

Floodplain Finding

A Location Risk Assessment Record has been completed for this project and is included in Appendix G of the EA. The project has been coordinated with the Federal Emergency Management Agency. Hydraulic and hydrologic studies will be performed during final design. Final bridge lengths, culvert sizes, locations and profiles will be determined and steps will be taken to insure that any changes in the 100-year flood elevations are within allowable standards.

The proposed structures will have an effective waterway opening equal to or greater than existing structures, and backwater surface elevations are not expected to increase. As a result, there will be no impacts on natural and beneficial floodplain values; there will be no significant change in flood risks; and there will be no increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that these encroachments will not be significant. In conclusion, the project is a feasible and acceptable proposal from a flood risk standpoint.

Hazardous Materials Review

The Alabama Department of Transportation Materials and Tests Bureau field reviewed the eight (8) hazardous materials sites discussed in Section 3.18.2 of the EA on April 1, 1999. The Materials and Tests Bureau determined that Sites 6,7 and 8 may require additional hazardous materials investigations. Documentation concerning Sites 6, 7 and 8 was reviewed by Alabama Department of Environmental Management (ADEM) personnel on March 30, 1999. Sites 6, 7 and 8 are eligible for the Alabama Underground and Aboveground Storage Tank Trust Fund.

Sites 6 and 7 are both active gas station/convenience stores. ADEM records indicate that Sites 6 and 7 are compliant with State and Federal regulations for the operation of underground storage tanks. ADEM has no record of a release of petroleum contaminants at either Site 6 or Site 7. Site 8 is a former gas station/convenience store. As noted in the EA, the underground storage tanks were closed by removal on August 7, 1998. ADEM records indicate that a petroleum release has occurred at this site. The release was reported as a result of soil sampling conducted during the August 7, 1998 closure. The Materials and Tests Bureau will conduct additional hazardous material testing at Sites 6, 7 and 8 as the project develops.

Shifting to the east of existing State Route 53 to avoid Sites 6, 7 and 8 was investigated. Transitioning from the selected alternate and utilizing the east alternate through Nodes 2-4 would impact 7.5 more acres of wetlands and impact an archaeological site potentially eligible for the National Register of Historic Places and for preservation in place. Transitioning would involve an additional twelve (12) residential relocations, three (3) business relocations and two (2) non-profit organization relocations. In addition, total costs of the project would increase by a minimum of \$2 million. The east alternate through Nodes 2-4 would also impact three (3) potential hazardous materials sites that would be subject to more detailed evaluation and/or testing. These three sites have the same potential for contamination as Sites 6, 7 and 8 on the selected alternate.

Based on increased impacts associated with transitioning to the east from Nodes 2-4 as stated above, the results of future hazardous materials investigations are not expected to facilitate a shift in the selected alignment.

The Environmental Assessment adequately addresses the socioeconomic and ecological issues related to the proposed project. A thorough analysis of the potential impacts of the projects has determined that there will be no significant impact upon the human environment. For this reason, it is requested that you sign the attached cover sheet

indicating the Federal Highway Administration's concurrence with the Alabama Department of Transportation's Finding of No Significant Impact.

Agency Comments

The following correspondence from the Tennessee Valley Authority is the only comment received following the EA public availability period.

Comment

Response



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37919-4900
March 2, 1999



Mr. Gary W. Moore
Environmental Technical Section
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130

Dear Mr. Moore:

ENVIRONMENTAL ASSESSMENT (EA) - PROJECT ST-045-053-001, STATE ROUTE 53 FROM HUNTSVILLE TO INTERSTATE 65 IN ARDMORE, WHEELER RESERVOIR TRIBUTARIES, MADISON AND LIMESTONE COUNTIES, ALABAMA

Thank you for the opportunity to review the EA for the proposed construction of additional lanes to State Route 53 between Mastin Lake Road and Old School House Road and the construction of four lanes on new location between Old School House Road and I-65 at the Ardmore exit. At this time, we have the following comments:

- On page v and page 61, discussion of TVA's Flood Storage Loss Guidelines is not necessary, because this project is located off-reservoir. However, the document correctly notes that an approval under Section 26a of the TVA Act would be needed for crossings of Tennessee River tributaries.
- On page 68, Section 3.13, we would like to see discussion of the proposed wetland mitigation included in the Federal Highway Administration Finding of No Significant Impact (FONSI). Such discussion is needed in order for TVA to adopt the EA and reach a FONSI.
- On page 73, Section 3.16, while consultation has taken place with the U.S. Fish and Wildlife Service on federally-listed species, we note that our earlier comment on the Tuscumbia darter was not discussed. For example, the FONSI could state, perhaps in the Water Quality Impacts (Section 3.10) or Wildlife Impact (Section 3.15) sections, that "With the implementation of Best Management Practices, adverse impacts to aquatic life, including the Tuscumbia darter, a Special Concern species, would be avoided."

TVA is pleased to serve as a cooperating agency on this project. Upon completion of the Federal Highway Administration Finding of No Significant Impact, please send a copy to us. Should you have any questions, please contact Harold M. Draper at (423) 632-6889 or hmdraper@tva.gov.

Jon M. Loney, Manager
Environmental Management

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The project will comply with Section 26a of the TVA Act.

Wetland mitigation is discussed in the wetland finding included in the FONSI.

Adverse impacts to aquatic life will be avoided or minimized through the use of Best Management Practices (BMPs). Tuscumbia Darter, a Special Concern species of fish, is known to inhabit aquatic resources in the study area. As stated in Section 3.10.2 of the EA, proper construction management and BMPs will be utilized throughout the project to minimize potential impacts to water quality. Through the use of BMPs the project is not expected to affect Tuscumbia Darter or habitat for the species.

ENVIRONMENTAL ASSESSMENT

**PROJECT ST-045-053-001
STATE ROUTE 53 FROM HUNTSVILLE
TO INTERSTATE 65 IN ARDMORE,
MADISON AND LIMESTONE COUNTIES, ALABAMA**

PREPARED BY:

**US DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
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**IN COOPERATION WITH:
US ARMY CORPS OF ENGINEERS
AND
TENNESSEE VALLEY AUTHORITY**

ENVIRONMENTAL ASSESSMENT

**Project ST-045-053-001
State Route 53 From Huntsville
To Interstate 65 In Ardmore,
Madison And Limestone Counties, Alabama**

Submitted pursuant to 42 U.S.C. 4321 et seq. and in compliance with
Executive Order 11988 Floodplain Management,
Executive Order 11990 Protection of Wetlands and
Executive Order 12898 Environmental Justice, by

**U.S. Department of Transportation
Federal Highway Administration
and
Alabama Department of Transportation**

**in cooperation with the
US Army Corps of Engineers
and
Tennessee Valley Authority**

12-23-98
Date

Bill Van Luchene
For FHWA

The following persons may be contacted for additional information:

**Mr. Joe D. Wilkerson
Division Administrator
Federal Highway Administration
500 Eastern Boulevard, Suite 200
Montgomery, Alabama 36117-2018
Telephone: (334) 223-7370**

**Mr. James F. Butts
Director
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130
Telephone: (334) 242-6311**

Project ST-045-053-001 is a proposal for improvements to State Route 53 from Huntsville to Interstate 65. The project consists of adding two lanes adjacent to the existing two-lane roadway at Huntsville to a point south of Ardmore, from this point, the project consists of divided, four-lane roadway on new location which by-passes Ardmore to the south and ties to the existing I-65/SR 53 interchange.

Summary

- **Project Description**

Project ST-045-053-001 is a proposed action to widen existing State Route 53 (SR 53) from a two-lane roadway to a four-lane roadway and construct a new four-lane bypass to the south of Ardmore, Alabama. Project location is shown on Figure 1.1. The project begins in northwest Huntsville, Alabama at the point where existing SR 53 narrows from four lanes to two lanes. The project extends in a northwest direction for approximately 25.6 kilometers (15.9 miles). Additional lanes will be added to the west of the existing SR 53 through this segment of the project. The project will then turn west from existing SR 53 and bypass the town of Ardmore, Alabama to the south. The bypass will consist of approximately 7.7 kilometers (4.8 miles) of divided, four-lane roadway on new location. This segment of the project links SR 53 to I-65 at the existing I-65/SR 53 interchange. The preferred alternate is a total of 32.9 kilometers (20.4 miles) in length and spans portions of Madison and Limestone Counties in north Alabama.

- **Other Actions in the Geographic Area**

The primary action in the study area is the newly constructed Rideout Road extension which begins at SR 53 and connects US 72, I-565, and Redstone Arsenal. The Rideout Road extension creates a direct corridor between the study area and employment centers associated with Redstone Arsenal in Huntsville. The Rideout Road extension also links SR 53 to the proposed Huntsville Southern Bypass project.

- **Alternatives**

All reasonable alternatives, including no-action, transportation system management, mass transit, and build alternates have been evaluated in relation to this project. The Alabama Department of Transportation (ALDOT) has recommended a preferred alternate (Section 4.2). The preferred alternate is shown on Figure 2.1. The preferred alternate is projected to carry 32,800 cars per day. Total cost of the preferred alternate is estimated at \$108.8 million.

- **Land Use**

Approximately 214 hectares (529 acres) of land will be converted to roadway use. The current land use is agricultural, residential, wetland, and open pasture (Section 3.1).

- **Wetlands**

The preferred alternate impacts 3.84 hectares (9.48 acres) of wetlands. Wetland impacts have been reduced by avoidance, minimization, and through proposed mitigation. Wetland impacts are not avoidable since the study area is perpendicular to area wetlands. A Clean Water Act, Section 404 Permit from the US Army Corps of Engineers will be required (Section 3.13).

- **Prime and Unique Farmlands**

Farmland impacts have been assessed in accordance with 7 CFR 658 (Section 3.2). The preferred alternate received an Alternate Site Rating of 99 on Form AD 1006 (Appendix B).

- **Floodplain Impacts**

No significant encroachments will occur (Section 3.14).

- **Water Quality**

Impacts to water quality in local streams will be temporary. Best Management Practices to control erosion and sedimentation will be used. No adverse impact to water quality is anticipated. A National Pollution Discharge Elimination System (NPDES) Permit from the Alabama Department of Environmental Management (ADEM) will be required (Section 3.10).

- **Wild and Scenic Rivers**

There will be no impacts to wild and scenic rivers (Section 3.11).

- **Air Quality**

There will be no appreciable change in air quality (Section 3.8).

- **Noise Impacts**

Noise studies for all alternates were conducted using the Standard Method of Noise Analysis (STAMINA) noise predicted model. Noise exceedances occur when a site experiences levels in excess of 66 dBA (residential), 71 dBA (commercial), or when noise levels increase 15 dBA over existing ambient noise levels. Eighty-seven sites were analyzed in this study. Noise impacts were predicted for 21 sites on the preferred alternate (Section 3.9.4).

- **Impacts to Threatened or Endangered Species**

Through US Fish and Wildlife Service coordination and field surveys of the proposed alignments, the proposed project is not expected to impact protected species (Section 3.16). US Fish and Wildlife Service concurrence is included in Section 4.2.

- **Relocation Impacts**

No communities or neighborhoods are isolated or bisected by the proposed action. The project will not involve disproportionate impacts to any minority group. Relocations are discussed in Section 3.5 of this document. The preferred alternate is expected to involve the relocation of 81 residences, 24 businesses, two non-profit organizations, and no farms.

- **Cultural Resource Impacts**

Cultural resource surveys were conducted within the study area to identify resources eligible for the National Register of Historic Places (NRHP). The preferred alternate does not affect NRHP eligible resources or archaeological sites eligible for preservation in place. Cultural resources are discussed in Section 3.17 and concurrence from the State Historic Preservation Officer (SHPO) is included in Section 4.2.

- **Public Involvement**

Two public involvement meetings were held on August 28, 1997. Issues were discussed regarding wetland, historical, and community impacts. Through the public involvement process, alternates were refined to avoid and minimize environmental impacts. Forty-eight public comments were received. Eighty-five percent of the comments favored construction of the SR 53 project (Section 4).

- **Areas of Controversy**

Controversy has arisen over the presence or absence of rural historic districts in the study area. The SHPO has determined that no rural historic districts exist in the study area. SHPO concurrence is included in Section 4.2.

- **Other Federal Actions**

A permit will be required from the US Army Corps of Engineers under Section 404 of the Clean Water Act in order to place bridge structures and/or fill materials in wetlands. Also, permits for crossing tributaries of the Tennessee River will be required by the Tennessee Valley Authority (TVA) and administered in accordance with Section 26(a) of the TVA Act and TVA's Flood Storage Loss Guidelines. Coordination with the Corps of Engineers and TVA is included in Section 4.2.

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1. PURPOSE AND NEED

1.1. Project Description

The project consists of adding two lanes to the existing two-lane lane section of SR 53 from the terminus of the existing four-lane SR 53 in Huntsville, north westward to a point south of Ardmore, Alabama. The additional lanes will be located adjacent to existing SR 53 and cover a distance of approximately 25.6 kilometers (15.9 miles). The project will then turn west from existing SR 53 and bypass the town of Ardmore to the south. The bypass will consist of approximately 7.7 kilometers (4.8 miles) of divided, four-lane roadway on new location linking SR 53 to I-65 at the existing I-65/SR 53 interchange. Project location is shown on Figure 1.1. Design criteria and typical sections are included in Appendix A.

1.2. Purpose and Need

The purpose of the project is to upgrade SR 53 to a four-lane roadway between Huntsville and I-65. The need for the project is demonstrated in existing sub-standard design features, increased traffic on the roadway and the increasing emphasis on SR 53 as an artery for commuter and through traffic.

The SR 53 project is included in the Huntsville Area Transportation Study (HATS) Year 2015 Transportation Plan, labeled as project one (1) in The Huntsville Long-Range Highway Plan, and programmed for Surface Transportation Any Area Program Funding, as referenced in the HATS Transportation Improvement Program FY 1998-2002, adopted in June 1997 by the Metropolitan Planning Organization. However, awareness of the need for improvements to SR 53 is not a current trend. Improvements to portions of SR 53 have been investigated over the last twenty years. In 1975, Project ST-1861-1 studied improvements to SR 53 in Ardmore. SR 53 is a local road through the central business district of Ardmore. Problems with traffic congestion in Ardmore were caused by mixing through traffic with local traffic. Congestion was compounded by the design of the SR 53 underpass of the L & N Railroad in Ardmore. (It should be noted that since the previous environmental



studies, the L&N Railroad has become CSX Railroad.) The underpass has a one-way vehicle clearance of 4.1 meters (13.5 feet) and the roadway floods during heavy rain. Suitable improvements to the SR 53/L & N underpass were not pursued due to its location in floodplain. Project ST-1861-1 was abandoned. From 1977 to 1980, Project F-388() was investigated to provide a bypass to the south of the main business district of Ardmore. A rural two-lane highway was proposed beginning 1.2 kilometers (0.75 miles) east of the existing I-65/SR 53 interchange and traveling east approximately 5.6 kilometers (3.5 miles) to intersect existing SR 53. Project F-388() included a grade separation overpass at the L & N Railroad tracks.

Improvements to existing SR 53 through Ardmore were studied in Project F-388() as an alternative to the bypass. Improvements through downtown Ardmore were determined to be unreasonable. Improvements bypassing Ardmore to the south were determined to be reasonable. The Finding of No Significant Impact for Project F-388() was approved by the Federal Highway Administration in 1980.

The improvements discussed in this Environmental Assessment meet and exceed prior purpose and need determinations studied for the SR 53 corridor by providing a four-lane bypass of Ardmore and also providing an additional multi-lane roadway between Huntsville and I-65 to accommodate growing traffic demands in the area.

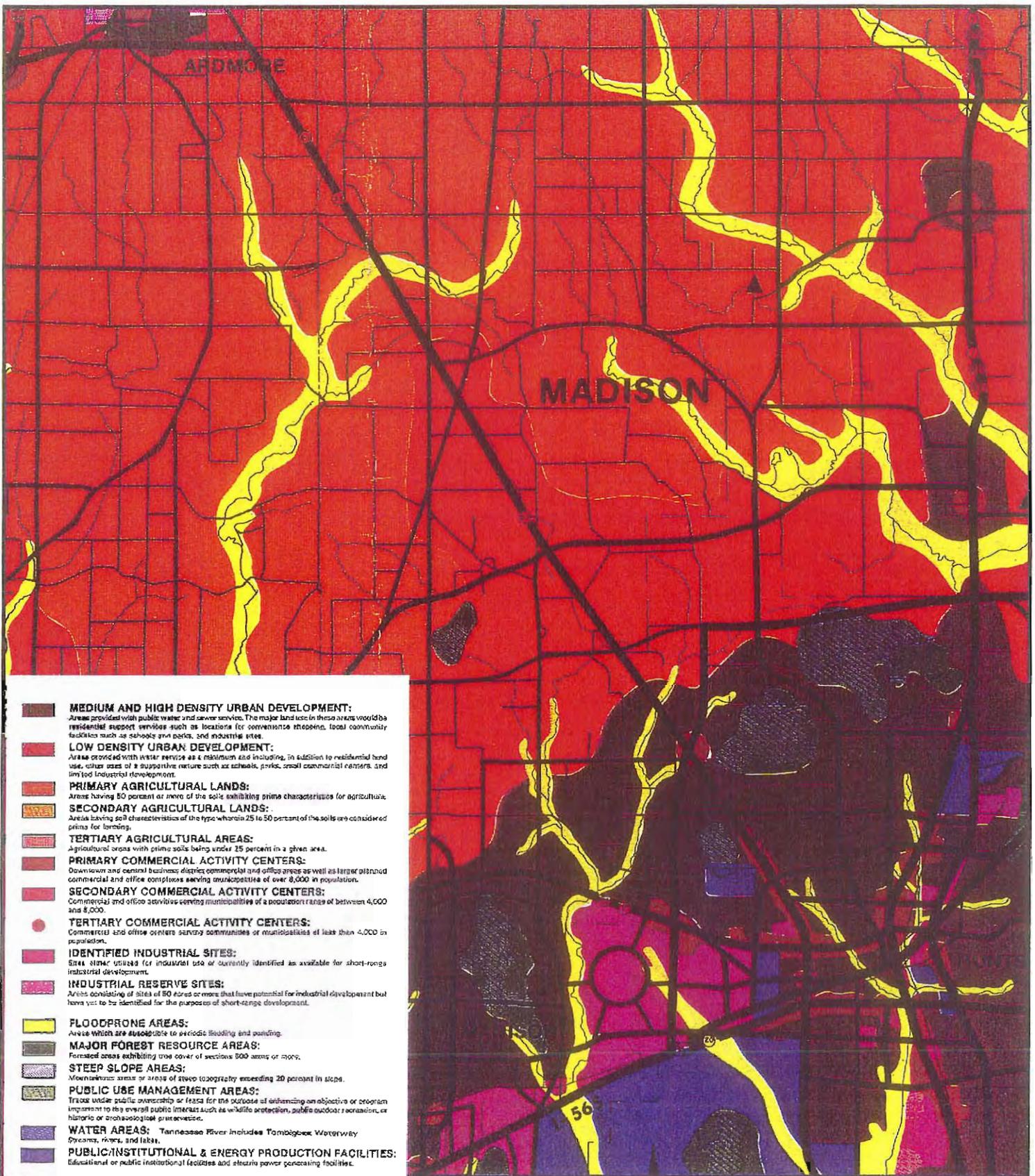
Traffic congestion on a roadway is described in levels of service (LOS). LOS is ranked in letter from "A" to "F." LOS "A" represents the best condition in which there are no delays or congestion on a roadway. LOS "F" represents the worst condition in which roadway operations breakdown completely causing extensive delays and congestion. LOS categories are described in Table 1.2.



corridor. The southeastern portion of the corridor from the beginning of the project to the newly constructed Rideout Road extension consists of commercial development. Areas northwest of the Rideout Road extension are rapidly converting from rural residential and agricultural land uses to suburban areas. Towns such as Ardmore, Harvest and Toney are becoming satellite communities for a growing work force in Huntsville and Madison. This is evident by new subdivision and retail commercial development along the SR 53 corridor. The Top of Alabama Regional Council of Government's Land Use Plan projects urban development to extend northwest of Toney and surround Ardmore by the year 2005 (Figure 1.2). In addition, the area around the existing SR 53/I-65 interchange and the central business district of Ardmore are projected to develop into primary commercial activity centers.

A contributing factor to residential and commercial growth in the SR 53 study area is the access, currently provided by SR 53, to destinations in Huntsville and north on I-65. SR 53 represents a direct route for through traffic that is traveling between Huntsville and Tennessee (Figure 1.1). Traveling on SR 53, the distance from the SR 53/I-565 interchange in Huntsville to the SR 53/I-65 interchange in Ardmore is approximately 42 kilometers (26 miles). Traveling on I-565 and I-65, the distance from the SR 53/I-565 interchange to the SR 53/I-65 interchange is approximately 93 kilometers (58 miles). Drivers have identified SR 53 as the shortest route from Huntsville to I-65 northbound at the Tennessee state line and have increased traffic demands on the existing roadway. Increased congestion, changing land use and identified design limitations define the need for upgrading SR 53 to a divided four-lane roadway.





PROJECT NO. ST-045-053-001
STATE ROUTE 53
MADISON AND LIMESTONE
COUNTIES, ALABAMA

2005 LAND USE

FIGURE 1.2

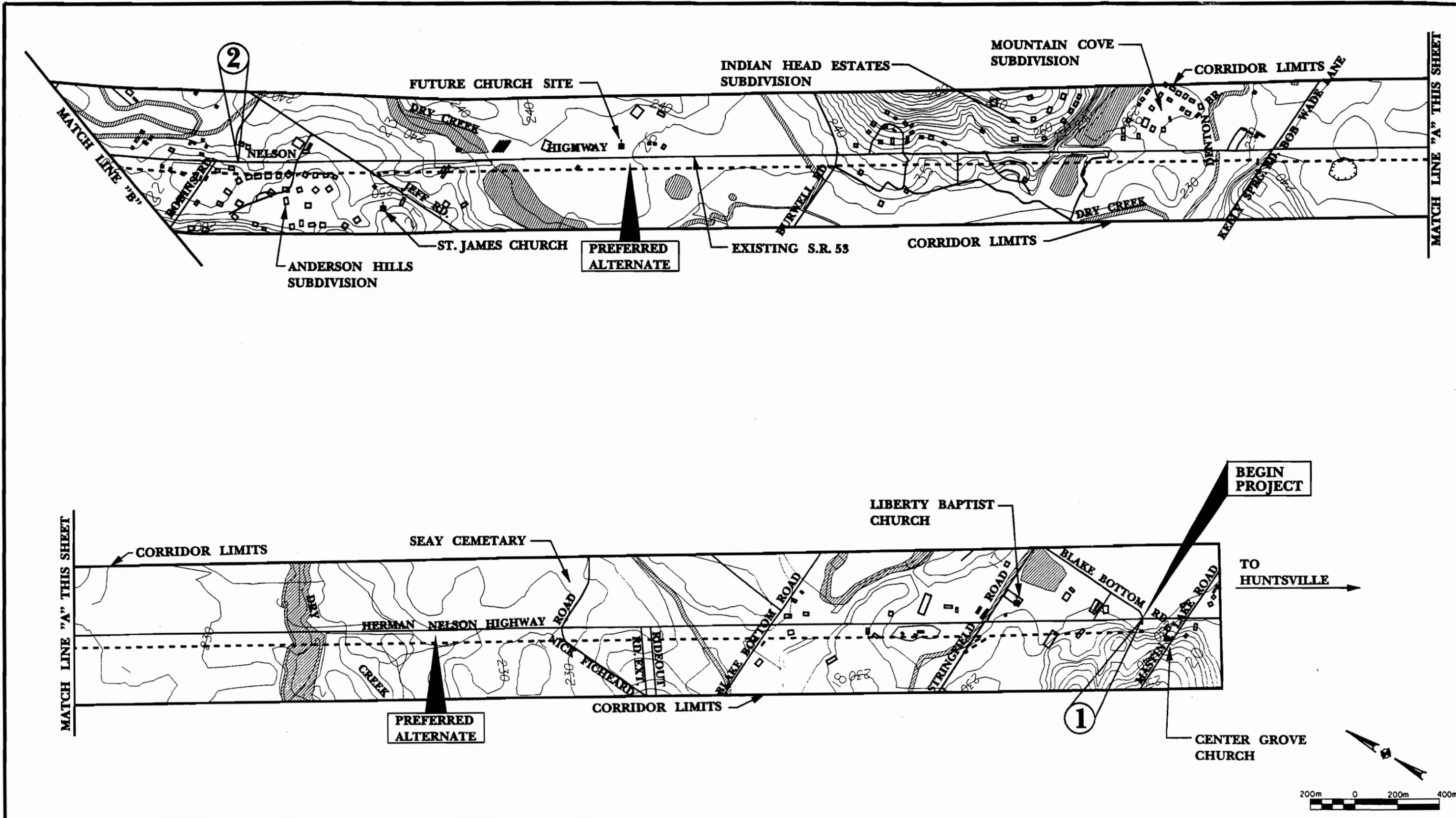
2. ALTERNATIVES

Alternatives for Project ST-045-053-001 were developed and analyzed with respect to the purpose and need stated in Section 1. Alternatives for screening during the transportation planning process included the No-Action Alternative, postponing the action, Mass Transit and Transportation System Management, widening to the west of existing SR 53 (Alternate West), widening to the east of existing SR 53 (Alternate East), a combination of widening to the east and west (best fit) and alternates on new location.

2.1. Preferred Alternate

The preferred alternate is shown on Figure 2.1. Correspondence from the Alabama Department of Transportation regarding the selection of the preferred alternate is included in Section 4.2.

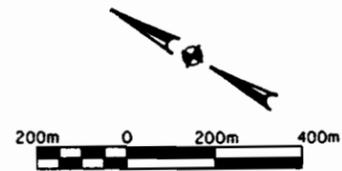
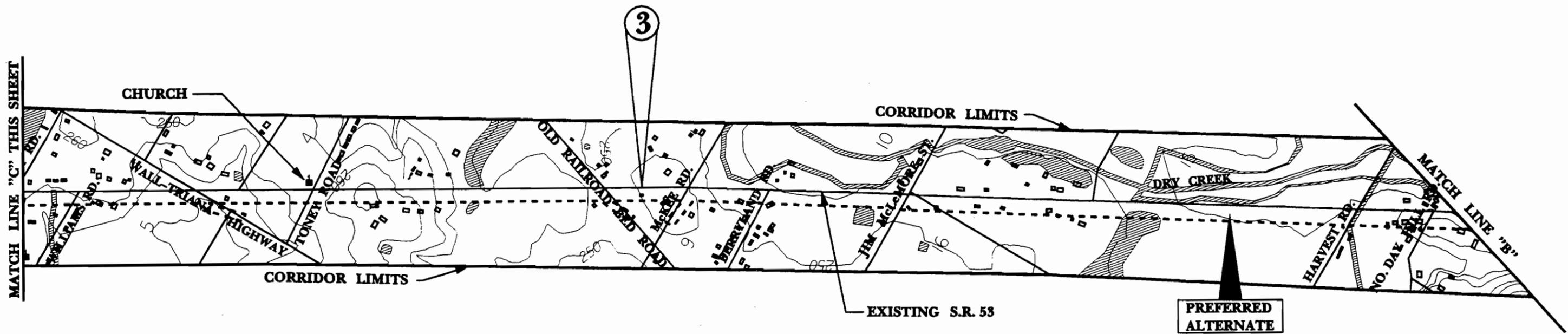
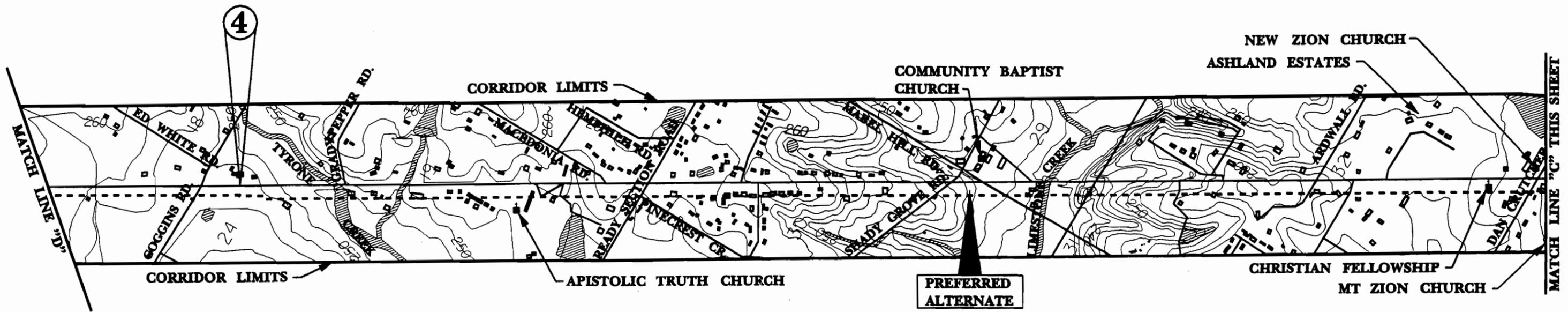
The preferred alternate is projected to carry 32,844 cars per day. Total cost of the preferred alternate is estimated at \$108.8 million. The project impacts 3.84 hectares (9.48 acres) of wetlands and acquires right-of-way from eight potential hazardous materials sites. The project will involve relocating 81 residences, 24 businesses, and two non-profit organizations. No active farms will be relocated. Eighty-five percent of the attendees at the public involvement meeting held August 28, 1997 were in favor of the project. The US Fish and Wildlife Service has concurred that the preferred alternate avoids impacts to protected species. The State Historic Preservation Officer has concurred that the preferred alternate avoids impacts to cultural resources determined eligible for the National Register of Historic Places and archaeological sites eligible for preservation in place. Concurrence letters are included in Section 4.2. Total environmental and engineering aspects of the preferred alternate are shown on Table 2.1.



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PREFERRED ALTERNATE

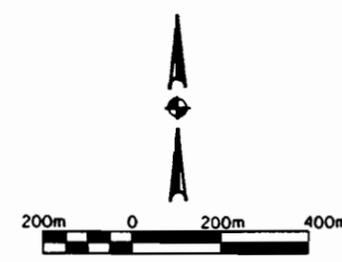
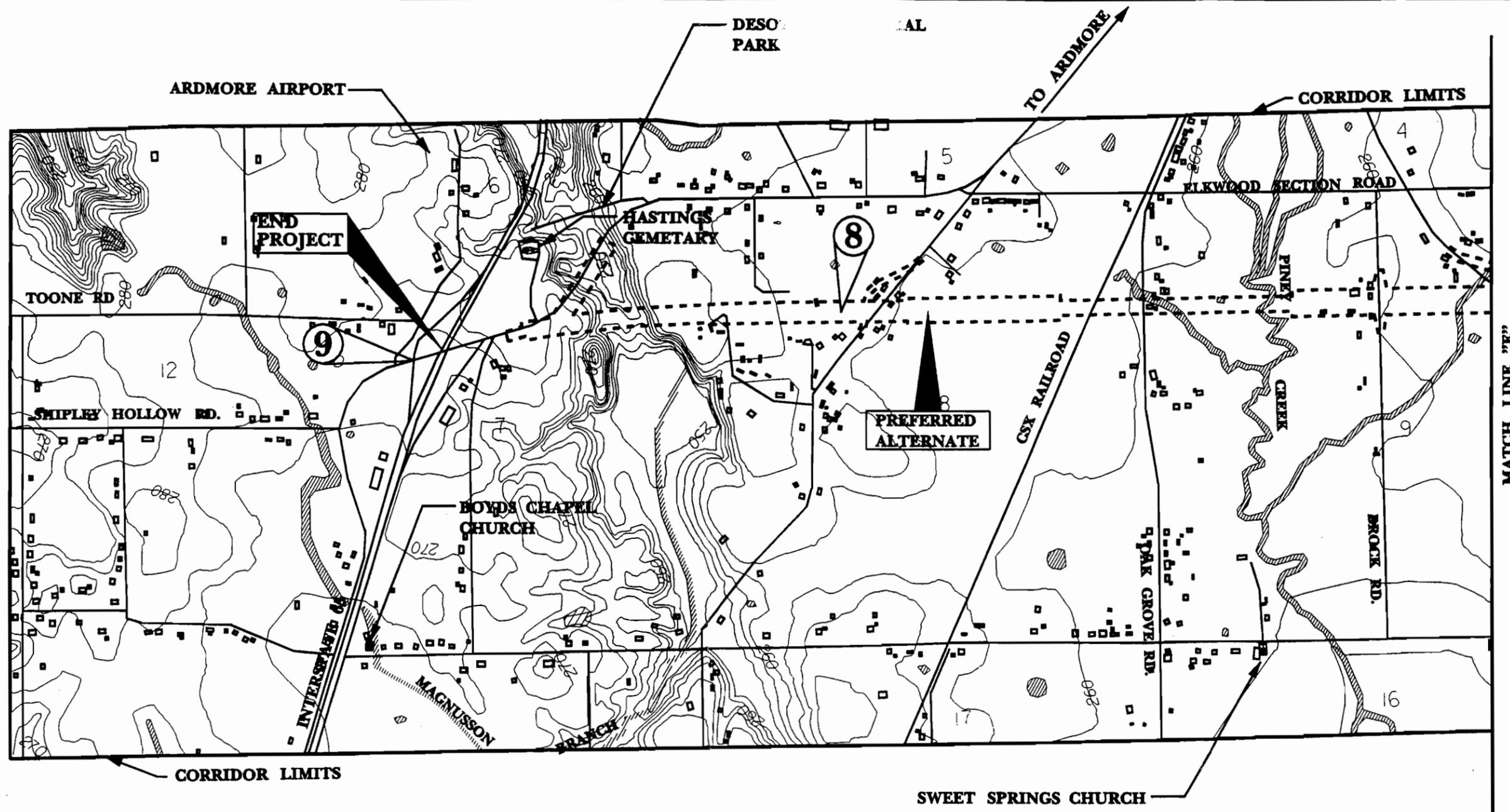
FIGURE 2.1



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

PREFERRED ALTERNATE

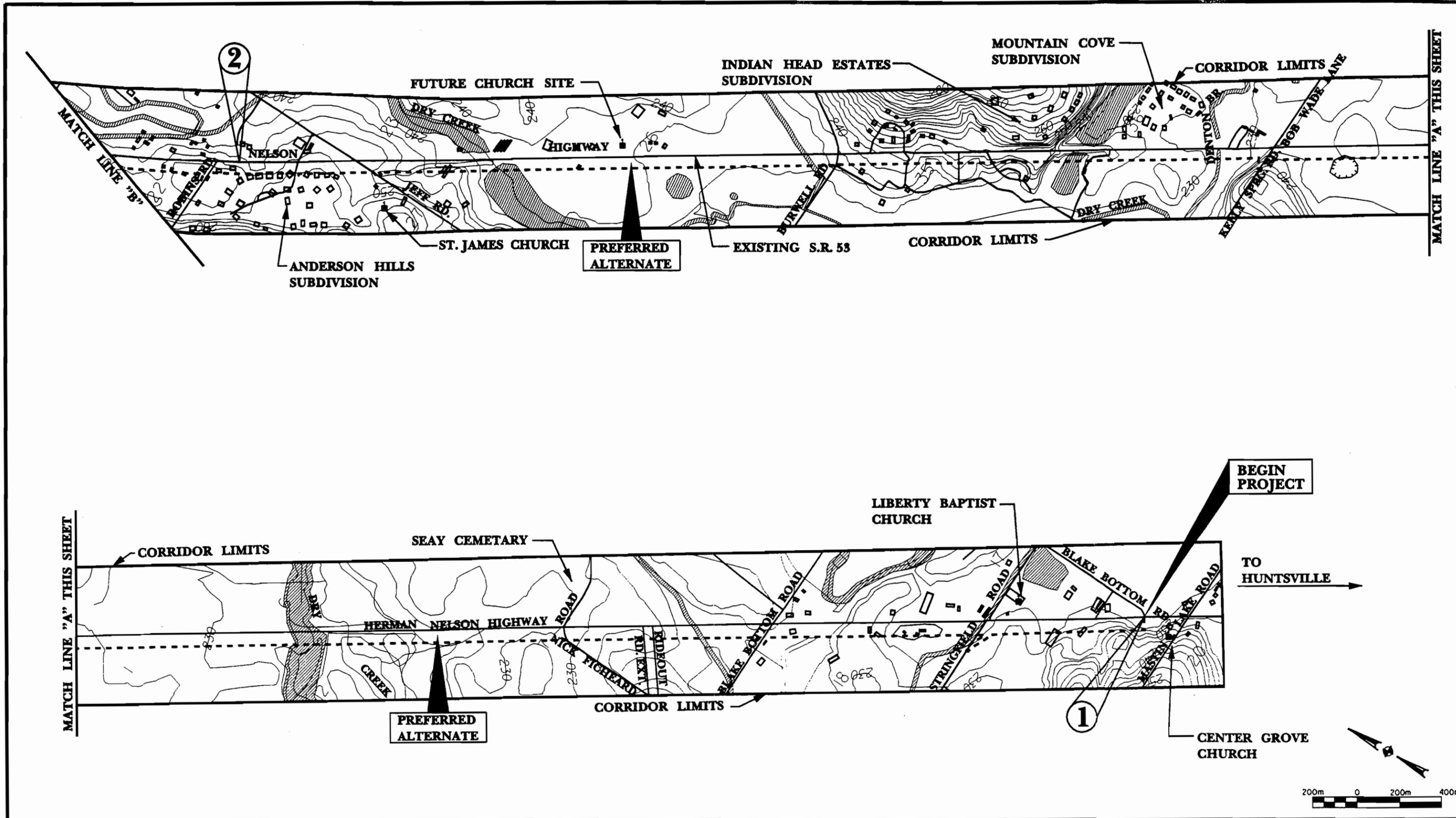
FIGURE 2.1



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

PREFERRED ALTERNATE

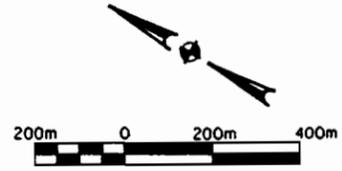
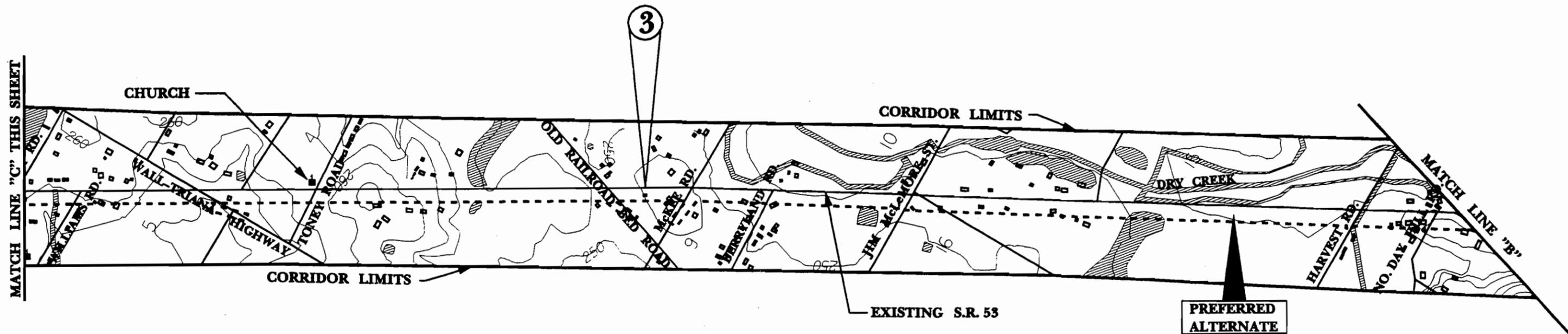
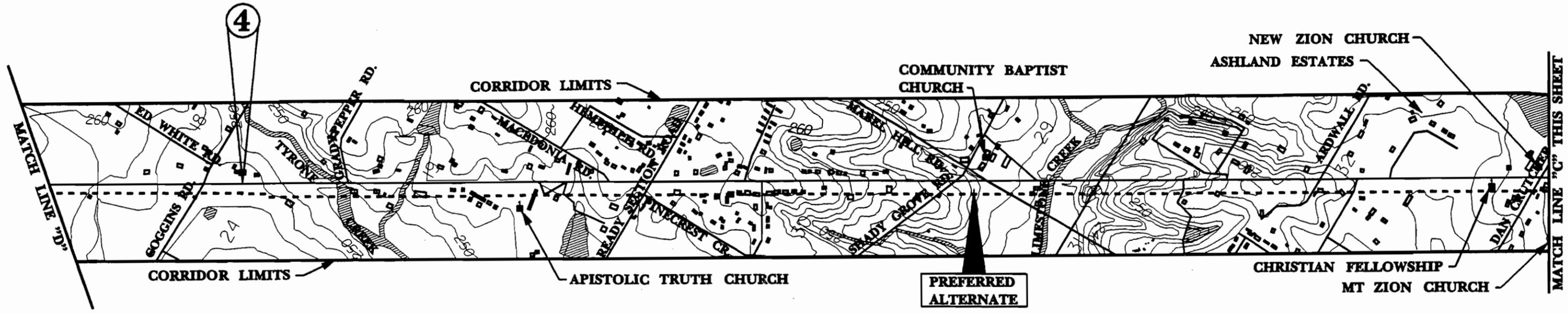
FIGURE 2.1



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

PREFERRED ALTERNATE

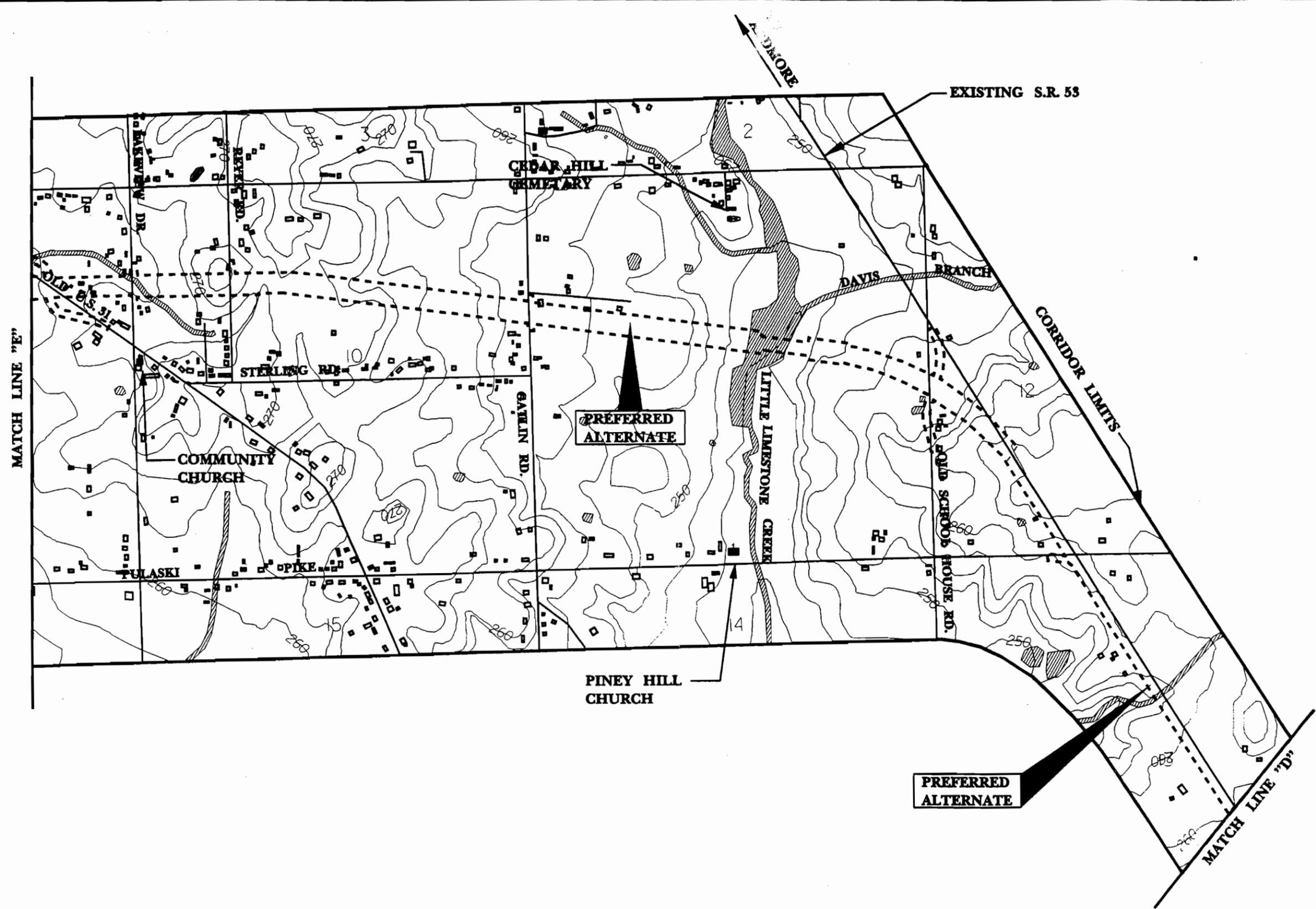
FIGURE 2.1



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
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PREFERRED ALTERNATE

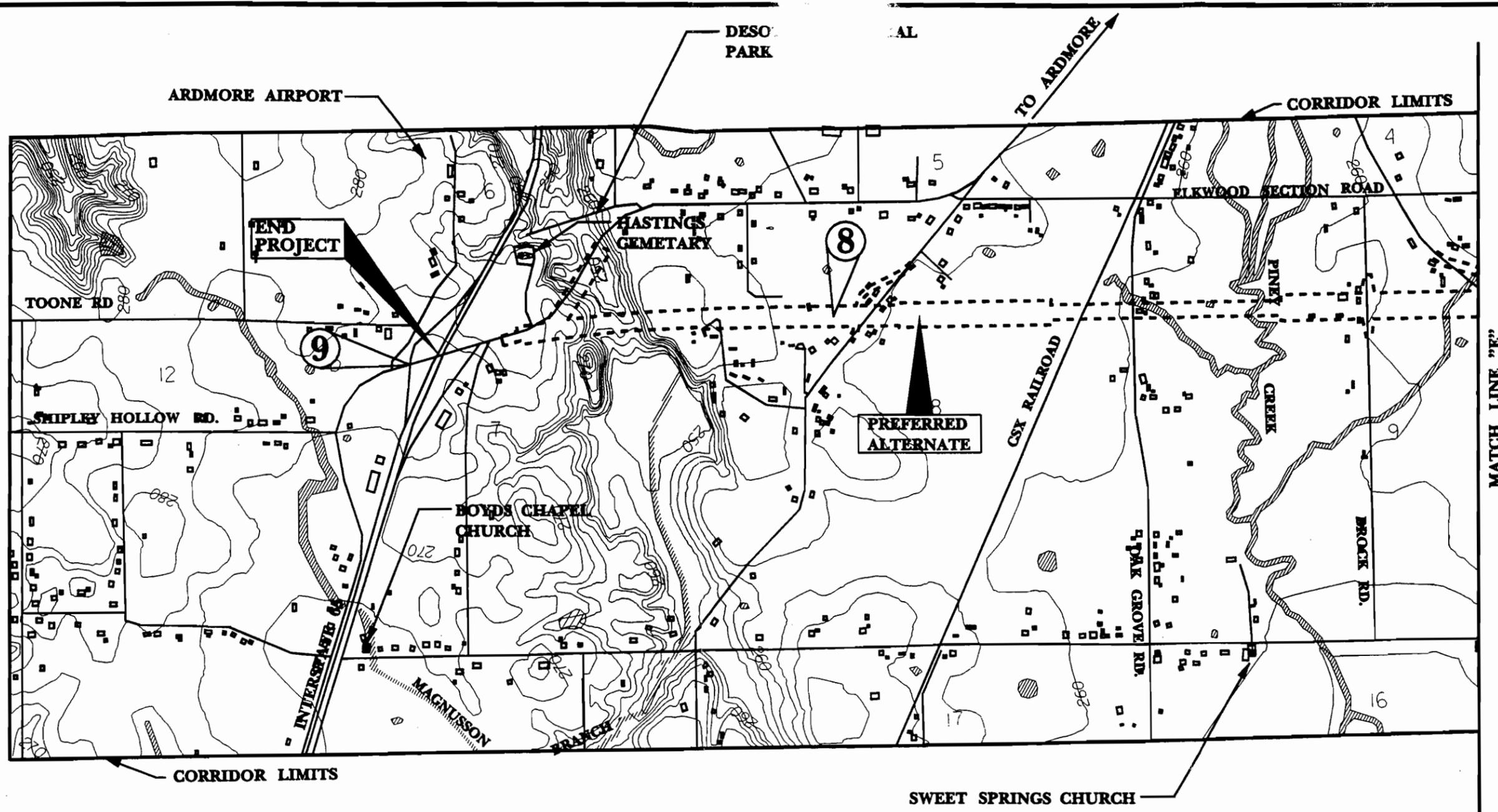
FIGURE 2.1



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

PREFERRED ALTERNATE

FIGURE 2.1



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

PREFERRED ALTERNATE

FIGURE 2.1

Table 2.1: Preferred Alternate

	Preferred Alternate
Roadway (kilometers)	31.8
Bridge (kilometers)	1.11
Total Length (kilometers)	32.9
Construction Cost (Thousands)	78011
Utility Cost (Thousands)	538
Right-of-Way (Thousands)	30333
Total Costs (Thousands)	108882
Wetlands (Hectares)	3.84
Potential Hazardous Materials Sites	8
NRHP* Eligible Structures	0
NRHP* Eligible Archaeological Sites	1
Residential Relocations	81
Business Relocations	24
NPO Relocations**	2
Farm Relocations	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

2.2. No-Action Alternative

The No-Action Alternative considers an alternative where future growth in the study area is projected for the existing transportation network without the proposed improvements to SR 53. This alternative involves advantages such as: no new environmental impacts, no displacement of residents or businesses in the study area, no construction impacts or costs, and no changes in land use. The disadvantage of the No-build Alternative is that it does not meet the purpose and need presented in Section 1.0. Traffic congestion in Ardmore would not be reduced. Traffic capacity along existing SR 53 would not be increased. Finally, commuter and regional travelers would not be provided with improved access to Huntsville and destinations along I-65 north of Huntsville. The No-Action Alternative will remain a reasonable alternative.

2.3. Postponing the Action

Postponing the action would increase social and economic impacts associated with the project. Subdivision development is occurring in the study area, and as shown in Figure 1.2, urban development is projected to continue. Postponing the project will allow the study area to develop further and could result in increased impacts to relocations and community resources. Postponing the action would also allow right-of-way, materials and construction costs to increase resulting in a more costly project when built. Postponing the action is not considered a reasonable alternative for this project.

2.4. Mass Transit and Transportation System Management

Portions of the Huntsville urbanized area are currently served by transit bus services. The route index, included in the Huntsville Area Transportation Study, indicates that there are no transit bus service routes in the SR 53 study area. Current travel patterns in the study area are a combination of commuter and cross regional patterns. These patterns are not conducive to transit bus service or fixed guideway transit service, which are typically prudent for trips between identified activity centers.

Transportation management strategies typically include such options as: fringe parking, ridesharing, high-occupancy vehicle (HOV) lanes and traffic signal timing optimization. It is unlikely that management strategies will affect the need for the project. Because a mix of commuter and cross regional travelers are already causing existing SR 53 to operate at or near capacity (Section 1.2) mass transit and transportation management strategies are not considered reasonable alternatives for this project.

2.5. Alternates in the Study Area

The study area was defined for alternates utilizing the existing SR 53 route from the four-lane portion of SR 53 in Madison County to alternates completing a southern bypass of Ardmore and connecting to the existing SR 53/I-65 interchange. As stated in Section 1, widening along SR 53 through Ardmore was not considered for this project due to design limitations and economic impacts associated with previous

alternates developed through the town. Existing SR 53 was recognized as a serviceable roadway within the study area. Alternates utilizing the centerline of SR 53 and widening to both the east and west were recognized as unreasonable early in the transportation planning process, as were alternates to construct a new location, four-lane, divided roadway to the east or west of existing SR 53.

Widening SR 53 to both sides of the existing centerline was determined unreasonable because it would create all the impacts associated with widening to either the east or the west. Wetland impacts would be incurred both upstream and downstream of existing crossings. Community resources would be impacted on both sides of the roadway. Construction costs would be increased as serviceable portions of SR 53 were destroyed and reconstructed in virtually the same location. Widening to the east and west of center on existing SR 53 is not considered a reasonable alternative for this project.

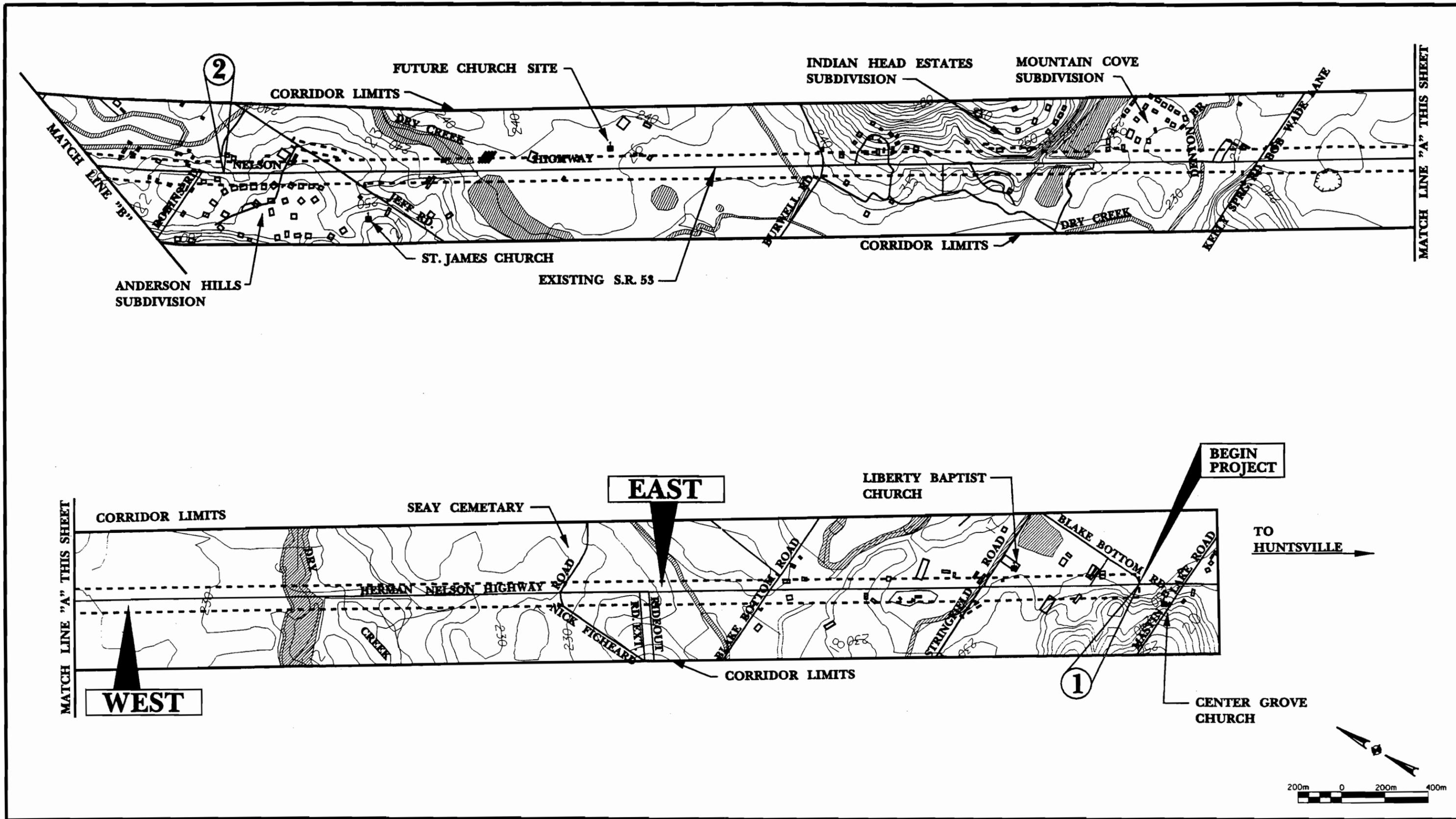
Constructing a divided four-lane on new location adjacent to existing SR 53 was determined unreasonable because SR 53 is an established transportation corridor through the study area. The SR 53 corridor has developed with commercial, retail and residential land use. Currently commercial and retail establishments along with community resources and individual residences are located along the roadway. This pattern of land use is projected to continue and is consistent with future land use plans developed by the Top of Alabama Regional Council of Governments. Alternates on new location would divide current development patterns between a newly constructed facility and the existing SR 53 corridor. This shift in development patterns is not consistent with land use plans established for the corridor. Constructing a divided four-lane on new location to the east or west of existing SR 53 is not considered a reasonable alternative for this project.

Upgrading SR 53 to a four-lane facility along existing SR 53 will be accomplished by providing a median and constructing a new two-lane roadway parallel to the existing two-lane roadway. Typical sections are included in Appendix A. The

project was evaluated for two new lanes to the east of existing SR 53 (East) and two new lanes to the west of existing SR 53 (West) from Node 1 to Node 5 in the study area. In addition to evaluating the project as widening to the east or west of existing SR 53, it was recognized that a combination of east and west alignments would need to be evaluated in order to provide an alignment that would have the opportunity to avoid or minimize impacts on both sides of the existing roadway. Nodes were established in order to provide cross over points between East and West Alignments. Alignments and nodes are displayed on Figure 2.5.

Although the alignment of existing SR 53 appears to be a straight line trending in a northwest direction, there are three locations of horizontal curvature on SR 53 in the study area. These locations offer the opportunity to transition from construction on the east to construction on the west or vice versa. These transition locations are labeled Node 2, Node 3, and Node 4. Node 1 represents the beginning of the project. Nodes 5 and 6 represent points where the project transitions from widening along existing SR 53 to a four-lane divided roadway on new location that bypasses Ardmore.

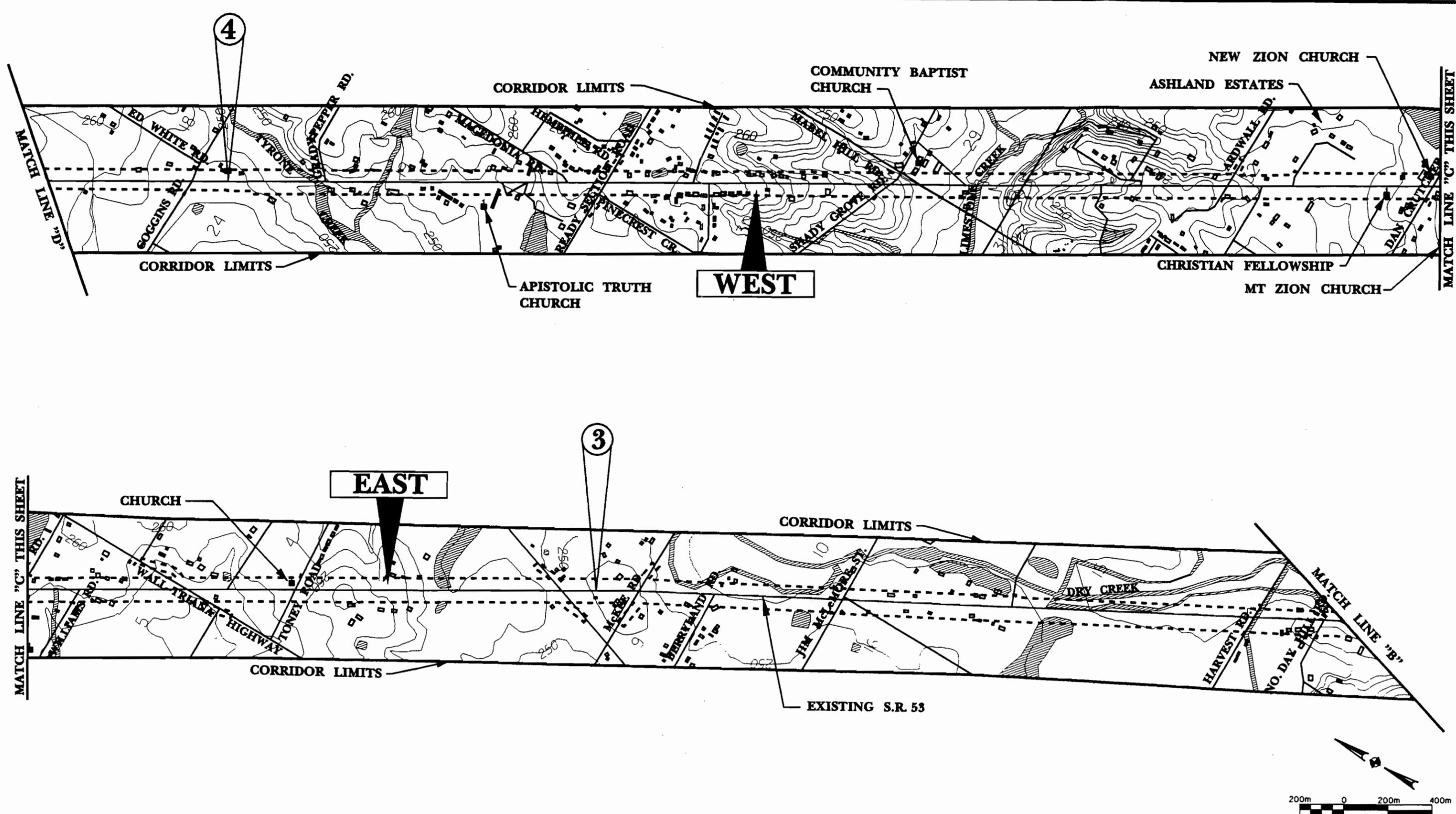
Alignments for the Ardmore bypass were developed based on environmental and physical characteristics of the study area. The primary environmental features in this portion of the study area are communities at Cedar Hill and existing residential housing in the vicinity of local roads such as Lakeview Drive and Old US 31 (Figure 2.5). Minimization of impacts to wetland areas associated with Little Limestone Creek and Piney Creek was also a concern. Physical characteristics of the study area involved crossing the CSX Railroad tracks, avoiding sinkholes, and reconnecting with the existing SR 53/I-65 interchange. Alignments for the Ardmore bypass extend from Nodes 5 to 9 and are labeled North and South and are displayed on Figure 2.5.



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ALTERNATES

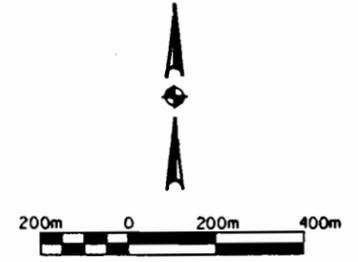
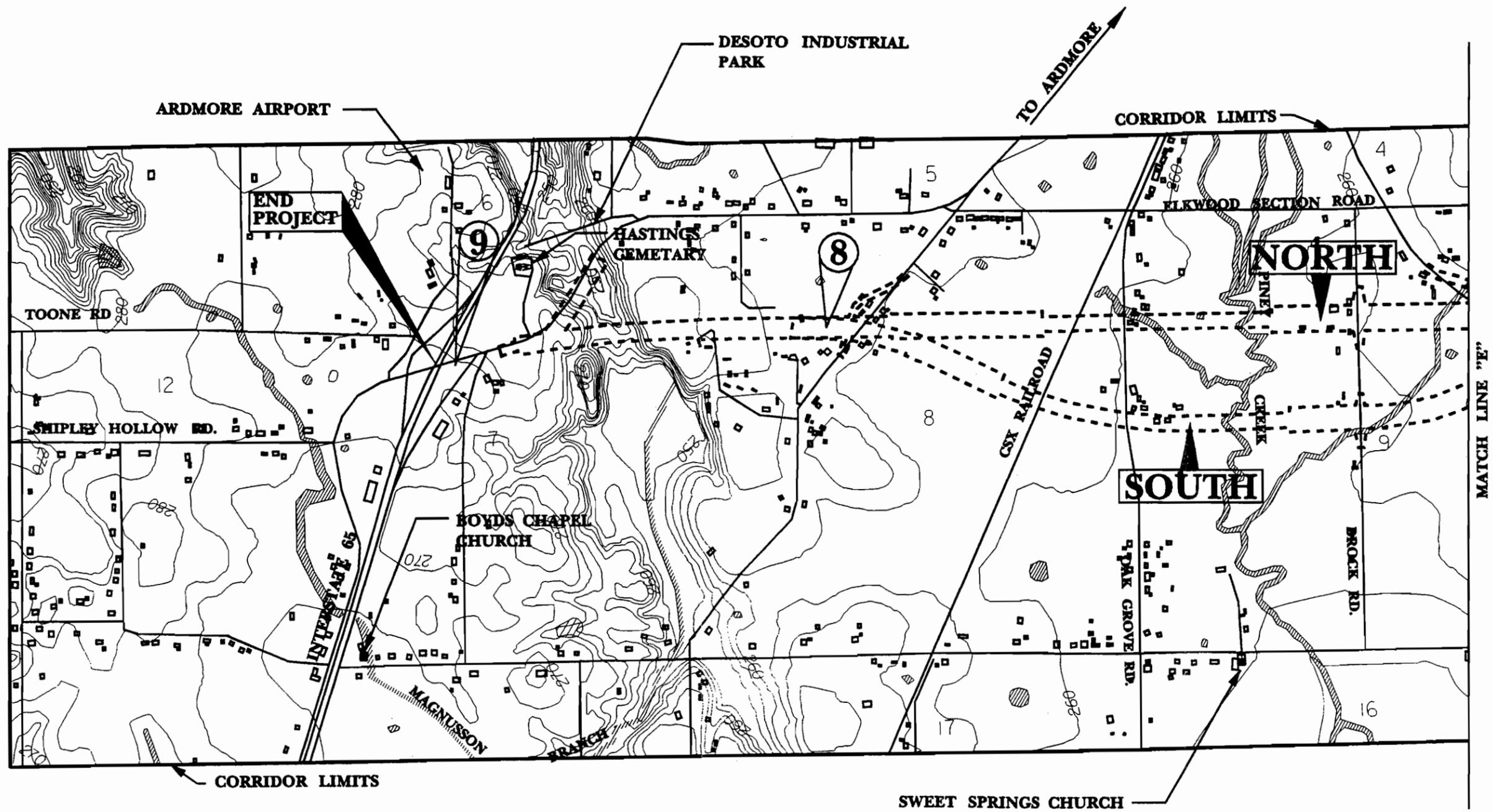
FIGURE 2.5



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 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

ALTERNATES

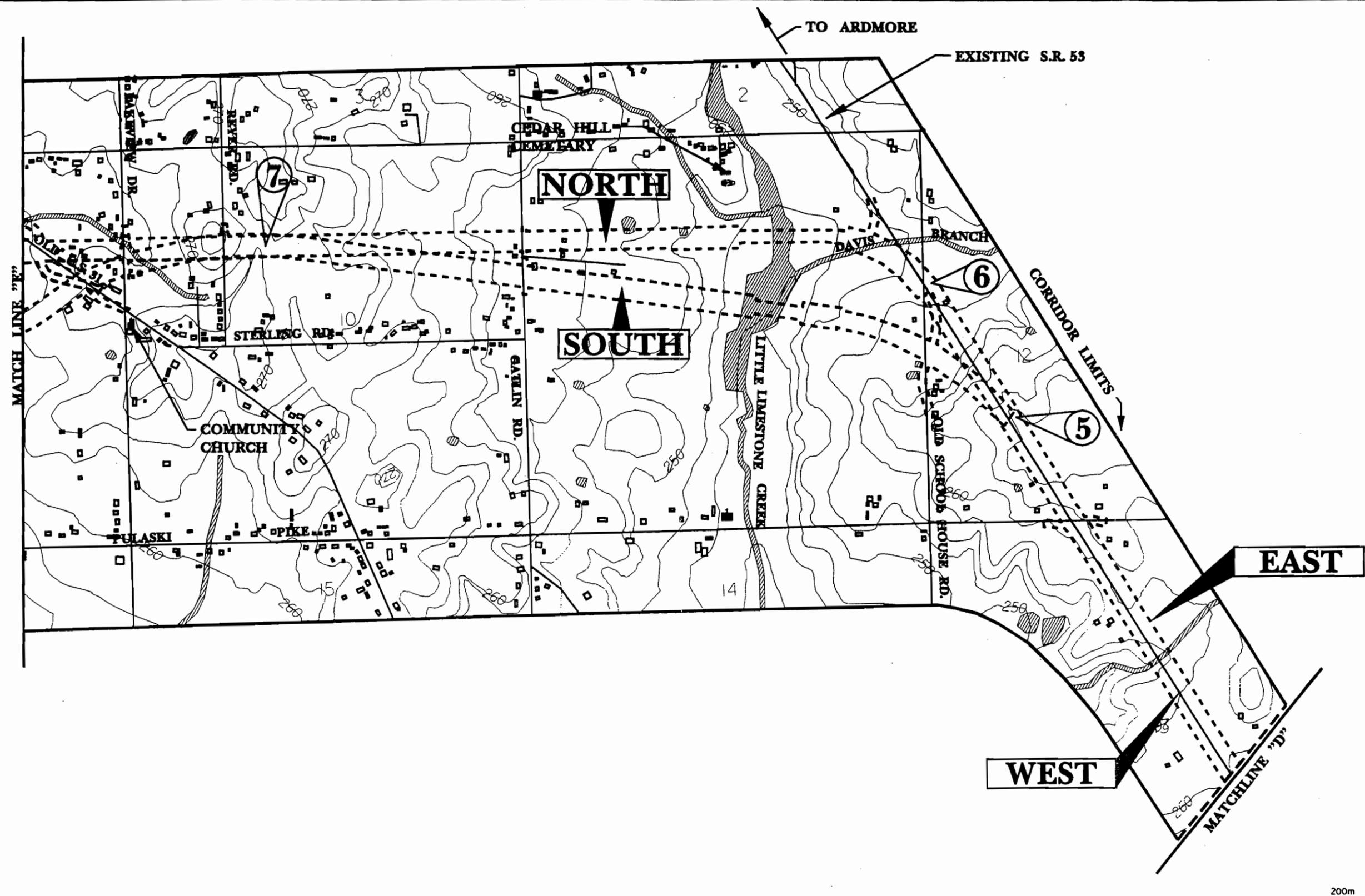
FIGURE 2.5



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

ALTERNATES

FIGURE 2.5



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

ALTERNATES

FIGURE 2.5

2.5.1. Node 1 - 2

The first segment of the project begins at Node 1 and extends northwest for 10.5 kilometers (6.5 miles) to Node 2 (Figure 2.5). Widening to the east or west will include intersection improvements at Dan Tribbs Road, Stringfield Road, Blake Bottom Road, Kelly Springs Road, Bob Wade Lane, Burwell Road, and Jeff Road. Intersection improvements at these tie-in roads will include re-aligning the tie-in roads on each side of SR 53 so that they intersect SR 53 mainline at right angles and that the intersections are in compliance with current design criteria. Jeff Road is currently a signalized intersection. Signalized intersections at other locations will be evaluated on an individual basis after the project is constructed and increased traffic on the facility warrants signalized intersections. Future traffic projections do show a potential need for signalization at a majority of the intersections.

Table 2.5.1 compares environmental and engineering aspects of the east and west alignments between Nodes 1 and 2.

Table 2.5.1: Node 1 - 2

Node 1 - 2	West***	East
Roadway (kilometers)	10.57	10.58
Bridge (kilometers)	0	0
Total Length (kilometers)	10.57	10.58
Construction Cost (Thousands)	17940	18318
Utility Cost (Thousands)	284	1395
Right-of-Way (Thousands)	17467	22044
Total Costs (Thousands)	35691	41757
Wetlands (Hectares)	2.19	1.55
Potential Hazardous Materials Sites	5	9
NRHP* Eligible Structures	0	0
NRHP* Eligible Archeological Sites	1	0
Residential Relocations	15	17
Business Relocations	12	16
NPO Relocations**	1	0
Farm Relocations	0	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

*** *Selected as a segment of the Preferred Alternate*

The west alignment has been selected as a segment of the preferred alternate between Nodes 1 and 2. The west alignment involves less total cost (approximately \$6 million less), fewer impacts to potential hazardous materials sites and fewer residential relocations than the east alignment through Nodes 1 and 2. The west alignment may affect archaeological site 1Ma672. The State Historic Preservation Officer has concurred that site 1Ma672 is not eligible for preservation in place. Site 1Ma672 is discussed in section 3.17.3 of this document.

2.5.2. Node 2 – 3

From Node 2, the next segment of the project extends northwest for 3.9 kilometers (2.4 miles) along existing SR 53 to Node 3 (Figure 2.5).

Widening to the east or west will include intersection improvements at

Robins Road, Harvest Road, McLemore Road, Berryland Road, and McKee Road.

Table 2.5.2 compares environmental and engineering aspects of the east and west alignments between Nodes 2 and 3.

Table 2.5.2: Node 2 - 3

Node 2 - 3	West***	East
Roadway (kilometers)	3.92	3.92
Bridge (kilometers)	0	0
Total Length (kilometers)	3.92	3.92
Construction Cost (Thousands)	6682	6492
Utility Cost (Thousands)	17	370
Right-of-Way (Thousands)	3665	3172
Total Costs (Thousands)	10364	10034
Wetlands (Hectares)	0.13	3.15
Potential Hazardous Materials Sites	2	0
NRHP* Eligible Structures	0	0
NRHP* Eligible Archeological Sites	0	0
Residential Relocations	16	20
Business Relocations	4	1
NPO Relocations**	0	0
Farm Relocations	0	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

*** *Selected as a segment of the Preferred Alternate*

The west alignment has been selected as a segment of the preferred alternate between Nodes 2 and 3. The west alignment involves 0.13 hectares (0.3 acres) of wetland impacts. The east alignment would impact 3.15 hectares (7.8 acres) of wetlands in the same segment. The west alignment minimizes wetland impacts between Nodes 2 and 3.

It is recognized that the total cost of the west alignment is \$330,000 more than the east alignment through this segment. However, the cost

associated with transitioning from the west alignment to the east alignment at Node 2 is \$500,000. This transition would eliminate the cost savings between Nodes 2 and 3. In addition, the west alignment has been selected as a segment of the preferred alternate between Nodes 3 and 4. Transitioning back to the west at Node 3 would cost an additional \$500,000.

2.5.3. Node 3 – 4

The project continues in a northwesterly direction for a distance of 8.18 kilometers (5 miles) between Nodes 3 and 4. Widening to the east or west will include intersection improvements at Old Railroad Bed Road, Toney Road, Wall-Triana Highway, Dan Crutcher Road, Ardwall Road, Shady Grove Road, Ready Section Road, and Grady Pepper Road.

Table 2.5.3 compares environmental and engineering aspects of the east and west alignments between Nodes 3 and 4.

Table 2.5.3: Node 3 - 4

Node 3 - 4	West***	East
Roadway (kilometers)	8.18	8.18
Bridge (kilometers)	0.061	0.061
Total Length (kilometers)	8.24	8.24
Construction Cost (Thousands)	14376	14064
Utility Cost (Thousands)	75	242
Right-of-Way (Thousands)	5619	7121
Total Costs (Thousands)	20070	21427
Wetlands (Hectares)	0.26	0.49
Potential Hazardous Materials Sites	1	3
NRHP* Eligible Structures	0	0
NRHP* Eligible Archeological Sites	0	1
Residential Relocations	39	47
Business Relocations	8	14
NPO Relocations**	1	3
Farm Relocations	0	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

*** *Selected as a segment of the Preferred Alternate*

The west alignment has been selected as a segment of the preferred alternate between Nodes 3 and 4. The west alignment avoids impacts to archaeological site 1 Ma678 (Figure 3.13). The west alignment would also require fewer residential and business relocations and have lower right-of-way and utility relocation costs.

2.5.4. Node 4 – 5

Node 4 is located at the Madison-Limestone County line. The project extends northwest for 2.53 kilometers (1.6 miles) along SR 53 between Nodes 4 and 5 (Figure 2.5). Widening to the east or west will include intersection improvements at Coggins Road, Ed White Road, and Pulaski Pike.

Table 2.5.4 compares environmental and engineering aspects of the east and west alignments between Nodes 4 and 5.

Table 2.5.4: Node 4 - 5

Node 4 - 5	West***	East
Roadway (kilometers)	2.53	2.52
Bridge (kilometers)	0	0
Total Length (kilometers)	2.53	2.52
Construction Cost (Thousands)	4330	4416
Utility Cost (Thousands)	60	270
Right-of-Way (Thousands)	50	503
Total Costs (Thousands)	4440	5189
Wetlands (Hectares)	0.06	0.06
Potential Hazardous Materials Sites	0	0
NRHP* Eligible Structures	0	0
NRHP* Eligible Archeological Sites	0	0
Residential Relocations	0	3
Business Relocations	0	0
NPO Relocations**	0	0
Farm Relocations	0	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

*** *Selected as a segment of the Preferred Alternate*

North of the Madison/Limestone County line there is an existing 36.6-meter (120 feet) right-of-way reserved on the west side of existing SR 53. The west alignment between Nodes 4 and 5 has been selected as a segment of the preferred alternate. Although the west alignment includes less cost for right-of-way acquisition than the east alignment between Nodes 4 and 5, existing right-of-way did not influence alternative selection. The west alignment minimizes residential relocations, construction costs and utility relocation costs between Nodes 4 and 5.

2.5.5. Node 5 – 7

The proposed project departs from existing SR 53 and turns west as a divided four-lane roadway on new location between Nodes 5 and 7 (Figure 2.5). This portion of the project represents the beginning of the southern bypass of Ardmore. Alternatives are labeled north and south through this segment of the project. The south segment turns west at Node 5 and extends 3.24 kilometers (2.01 miles) to Node 7. The north segment extends northwest along SR 53 to Node 6, turning west at Node 6 and connecting to Node 7, a total distance of 3.46 kilometers (2.15 miles). The north or south alignment will include constructing new intersections at existing SR 53 and Gatlin Road.

Environmental and engineering aspects of the north and south alignments between Nodes 5 and 7 are shown on Table 2.5.5.

Table 2.5.5: Node 5 - 7

Node 5 - 7	South***	North
Node Path	5-7	5-6-7
Roadway (kilometers)	3.04	3.01
Bridge (kilometers)	0.2	0.45
Total Length (kilometers)	3.24	3.46
Construction Cost (Thousands)	11087	14614
Utility Cost (Thousands)	50	100
Right-of-Way (Thousands)	1117	1143
Total Costs (Thousands)	12254	15857
Wetlands (Hectares)	0.14	0.27
Potential Hazardous Materials Sites	0	1
NRHP* Eligible Structures	0	1
NRHP* Eligible Archeological Sites	0	0
Residential Relocations	2	7
Business Relocations	0	0
NPO Relocations**	0	0
Farm Relocations	0	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

*** *Selected as a segment of the Preferred Alternate*

The south alignment has been selected as a segment of the preferred alternate between Nodes 5 and 7. The south alignment is shorter in length, lower in total cost (23%), minimizes impacts to wetlands and minimizes residential relocations as compared to the north alignments through Nodes 5 and 7. The south alignment also avoids impacts to potential hazardous materials sites and NRHP eligible structures.

2.5.6. Node 7 – 8

North and south segments extend westward on new location for approximately 2.6 kilometers (1.6 miles) between Nodes 7 and 8 to continue the Ardmore bypass (Figure 2.5). The north or south alignment will include constructing new intersections at Lakeview Drive, Old US 31, Brock Road, and Mooresville Road. Either alignment will overpass the CSX Railroad tracks. Environmental and engineering aspects of the north and south alignments between Nodes 7 and 8 are shown on Table 2.5.6.

Table 2.5.6: Node 7 - 8

Node 7 - 8	South	North***
Roadway (kilometers)	2.59	2.65
Bridge (kilometers)	1.05	0.85
Total Length (kilometers)	3.64	3.50
Construction Cost (Thousands)	22803	20595
Utility Cost (Thousands)	27	25
Right-of-Way (Thousands)	2005	1934
Total Costs (Thousands)	24835	22554
Wetlands (Hectares)	0.43	1.19
Potential Hazardous Materials Sites	0	0
NRHP* Eligible Structures	0	0
NRHP* Eligible Archeological Sites	0	0
Residential Relocations	7	9
Business Relocations	1	0
NPO Relocations**	0	0
Farm Relocations	0	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

*** *Selected as a segment of the Preferred Alternate*

The north alignment has been selected as a segment of the preferred alternate between Nodes 7 and 8. The north alignment represents a savings of \$2.3 million as compared to the south alignment between Nodes 7 and 8.

2.5.7. Node 8 – 9

There is one 0.974 kilometers (0.6 miles) alignment completing the project from Node 8 to its western terminus at the existing SR 53/I-65 interchange (Figure 2.5). This alignment has been selected as a segment of the preferred alternate. North and south alignments were not continued through this segment of the project due to geotechnical concerns associated with two large sinkholes located to the east of the existing SR 53/I-65 interchange. Geotechnical testing is discussed in Section 3.3 of this document. The project will involve re-aligning existing SR 53 and constructing a new intersection to tie existing SR 53 into the new location section. The project transitions from a four-lane divided roadway to two lanes at the I-65 interchange. The SR 53/I-65 interchange will accommodate projected 2017 traffic associated with this project. Therefore, no modifications to the existing SR 53/I-65 interchange are proposed. Environmental and engineering aspects of the project between Nodes 8 and 9 are presented in Table 2.5.7.

Table 2.5.7: Node 8 - 9

Node 8 - 9	
Roadway (kilometers)	0.974
Bridge (kilometers)	0
Total Length (kilometers)	0.974
Construction Cost (Thousands)	3001
Utility Cost (Thousands)	27
Right-of-Way (Thousands)	481
Total Costs (Thousands)	3509
Wetlands (hectares)	0
Potential Contamination Sites	0
NRHP* Eligible Structures	0
NRHP* Eligible Archaeological Sites	0
Residential Relocations	0
Business Relocations	0
NPO** Relocations	0
Farm Relocations	0

* *NRHP – National Register of Historic Places*

** *Non-Profit Organizations*

3. IMPACTS

3.1. Land Use

The study area encompasses portions of Madison and Limestone Counties. Land use in the study area is a mixture of suburban, rural residential, commercial, and agricultural areas.

As stated in Section 1.0 and illustrated on Figure 1.2, the current land uses trend in the study area are projected to continue in the future. The Top of Alabama Regional Council of Governments (TARCOG) predicts that the SR 53 corridor will encompass primarily low density urban developments as Huntsville and Ardmore expand into the study area. Subdivision development and rural residential development are projected to replace agricultural land uses as urbanization occurs.

3.1.1. No-Action Alternative

The No-Action Alternative would impact the study area by not providing improved traffic capacity along existing SR 53 and around Ardmore's business district.

3.1.2. Preferred Alternate

The preferred alternative would convert 214 hectares (529 acres) of land from residential, commercial, and agricultural uses to roadway use. The preferred alternate would provide improved traffic capacity along existing SR 53 and areas around Ardmore. The preferred alternate is consistent with land use plans developed by TARCOG.

The preferred alternate will improve commuter access between the study area and destinations in Huntsville and Ardmore. This action is likely to support and promote residential development in the study area. In turn, existing highway-oriented commercial development along SR 53 will be

complemented by new commercial land uses.

3.2. Farmland

During the transportation planning process, the United States Department of Agriculture's Natural Resource Conservation Service conducted a Farmland Conversion Impact Rating (Form AD1006) for the SR 53 project. Land evaluation data indicates that there are 184 hectares (455 acres) of prime and unique farmland in the study area. Form AD1006 is included in Appendix B. Prime and unique farmland was defined in accordance with Appendix A of Departmental Regulation No. DP-9500-3.

3.2.1. No-Action Alternative

No prime or unique farmland will be directly converted to transportation use in the study area.

3.2.2. Preferred Alternate

The preferred alternate will convert 131 hectares (325 acres) of prime and unique farmland to an improved transportation corridor. The preferred alternate received a total score of 99 on Form AD1006 (Appendix B). The Farmland Protection Policy Act (FPPA) Guidelines 658.4 (c) (2) states that "sites receiving a total score of less than 160 (on Form AD 1006) be given a minimal level of consideration for protection and no additional sites be evaluated." The preferred alternate is in compliance with 7 CFR Part 658.4 (c) (4) of the FPPA.

3.3. Geology

Geology is relevant to the SR 53 project because all alternates cross between two sinkholes located to the east of the existing SR 53/I-65 interchange. Sinkhole formation is common in both Madison and Limestone Counties.

The study area is located in the Highland Rim Physiographic Province. Fort Payne Chert and Tuscumbia Limestone underlie the study area. The study area is

primarily Fort Payne Chert. This formation consists of limestone and shale. The formation typically weathers to flint and chert. Caves and sinkholes are known to occur in areas underlain with Fort Payne Chert.

Due to the presence of sinkholes, structural support for the proposed project was investigated. A field reconnaissance of the area was made by geologists from the Materials and Test Bureau of the Alabama Department of Transportation. Drilling was conducted, and no caves or additional karst features were indicated. Geotechnical coordination is included in Appendix C.

Based on the report prepared by the Alabama Department of Transportation geologists, the possibility of a cave located in the vicinity of the existing SR 53/I-65 interchange exists. However, if a cave is present, it begins deep enough and has enough material above it that the addition of the proposed project will not be "significant." In addition, the sinkholes on either side of the area appear "old" and "stable." No evidence of recent movement was noted in the geotechnical investigation.

3.3.1. No-Action Alternative

No new adverse geologic impacts will occur.

3.3.2. Preferred Alternate

The preferred alternate will not adversely impact geologic formations in the study area. The preferred alternate is not anticipated to require special design considerations related to sinkholes in the vicinity of the existing SR 53/I-65 interchange.

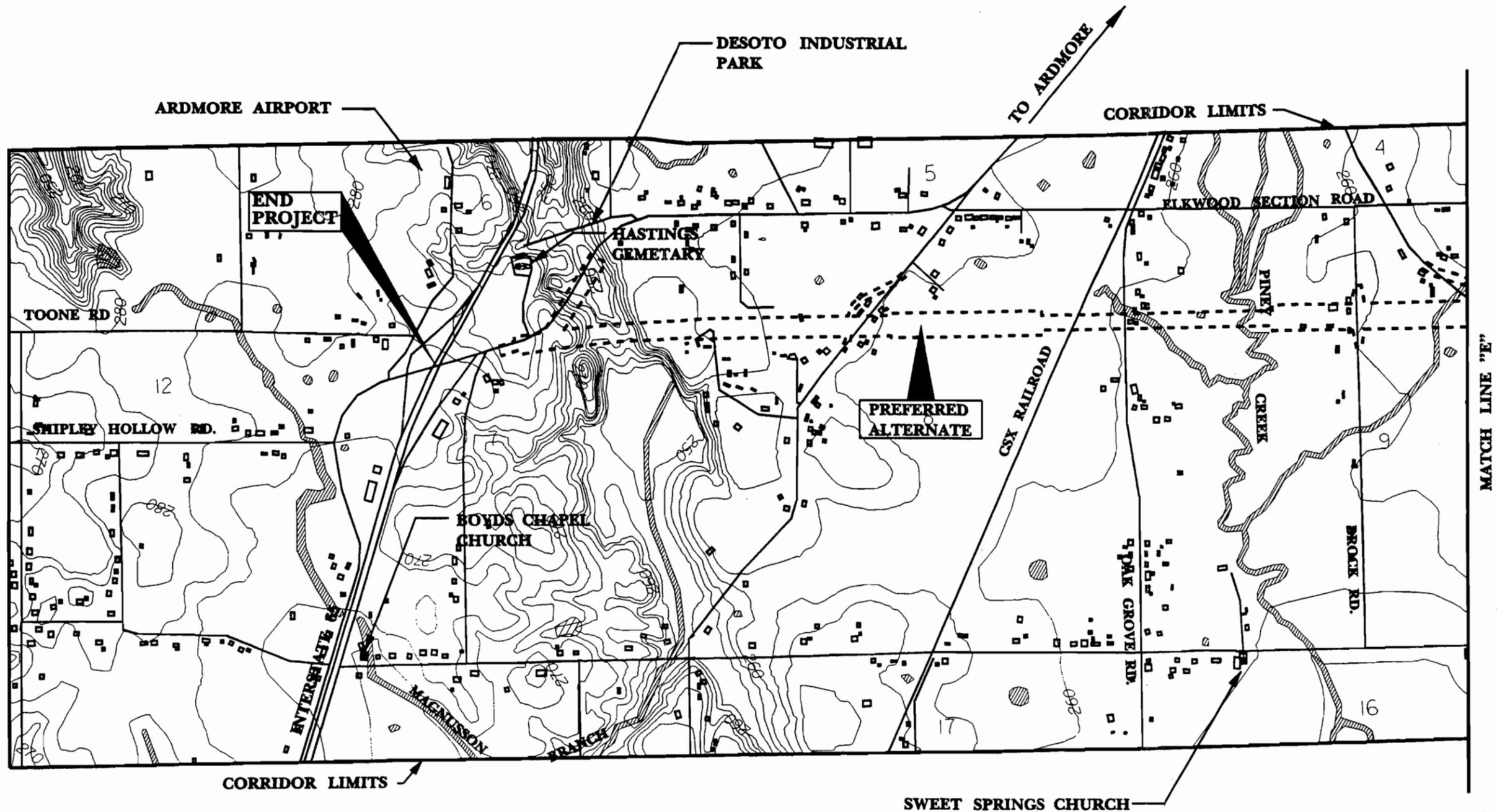
3.4. Social

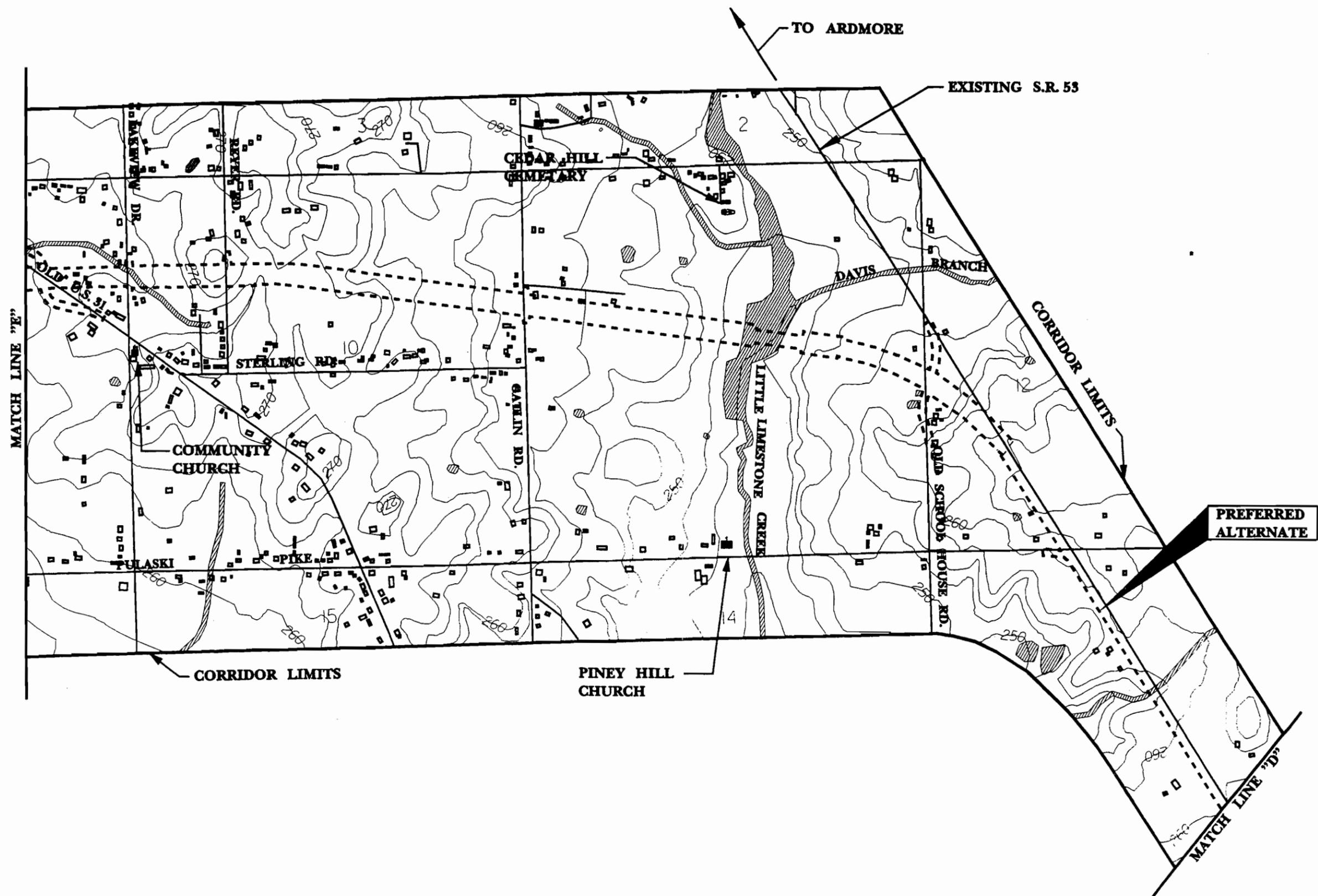
The study area spans Madison and Limestone Counties. Information from the 1990 Census, US Department of Commerce, Alabama Department of Economic and Community Affairs, and the University of Alabama Center for Business and Economic Research was combined to provide the following social and economic descriptions of each county. In reference to the following descriptions, the 1989 per capita income for the state of Alabama was \$11,500 and 14.3 percent of all Alabama families reported incomes below the 1989 poverty level.

Madison County is Alabama's third largest county with a 1990 population of 239,000. The major metropolitan area, Huntsville, is a rapidly growing city with a 1990 population of 160,000. The county population distribution is 78.1 percent urban and 21.9 percent rural. Madison County is 77 percent Caucasian and 23 percent minority. Employment is 60 percent non-retail and 40 percent retail. The per capita income for Madison County in 1989 was \$15,000.

Limestone County is inhabited by 54,100 residents. Much of Limestone County is developing into a bedroom community for the cities of Huntsville and Madison in bordering Madison County. The majority (68.7 percent) of residents live in urban areas and 31.3 percent in rural areas. According to the 1990 Census, Limestone County is 86 percent Caucasian and 14 percent minority. The work force in Limestone County is 88 percent non-retail and 12 percent retail. The per capita income for Limestone County in 1989 was \$11,700.

Since SR 53 is an established transportation corridor, community resources such as subdivisions, churches and retail commercial establishments have developed along SR 53. Community resources are shown on Figure 3.4. There are no schools, fire departments, or hospitals in the study area. Travel patterns in the study area are centered along existing SR 53 with commuter destinations primarily between Huntsville and Ardmore. Cross regional traffic typically

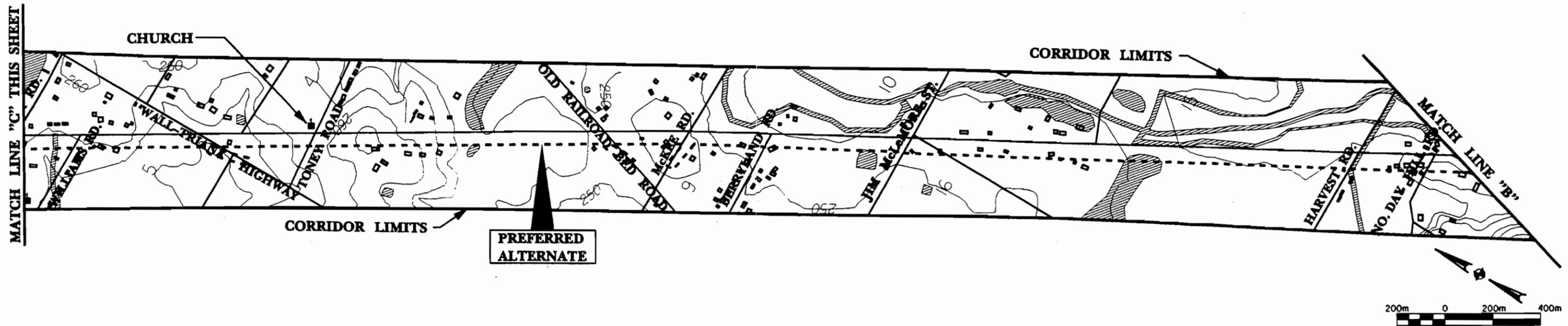
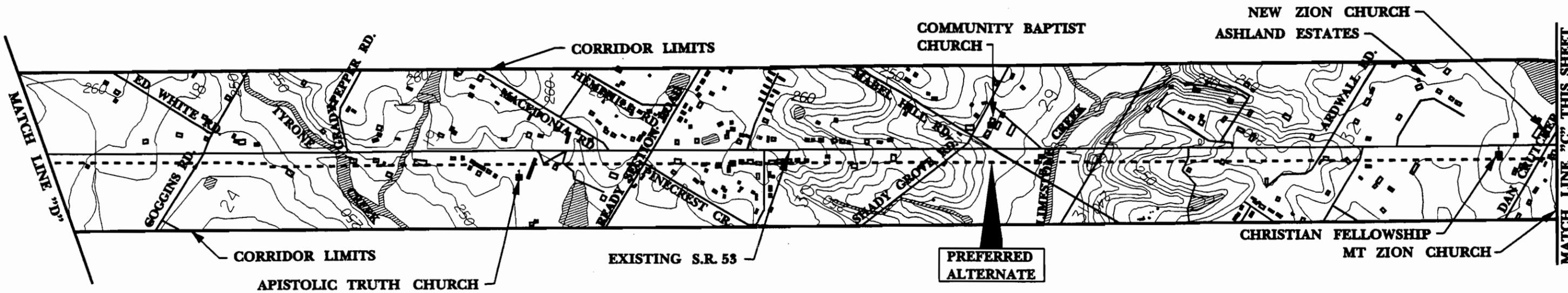




PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

COMMUNITY RESOURCES

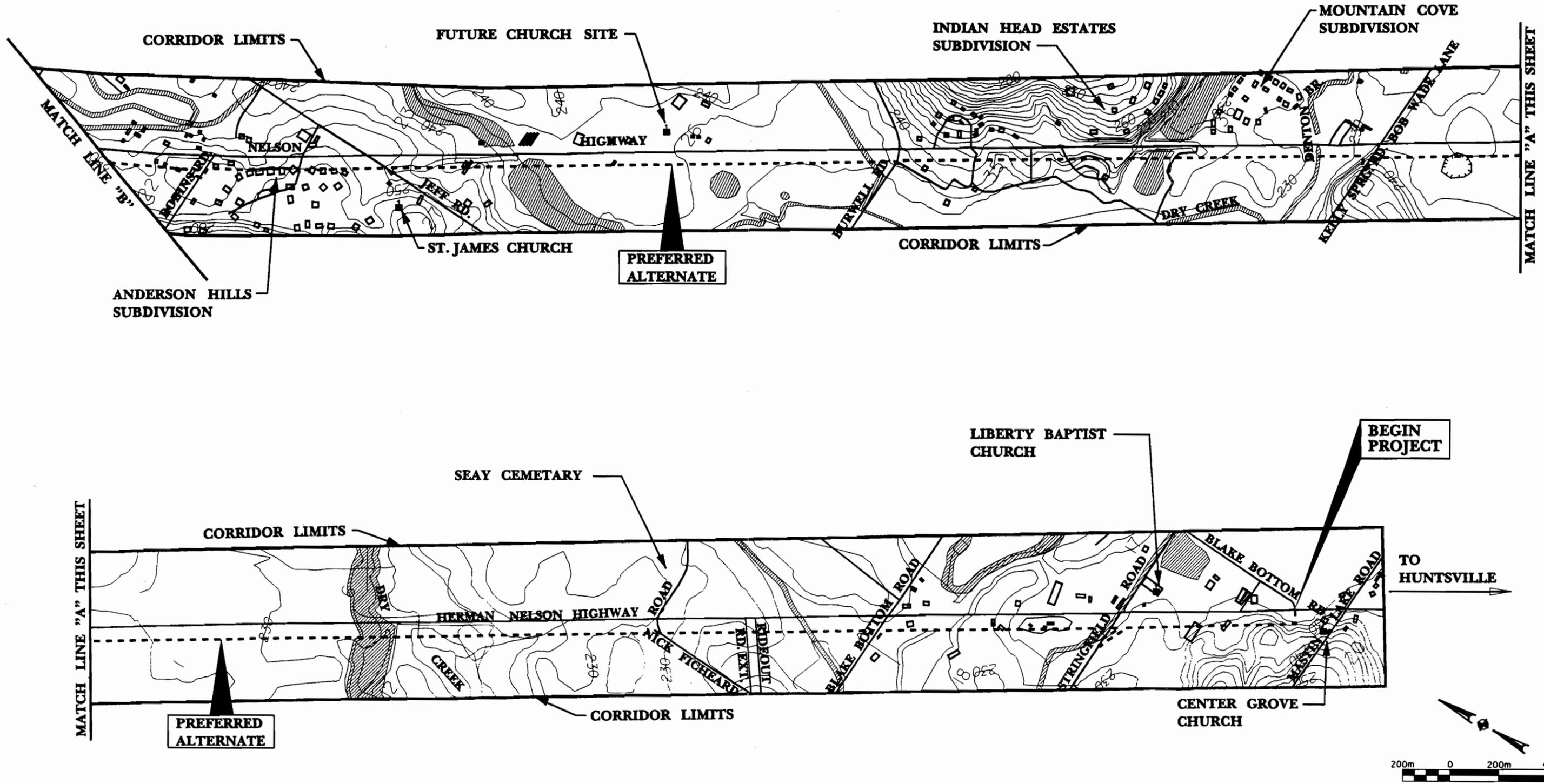
FIGURE 3.4



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

COMMUNITY RESOURCES

FIGURE 3.4



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

COMMUNITY RESOURCES

FIGURE 3.4

utilizes SR 53 to access destinations in Huntsville and areas north of Ardmore along I-65.

3.4.1. No-Action Alternative

The No-Action Alternative will not create any new impacts on community cohesion in the study area.

3.4.2. Preferred Alternate

The preferred alternate will increase access to community resources and decrease traffic congestion in the study area. The bypass of Ardmore is likely to separate through traffic from local traffic, which will improve accessibility to community resources in downtown Ardmore. Along existing SR 53, the preferred alternate will neither represent a barrier to community cohesion nor change existing traffic patterns to community facilities. The proposed action has been developed in accordance with Executive Order 12898. The preferred alternate avoids disproportionate impacts to any minority group.

3.5. Relocations

A preliminary project relocation analysis was performed for this project to identify relocations and the availability of adequate replacement housing. ROW-RA-1 Forms that summarize the results of the preliminary relocation analysis are included in Appendix D.

There is sufficient decent, safe, and sanitary housing and/or vacant land so that families can easily relocate within or very near their old neighborhoods. However, ALDOT will implement housing of the last resort, if necessary. There was no evidence to indicate the existence of large families, low income families, handicapped persons, or higher than normal elderly displacees among owners or tenants in the study area. Minimal detrimental impacts on neighborhoods, public facilities, non-profit organizations and special composition families is anticipated

other than normal inconveniences during construction. The majority of businesses being displaced should have sufficient land to relocate on their existing sites. The project will generally improve accessibility to area businesses.

3.5.1. No-Action Alternative

The No-Action Alternative will not require the relocation of residences, businesses, non-profit organizations or farms.

3.5.2. Preferred Alternate

The preferred alternate will involve 81 residential relocations, 24 business relocations, two non-profit organization (NPO) relocations and no farm relocations. Relocation impacts are summarized in Table 3.5.2. and Appendix D.

Table 3.5.2: Relocations

Alternate	Relocations							Available Housing				
	NPO	Business	Farm	Owner	Renter	Value/Rent	No. of Bedrooms	Minority/Non-Minority	Owner	Renter	Value/Rent	No of Bedrooms
Preferred Alternate	2	24	0	0	-	0-40,000	1-3	7/74	5	-	0-40,000	1-3
	-	-	-	13	-	40,000-60,000	1-3	-	8	-	40,000-60,000	1-3
	-	-	-	17	-	60,000-80,000	3-4	-	61	-	60,000-80,000	3-4
	-	-	-	16	-	80,000-100,000	3-4	-	63	-	80,000-100,000	3-4
	-	-	-	24	-	Over 100,000	4-over	-	70	-	Over 100,000	4-over
	-	-	-	-	0	0-150	1-3	-	-	-	0-150	1-3
	-	-	-	-	0	151-300	1-3	-	-	-	151-300	1-3
	-	-	-	-	0	301-400	1-3	-	-	3	301-400	1-3
	-	-	-	-	9	401-500	3-4	-	-	13	401-500	3-4
	-	-	-	-	2	Over 501	3-4	-	-	10	Over 501	3-4
TOTAL	2	24	0	70	11			7/74	207	26		

The preferred alternate is expected to involve the following business relocations:

<u>Business</u>	<u>Number of Employees</u>
Kar Mart	3
Key Machinery	14
Autoworks	4
Exxon Station	5
Car Lot	2
Summit Structures	2
Affordable Storage	2
Plant Park Garden Center	2
Amoco Station	4
L & L Auto Sales	2
B & B Automotive Junkyard	4
Highway 53 Used Cars	2
Junkyard	2
Harvest Garden Center	6
Hoff's Auto Sales	3
BP Station	6
Mildred's Country Catfish	18
Firewood	2
Park In Motel	5
Star R/T Auto Parts	5
People's Distributing	10
Auto World	3
Rock Crusher	15
Antiques (Collectibles)	3

Fifty-two percent of the business relocations are automobile sales or service oriented. It is likely that the majority of relocated businesses will re-establish in the study area in order to benefit from improved automobile capacity and accessibility in the study area.

The preferred alternate will require the relocation of two NPOs, Christian Fellowship Church and the Madison County Commissioner's Office.

3.5.3. Relocation Assistance Advisory Service

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and relocation resources are available to all residential and business relocatees without discrimination.

The Relocation Assistance Advisory Service offered by the Alabama Department of Transportation is designed to help displacees find a new place to live in or in which to do business. A relocation officer is assigned to each displacee for this purpose.

The relocation officer will determine the needs of displaced families, individuals, business concerns, and farm operators for the Relocation Assistance Advisory Service without regard to race, color, religion, sex, or national origin. Services will be offered within sufficient lead time prior to the need for replacement housing. This housing must be available fair housing open to all persons regardless of race, color, religion, sex, or national origin. It must meet the decent, safe, and sanitary standards of the state law and applicable local housing and occupancy codes, and be adequate to accommodate the relocatee. Relocation of displaced persons will be made in areas not generally less desirable in regard to public utilities and public and commercial facilities, including public transportation. Rents and sale prices of replacement housing offered must

be priced within the financial means of the families and individuals displaced.

It is a policy of the state that no person to be displaced by the Alabama Department of Transportation's construction projects shall be required to move from his or her dwelling unless at least one comparable replacement dwelling has been made available to the person.

- A. The Federal Highway Administration has been given written assurances that the Alabama Department of Transportation will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 of the Code of Federal Regulations, Part 24, on any program or project on which federal financial assistance will be made available which results in real property acquisition or displacement.
- B. Construction authorization will be requested only upon verification that replacement housing is in place and has been made available to all affected persons.

Replacement properties would be made available equal in number to the number of displaced families and individuals in the same general area from which they are being displaced and reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses and farm operators in obtaining and becoming established in suitable locations. This will include explaining to, and exploring with all displacees all options available to them, such as (1) purchase of replacement housing (whether displacees are owner-occupants or renter-occupants), (2) rental of replacement housing (private or public), or (3) relocating existing owner-occupant housing.

The relocation officer will also supply information concerning the Federal Housing Administration home acquisition program , the Farmer's Home Administration home acquisition program, the Small Business Administration loan programs, and other state and federal programs offering assistance to displaced persons and will provide other advisory services in order to minimize hardships to displaced persons in adjusting to a new location.

1. Moving and Related Expense Payments

The Moving and Related Expense Payments offered by the State of Alabama Department of Transportation are designed to render financial aid for the relocation and re-establishment of persons, businesses, farmers, and non-profit organizations displaced as a result of highway projects without regard to race, color, religion, sex, or national origin.

The Moving and Related Expense Payments Program is designed to (1) help pay the costs of moving from homes, businesses, and farm operations acquired for a highway project to replacement dwellings, businesses, and farm operations; and (2) provide optional and/or incidental payments. In general, any individual, family, business, farm operation, or non-profit organization displaced by a highway project is entitled to receive a payment for reasonable moving expenses, provided that they are eligible.

2. Replacement Housing Payments, Increased Interest Payment, and Incidental Purchase Expenses

A displaced owner-occupant may be eligible to receive additional payments, the combined total of which may not exceed \$22,500.00 for additional cost necessary to purchase replacement housing; an amount to compensate for the loss of favorable financing on his or her existing

mortgage in the financing of replacement housing; and the amount necessary for reimbursement for incidental expenses associated with the purchase of replacement housing. Or, a displaced owner-occupant may be eligible to receive a payment, not to exceed \$5,250 to rent replacement housing or to make a down payment, including incidental purchase expenses, on the purchase of a replacement dwelling.

A displaced tenant may be eligible to receive a payment, not to exceed \$5,250 to rent a replacement dwelling or room, or to make a down payment, including incidental purchases expenses, on the purchase of a replacement dwelling.

3.6. Economic Development

The SR 53 study area is primarily characterized by rural residential land use with retail and commercial development located along existing SR 53. Residents in the study area depend on SR 53 as a commuter route between destinations in Huntsville, Ardmore, and along I-65. The purpose of the proposed action is to improve accessibility in the study area by increasing the traffic capacity of existing SR 53. Improving accessibility is likely to promote residential development and, in turn, promote economic development in the study area. Projected development is shown on Figure 1.2.

3.6.1. No-Action Alternative

The No-Action Alternative does not provide improved traffic capacity along SR 53 for existing developments or predicted future growth. The No-Action Alternative will negatively impact accessibility and economy of travel in the study area.

3.6.2. Preferred Alternate

The preferred alternate will improve access and produce both short term and long term economic impacts in the study area. The short term

economic impacts of the preferred alternate will be both positive and negative. The long term impacts of the preferred alternate are expected to be positive.

Short term positive impacts are generally promoted by construction of the proposed action. The local economy will benefit from material purchases, construction employment and a temporary increase in the number of local expenditures to support the construction process. Local businesses should benefit from these sales.

Short term negative impacts include the required relocation of 24 businesses associated with the construction of the preferred alternate. Short term negative impacts should be offset by long term positive impacts.

The long term economic impact of this project is that improved capacity and accessibility is likely to promote residential and commercial development in the study area. Improved traffic capacity will make commuting to Huntsville or Ardmore more accessible, resulting in residential development. Residential growth is likely to be followed by growth in retail and service industries. This process is already projected as the development pattern of the study area (Figure 1.2).

3.7. Pedestrian and Bicycle Facilities

In accordance with 23 USC 109(n), the Alabama Department of Transportation gives full consideration to bicycle facilities and providing reasonable alternatives to the bicycling public in transportation planning.

Due to the absence of sidewalks and bicycle facilities in the study area, impacts from the proposed project are expected to be minimal. Pedestrians are forced to

use the shoulders of existing roadways, while bicyclists either use the roadway shoulder or share the roadway with automobiles.

The preferred alternate is consistent with existing pedestrian and bicyclist's access in the study area. At-grade intersections at existing roadway crossings will maintain bicycle and pedestrian passage in the study area as it currently exists.

3.8. Air Quality Analysis

The SR 53 improvement project is included in the FY 1998-2002 Transportation Improvement Plan (TIP), *Huntsville Area Transportation Study* adopted by the Metropolitan Planning Organization June 1997.

The SR 53 project is in an area not designated under the Clean Air Act or the Clean Air Act Amendment of 1990 for pollution due to carbon monoxide, ozone, or PM-10. Additionally, this project is not in an area designated for non-attainment of transportation related pollutants.

This project is included in an approved Statewide Transportation Improvement Program (STIP) that has been determined to meet the requirements under Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans funded or approved under Title 23 USC or the Federal Transit Act: Final Rule, released November 1993.

Microscale Analysis

A microscale carbon monoxide (CO) analysis was performed for this project in accordance with 40 CFR 51 and 93 utilizing the MOBILE5A and CAL3QHC mobile source computer models. The "worst case" scenario (area of greatest traffic congestion) was determined to be the intersection of SR 53 and Rideout Road for the design year (2017) (see Appendix E). It was determined that if the project CO contribution for this "worst case" analysis was well below the one-hour and eight-hour National Ambient Air Quality Standards (NAAQS), then it

would not be necessary to analyze any other scenarios for this project [T 6640.8A V.G.8(b)].

Traffic parameters were taken from the September 1996 traffic analysis performed for the SR 53 study. Three receptor sites lying in close proximity to the intersection were designated for the analysis.

The intersection was modeled for wind angles from 0° 360° in 10° increments for a total of 36 wind angles. One-hour and eight-hour concentrations were predicted for the year 2017 for all 36 wind angles.

The results of the analyses show that the NAAQS of 35.0 ppm (one-hour) or 9.0 ppm (eight-hour) will not be exceeded for any of the 36 conditions modeled. The highest concentrations produced were 3.90 ppm at receptor 2 when the wind angle is 260° from the receptor site for the one-hour scenario and 3.60 ppm at receptor 2 when the wind angle is 270° from the receptor site for the eight-hour scenario complete computer output for the analysis is included in Appendix E.

3.9. Noise Analysis

A noise analysis was conducted for this project in accordance with the procedures for noise studies as set forth in 23 CFR 772. The purpose of this analysis is to determine and analyze the effect of traffic noise on adjacent properties of human habitation and alternative noise abatement measures to mitigate these effects, giving weight to the benefits and cost of abatement, and to the overall social, economic and environmental effects.

23 CFR 772.5 (g) defines traffic noise impacts as:

“Impacts which occur when the predicted traffic noise levels approach to exceed the noise abatement criteria (Table 3.9), or when the predicted traffic noise levels substantially exceed the existing noise levels.” Approach criteria is defined as 66

dBA for residential receptors and 71 dBA for businesses for this project.

Substantial exceedance is defined as fifteen (15) dBA Leq(h) for this project.

Table 3.9: FHWA Noise Abatement Criteria

Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D		Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

NOTES: All noise levels are expressed as dBA Leq(h).

3.9.1. Existing Noise Levels

Noise monitoring was conducted in the project area to obtain information concerning existing noise levels. The procedures for noise monitoring were based on the methodologies described in the FHWA reports *Fundamentals and Abatement of Highway Traffic Noise* and *Sound Procedures for Measuring Highway Noise*. The standard utilized for monitoring and prediction analyses was the hourly equivalent sound level, Leq(h). Hourly Leq is the equivalent steady state sound level which, in one hour, would contain the same acoustic energy as the time-varying level would during the same period. Leq is measured in A-weighted decibels (dBA), which closely approximates human frequency response.

Noise measurements were taken at seven sites in the study area. These sites, along with the measured noise levels, are shown in Figure 3.9.4. A

Larson Davis Model 700 Dosimeter type 2 integrated sound level meter was used for six-minute periods. Measured Leq noise levels were found to range from 52 to 62 dBA.

3.9.2. Sensitive Receptor Sites

The project corridor was examined for noise sensitive sites using the activity category descriptions contained in 23 CFR, Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise. The majority of the project falls under Activity Category B, with a 67 dBA Leq(h) (exterior) limit. Based on proximity to the proposed roadway, geometrics of the roadway and traffic volume, it was determined that, depending on which alternate is selected, 166 to 187 sites within the corridor had the potential to be impacted by noise generated by the proposed roadway.

3.9.3. Analysis Techniques

The project was analyzed considering potential widening to either side of the existing alignment utilizing a breakpoint methodology. This section gives a detailed analysis of the preferred alternate that was selected based on the breakpoint to breakpoint analysis. The traffic noise analysis included the following detailed study:

1. Identification of existing activities which may be affected by traffic related noise along each alternate considered for study.
2. Determination of existing (ambient) noise levels.
3. Prediction of future traffic noise levels.
4. Determination of noise impacts.
5. Examination and evaluation of alternative noise abatement measures for reducing or eliminating impacts if they are determined in the analysis.

All of the above conditions were applied to each receptor in this analysis. Traffic data, including volume, speed and vehicle mix, were taken from the September 1997 traffic report. Through on-site inspections and review of plans and traffic, it was determined that there were no continuous point sources, and that the major noise sources were the result of vehicular sources.

The final stage of the analysis consisted of compiling data for input into the computer program. Design year noise levels for the "Build" condition were predicted with the FHWA Traffic Noise Prediction Model STAMINA 2.0 (FHWA-RD-77-108). Modeling results are included in Appendix F.

3.9.4. Conclusions

A determination of the effects of traffic noise of the proposed project was accomplished by comparing land use, existing noise levels and predicted noise levels with established criteria that consider exceedance and substantial increase.

Eighty-seven sites were analyzed in this study. Noise impacts were predicted for 21 sites on the preferred alternate, as shown in Table 3.9.4. The site numbers in Table 3.9.4 correspond to the site numbers on Figure 3.9.4.

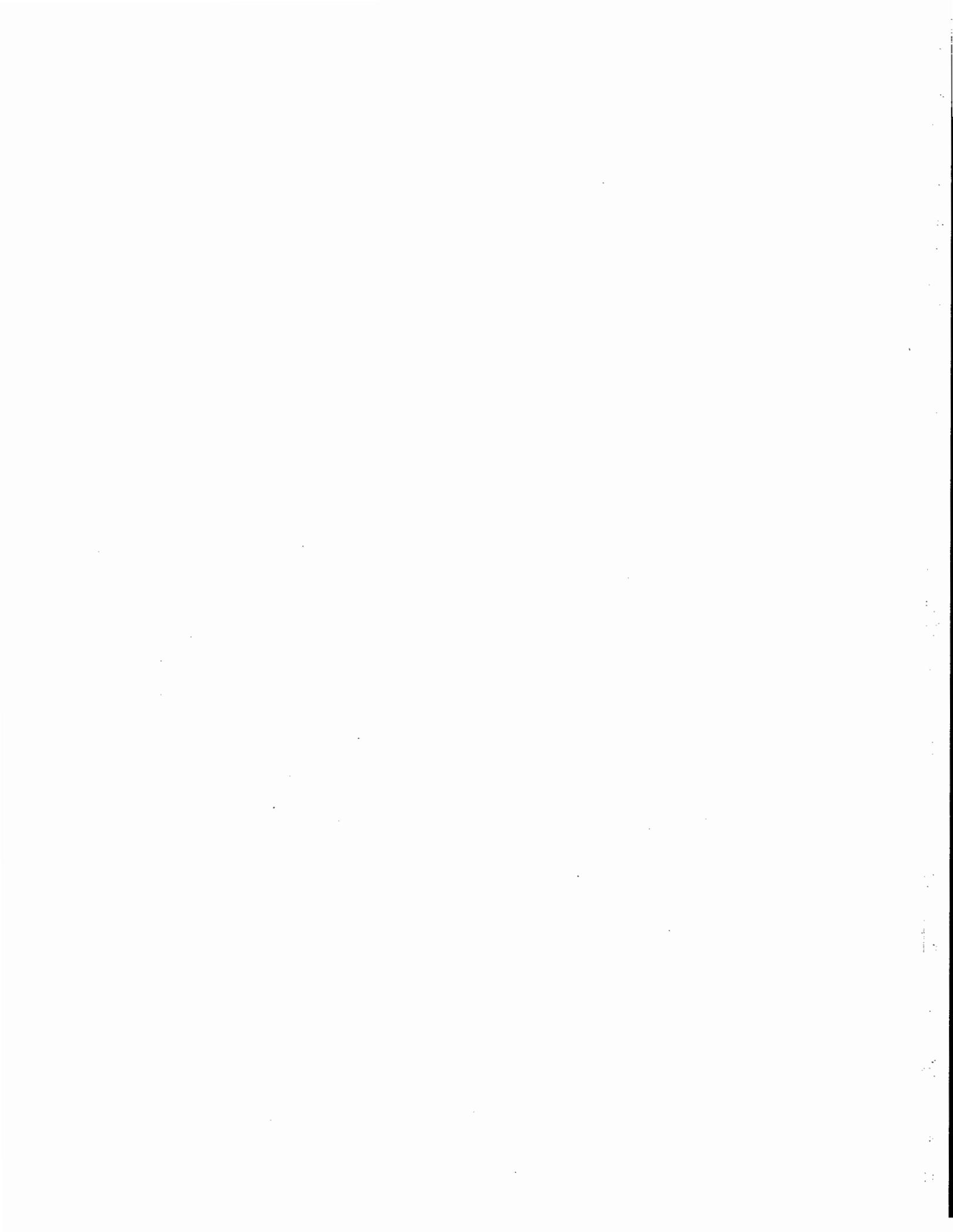
Table 3.9.4: Noise Impacts of the Preferred Alternate

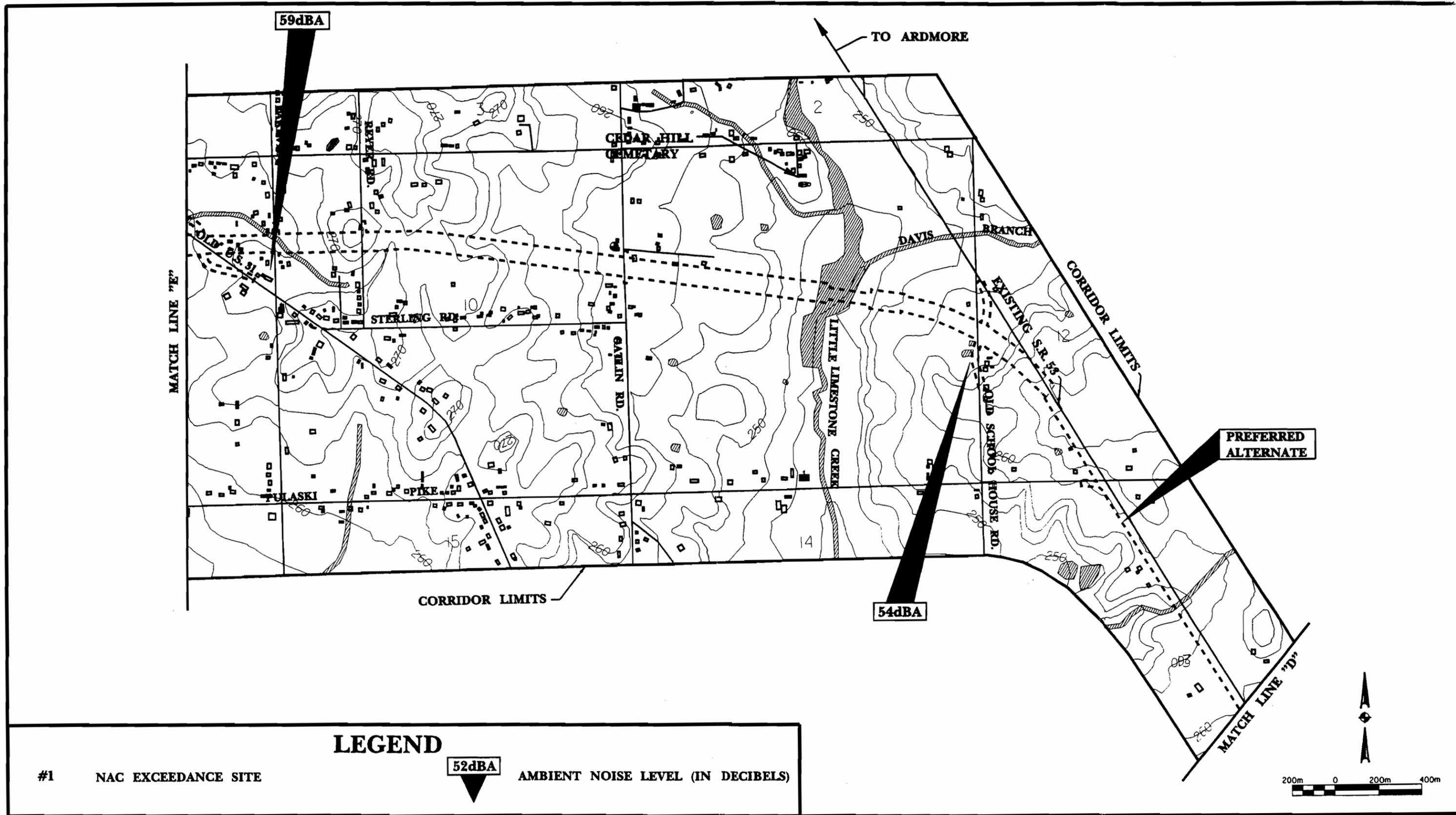
Site #	Distance from Centerline of Nearest Lane*	Existing Noise Level DBA (leq)(h)	2015 Predicted Noise Level dBA (leq)(h)
1	42 meters (140 feet)	59	66
2	36 meters (120 feet)	52	68
3	36 meters (120 feet)	52	67
4	42 meters (140 feet)	52	66
5	33 meters (120 feet)	52	69
6	23 meters (78 feet)	52	69
7	45 meters (150 feet)	52	66
8	48 meters (160 feet)	52	66
9	26 meters (85 feet)	52	70
10	27 meters (90 feet)	52	69
11	19 meters (63 feet)	52	69
12	57 meters (190 feet)	53	66
13	29 meters (96 feet)	53	67
14	40 meters (133 feet)	53	66
15	20 meters (68 feet)	53	69
16	30 meters (100 feet)	53	69
17	23 meters (75 feet)	53	68
18	35 meters (117 feet)	53	67
19	29 meters (98 feet)	56	67
20	29 meters (95 feet)	56	66
21	44 meters (148 feet)	62	67

* *Meters and feet are both rounded to the nearest whole number.*

3.9.5. Noise Abatement Considerations

23 CFR 772.11(c) states: “If a noise impact is identified, the abatement measures listed in Sec. 772.13(c) of this chapter must be considered.” It is ALDOT’s policy to ensure that all reasonable and feasible mitigation measures are incorporated into projects to minimize noise impacts and enhance the surrounding noise environment to the extent practicable. The final determination on the reasonableness and feasibility of noise abatement measures will be made after completion of final design. The following noise abatement measures are being considered for this project in accordance with 23 CFR 772.





LEGEND

#1 NAC EXCEEDANCE SITE

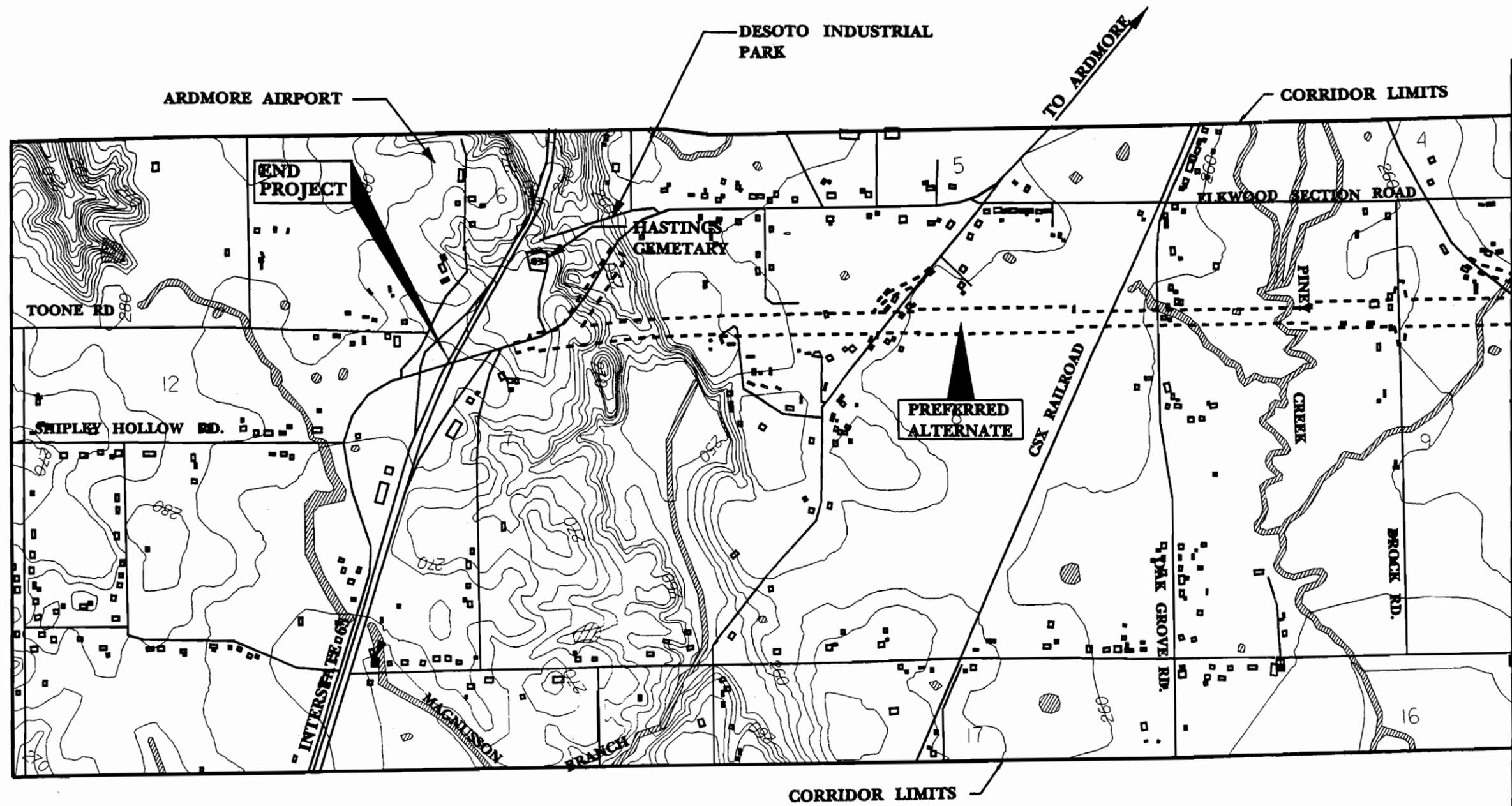
52dBA

AMBIENT NOISE LEVEL (IN DECIBELS)

PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

NOISE ANALYSIS

FIGURE 3.9.4



LEGEND

#1 NAC EXCEEDANCE SITE

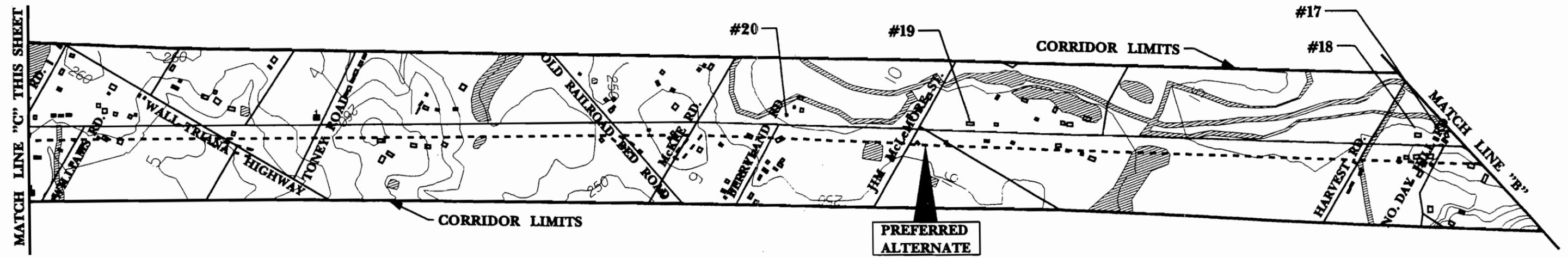
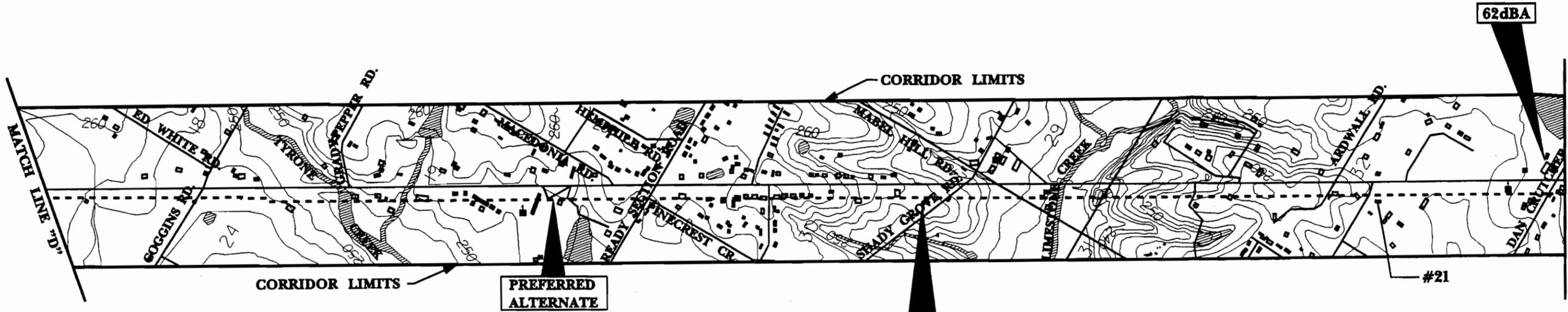
52dBA

AMBIENT NOISE LEVEL (IN DECIBELS)

PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

NOISE ANALYSIS

FIGURE 3.9.4

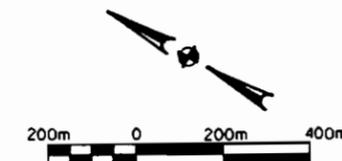


LEGEND

#1 NAC EXCEEDANCE SITE

52dBA

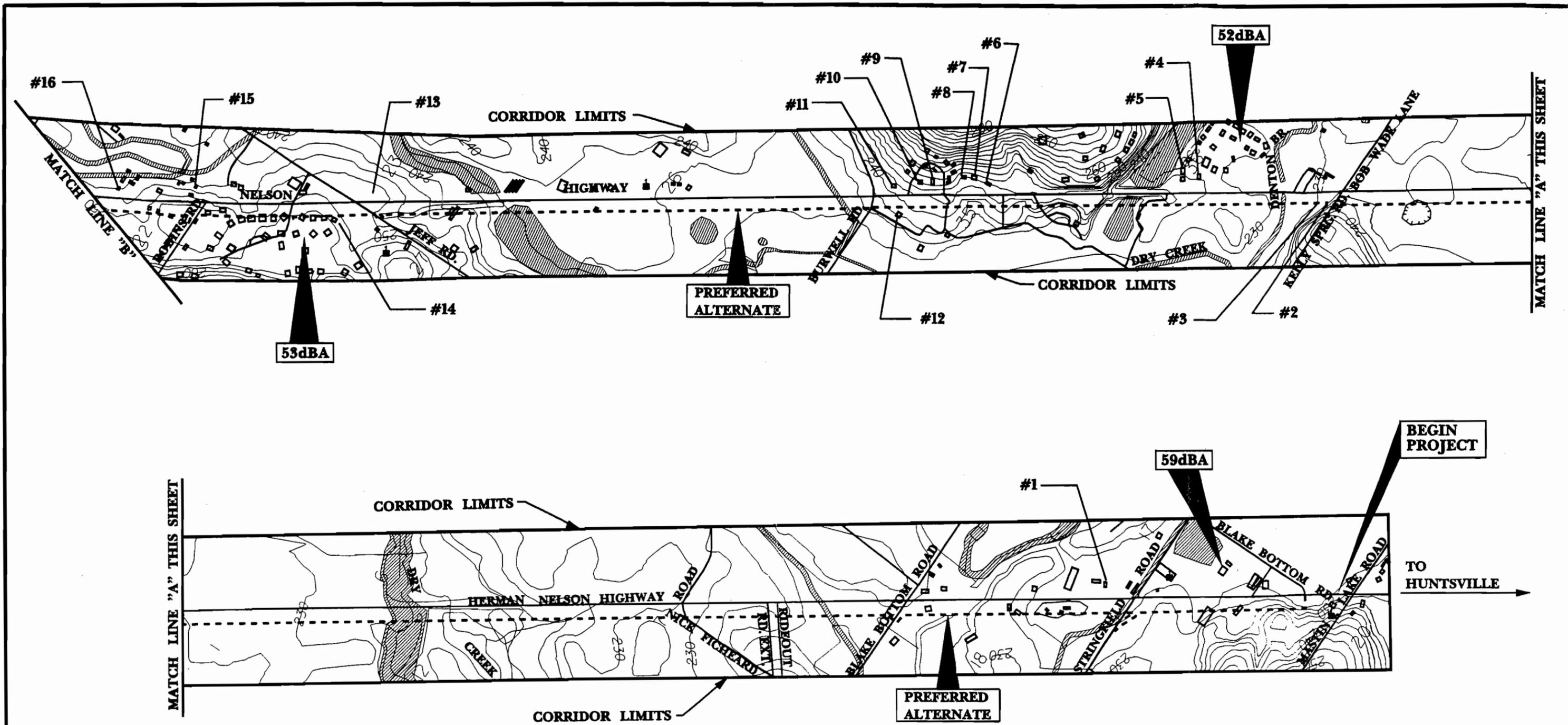
AMBIENT NOISE LEVEL (IN DECIBELS)



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

NOISE ANALYSIS

FIGURE 3.9.4



LEGEND

#1 NAC EXCEEDANCE SITE

52dBA

AMBIENT NOISE LEVEL (IN DECIBELS)

PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

NOISE ANALYSIS

FIGURE 3.9.4

1. Traffic management measure (e.g., traffic control devices and signing for prohibition of certain vehicle types, time use restrictions for certain vehicle types, modified speed limits, and exclusive land designations).

Traffic management measures applied for the purpose of noise abatement would be inconsistent with the purpose of this project (i.e. to provide for increased capacity within the transportation corridor and to move traffic at an acceptable level of service in a safe and efficient manner). Use restrictions, including the restriction of certain vehicle types and time use restrictions, would eliminate certain traffic from using the roadway during peak periods and therefore eliminate function of increasing transportation capacity within the corridor. The installation of additional traffic control devices or the modification of speed limits (currently 45 mph) would result in a decreased level of service and decreased efficiency of the proposed facility. The implementation of traffic management measures for the purpose of noise abatement is not deemed reasonable or likely for this project.

2. Alterations of horizontal and vertical alignments.

Each of the affected sites is in an area where development has already occurred on both sides of the proposed facility. Horizontal shifts would result in greater relocations and increased noise levels at residences which are not currently affected by the proposed alignment. Alterations of horizontal and vertical alignments are not deemed reasonable or likely noise abatement measures for this project.

3. Acquisition of property rights (either in fee or lesser interest) for construction of noise barriers.

The acquisition of property rights for the construction of noise barriers would be an effective noise abatement measure only if noise barriers were actually constructed on the acquired property (see number 4 below).

4. Construction of noise barriers (including landscaping for aesthetic purposes) whether within or outside the highway right-of-way.

Any type of noise barrier requires at least a line of sight break between the noise source (traffic) and the receptor site (residence) in order to afford any abatement of noise level. Any gaps in the barrier defeat the barriers' effectiveness. All of the affected sites either have driveway access to the proposed facility or are adjacent to existing roads which will cross or tie into the proposed facility, therefore it is not possible to construct an effective noise barrier for any of these sites and still allow access to the sites and connections to local streets. The construction of noise barriers does not appear to be a reasonable or likely noise abatement measure for this project.

5. Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise. This measure may be included in Type I projects only.

The acquisition on additional property to act as a buffer zone would include the acquisition of the affected sites. The purchase of these properties does not appear to be an economically reasonable mitigation measure at this time.

6. Noise insulation of public use or non-profit institutional structures.

The preferred alternate does not impact public use or non-profit institutional structures. Therefore, noise insulation of public use or non-profit institutional structures is not an applicable abatement consideration for the project.

3.9.6. Construction Noise

The construction and development of the proposed project would result in temporary noise increases within the study area. The noise would be generated primarily from heavy equipment used in hauling materials and building the roadway. Some areas located close to the construction alignment may temporarily experience increased noise levels.

Article 107.22 of the State of Alabama Highway Department Standard Specifications requires the contractor to comply with all state, federal, and local laws and regulations controlling pollution of the environment. Compliance with this article will be required of the contractor for this project. The contractor has the responsibility for protection of the general public in all aspects of construction throughout the life of the project. All construction equipment will be required to comply with OSHA regulations as they pertain to the employees' safety and in accordance with the State of Alabama Highway Department Standard Specifications. At the PS&E inspection, consideration will be given as to whether or not further restrictions need to be placed on work hours. If it is determined that restrictions are necessary, appropriate notes will be placed on the plans. These stipulations will be included in the sequence of construction for the project, if needed.

3.10. Water Quality Impacts

The SR 53 project has been coordinated with the Alabama Department of Environmental Management, the Alabama Department of Conservation and Natural Resources, the US Army Corps of Engineers, and the Tennessee Valley Authority. The proposed project traverses Dry Creek, Limestone Creek and Tyrone Creek at existing SR 53 crossings. Little Limestone Creek and Piney Creek will be crossed on new location.

3.10.1. No Build Alternate

No new adverse impacts will occur.

3.10.2. Preferred Alternate

Stormwater discharge associated with the preferred alternate may increase levels of sediment, solids, metals, and chemical compounds in local waters. Increased erosion may also occur as discharges increase. Proper construction activities and Best Management Practices (BMPs) will minimize potential impacts to water quality in the study area. Proper construction management and BMPs will be utilized throughout the project. A National Pollution Discharge Elimination System (NPDES) permit will be required by the Alabama Department of Environmental Management (ADEM). ADEM correspondence is included in Section 4.2.

3.11. Wild and Scenic Rivers

There are no wild and scenic rivers in the study area. The proposed project has been developed in accordance with Section 7(a) of the Wild and Scenic Rivers Act. The preferred alternate does not impact wild and scenic rivers.

3.12. Permits

A Section 404 Permit will be required from the US Army Corps of Engineers for any portion of the project that involves dredge or fill activities in jurisdictional wetland areas. A NPDES Stormwater Permit will be required from the Alabama Department of Environmental Management for construction activities along the

length of the project. Permits from the Tennessee Valley Authority (TVA) will be required for each crossing of Tennessee River tributaries. Permits from TVA are administered in accordance with Section 26(a) of the TVA Act and TVA's Flood Storage Loss Guidelines. TVA serves as a cooperating agency on this project.

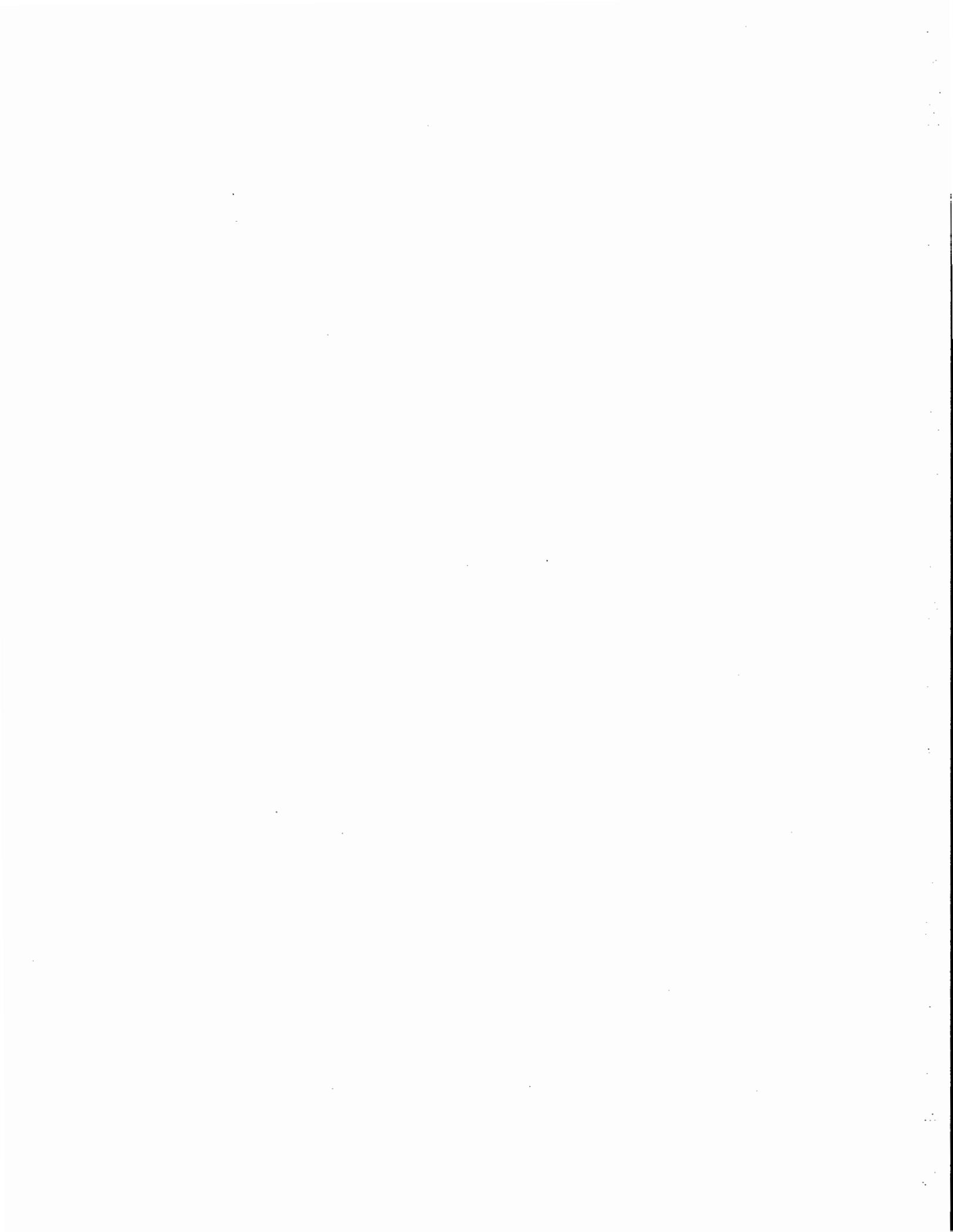
3.13. Wetland Impacts

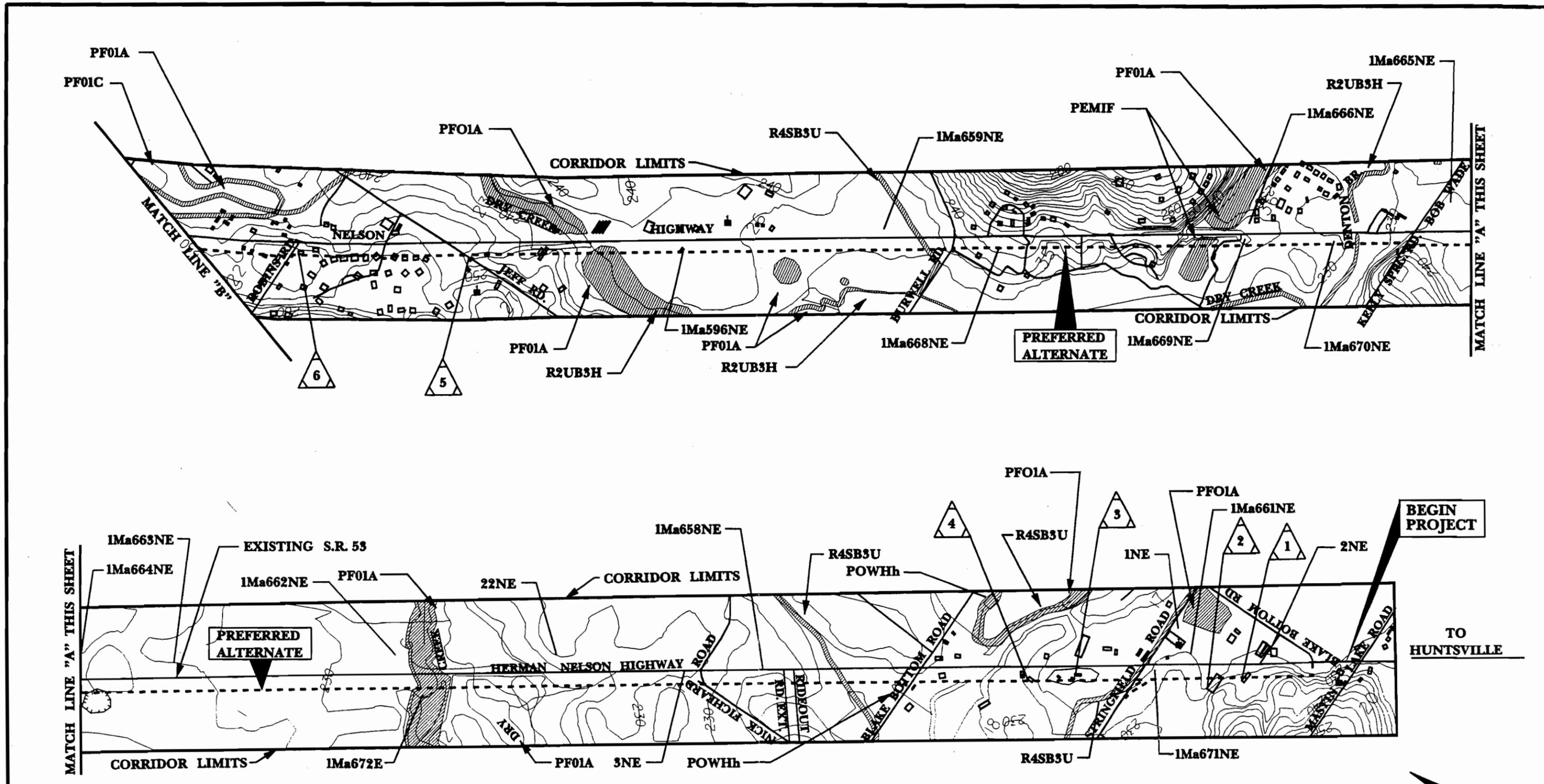
The primary importance of wetlands in the study area, to the natural environment and local communities, is conveyance and storage of stormwater runoff, flood control, sediment and compound cycling, and wildlife habitat.

Potential wetlands in the study area were first identified through review of existing documentation. United States Geological Survey quadrangle maps, Federal Emergency Management Agency floodplain maps, black and white aerial photography, color infrared aerial photography, National Wetland Inventory (NWI) Mapping, and county soil surveys were reviewed to identify wetlands.

Alternates were field surveyed and wetland boundaries were reviewed using methods found in the 1987 US Army Corps of Engineers Wetland Delineation Manual. Figure 3.13 shows the location of identified wetland areas. Figure 3.13 indicates the NWI classification for each wetland in the study area. NWI classifications are based on the publication, "Classification of Wetlands and Deep Water Habitats of the United States" (Cowardin et al 1979).

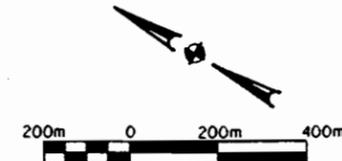
Wetlands in the study area are commonly lower perennial or intermittent riverine systems. In areas where agricultural clearing has not impacted overstory species, palustrine forested wetlands are found.





LEGEND

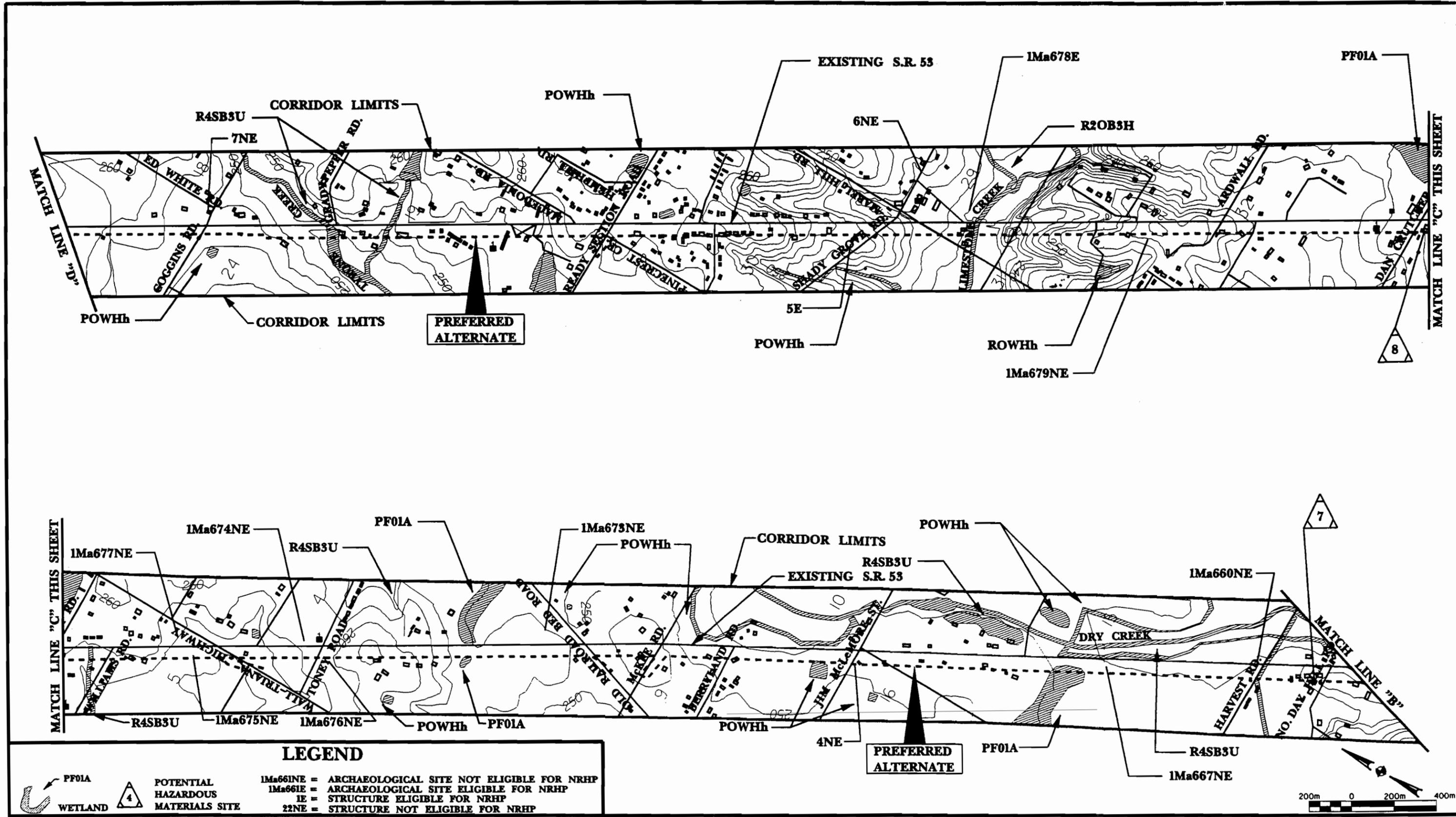
-  PF01A
-  POTENTIAL HAZARDOUS MATERIALS SITE
- 1Ma661NE = ARCHAEOLOGICAL SITE NOT ELIGIBLE FOR NRHP
- 1Ma661E = ARCHAEOLOGICAL SITE ELIGIBLE FOR NRHP
- 1E = STRUCTURE ELIGIBLE FOR NRHP
- 22NE = STRUCTURE NOT ELIGIBLE FOR NRHP



PROJECT NO. ST-045-053-001
STATE ROUTE 53
MADISON AND LIMESTONE
COUNTIES, ALABAMA

CORRIDOR FEATURES

FIGURE 3.13



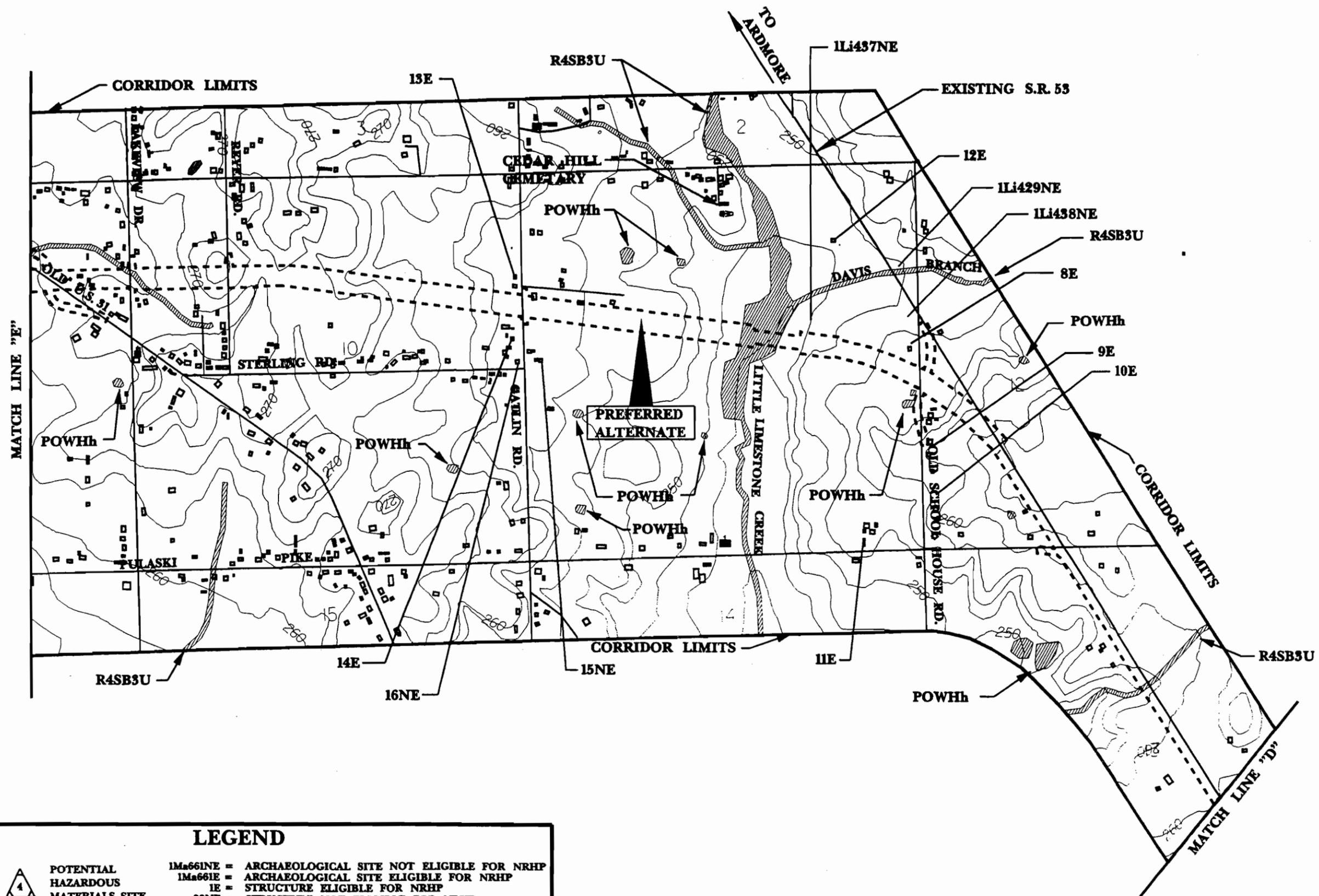
LEGEND

- PF01A WETLAND
- POTENTIAL HAZARDOUS MATERIALS SITE
- 1Ma661NE = ARCHAEOLOGICAL SITE NOT ELIGIBLE FOR NRHP
- 1Ma661E = ARCHAEOLOGICAL SITE ELIGIBLE FOR NRHP
- 1E = STRUCTURE ELIGIBLE FOR NRHP
- 22NE = STRUCTURE NOT ELIGIBLE FOR NRHP

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COUNTIES, ALABAMA

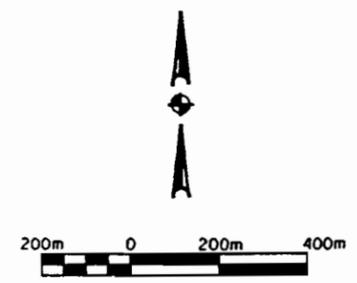
CORRIDOR FEATURES

FIGURE 3.13



LEGEND

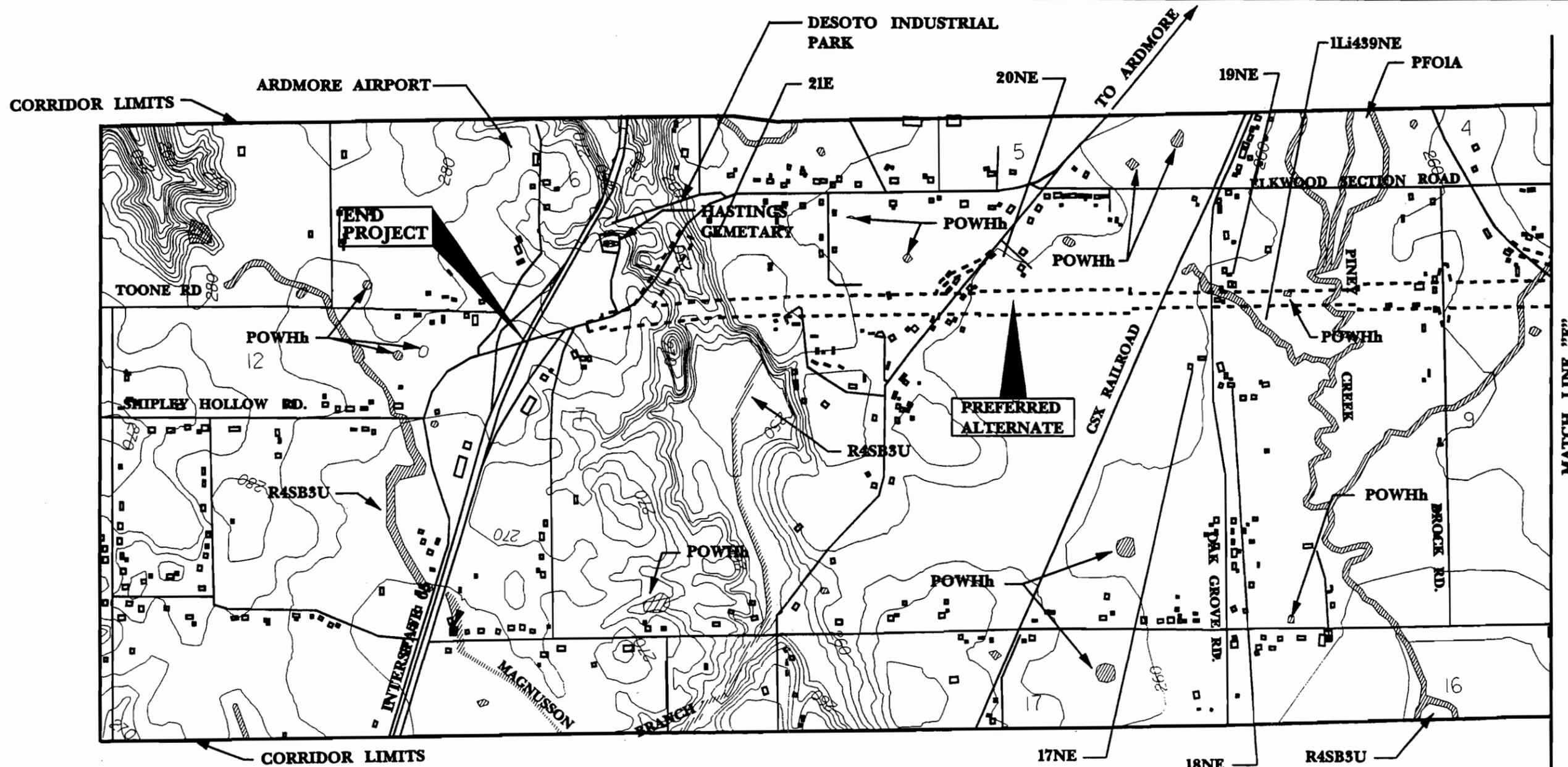
- | | | | | | |
|--|---------|--|------------------------------------|------------|---|
| | WETLAND | | POTENTIAL HAZARDOUS MATERIALS SITE | 1Ma661NE = | ARCHAEOLOGICAL SITE NOT ELIGIBLE FOR NRHP |
| | | | | 1Ma661E = | ARCHAEOLOGICAL SITE ELIGIBLE FOR NRHP |
| | | | | 1E = | STRUCTURE ELIGIBLE FOR NRHP |
| | | | | 22NE = | STRUCTURE NOT ELIGIBLE FOR NRHP |



PROJECT NO. ST-045-053-001
 STATE ROUTE 53
 MADISON AND LIMESTONE
 COUNTIES, ALABAMA

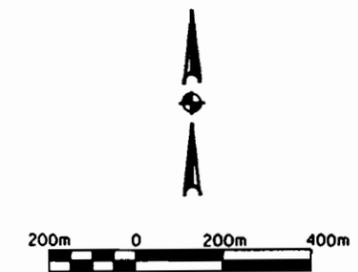
CORRIDOR FEATURES

FIGURE 3.13



LEGEND

- | | | |
|---|--|--|
|  PF01A |  POTENTIAL HAZARDOUS MATERIALS SITE | 1Ma661NE = ARCHAEOLOGICAL SITE NOT ELIGIBLE FOR NRHP |
| | | 1Ma661E = ARCHAEOLOGICAL SITE ELIGIBLE FOR NRHP |
| | | 1E = STRUCTURE ELIGIBLE FOR NRHP |
| | | 22NE = STRUCTURE NOT ELIGIBLE FOR NRHP |



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 COUNTIES, ALABAMA

CORRIDOR FEATURES

FIGURE 3.13

Wetland vegetation in the study area includes River Birch (*Betula nigra*), Sweet Gum (*Liquidambar styraculata*), Post Oak (*Quercus stellata*), Broom Sedge (*Andropogon virginicus*), Sycamore (*Platanus occidentalis*), Dogwood (*Cornus florida*), Honeysuckle (*Lonicera japonica*), Sumac (*Rhus glabra*), Greenbriar (*Smilax spp.*), and Cattails (*Typha latifolia*).

Wetlands in the study area exhibit a range of productivity. Wetlands associated with intermittent streams typically exhibit an average net primary productivity per unit area of 250 g/m²/yr. Forested wetlands may average a net primary productivity per unit area of 1,200 g/m²/yr or higher.

Wetlands in the study area exhibit functions of floodwater conveyance, wildlife habitat and conveyance of baseflow. These wetlands also transport dissolved and particulate organic carbon by flushing, displacement and erosion.

Wetlands impacted by the project are not unique to the study area.

3.13.1. No-Action Alternative

No new adverse impacts will occur.

3.13.2. Preferred Alternate

The preferred alternate impacts 3.84 hectares (9.48 acres) of wetlands. Wetland impacts are shown on Figure 3.13. Table 3.13.2 details the preferred alternate wetland impacts at each crossing.

Many of the wetland sites located along the project are linear systems and are perpendicular to all alternate alignments. This is particularly applicable to the new location portion of the project. As such, no alternate can completely avoid wetlands. All practical measures to minimize impacts to wetlands have been utilized.

Table 3.13.2: Preferred Alternate Wetland Impacts

Waterbody	NWI Classification	Hectares *	Acres *	Adjacent to Existing SR-53 Roadway Crossing
Dry Creek Tributary	R4SB3U	0.048	0.11	Yes
Dry Creek Tributary	R4SB3U	0.089	0.22	Yes
Dry Creek	PF01A	1.17	2.89	Yes
Denton Branch	Channelized	-	-	Channelized
Dry Creek Backwater	PEM1F	0.31	0.77	Yes
Dry Creek	PFO1A	0.20	0.49	Yes
Dry Creek Tributary	R2UB3H	0.28	0.69	Yes
Dry Creek Tributary	R45133U	0.09	0.22	Yes
Dry Creek	PFO1A	0.04	0.09	Yes
Unnamed	R4SB3U	0.08	0.19	Yes
Limestone Creek	R20B3H	0.02	0.05	Yes
Tyrone Creek Tributary	R4SB3U	0.08	0.19	Yes
Tyrone Creek	R4SB3U	0.08	0.19	Yes
Tyrone Creek Tributary	R4SB3U	0.06	0.14	Yes
Little Limestone Creek	R4SB3U	0.13	0.32	New location
Piney Creek Tributary	R4SB3U	0.15	0.37	New location
Piney Creek Tributary	R4SB3U	0.20	0.49	New location
Piney Creek	R4SB3U	0.05	0.12	New location
Piney Creek Tributary	R4SB3U	0.76	1.87	New location
Total		3.84	9.48	

* *Area calculations are based on the following construction impacts:*

- *Sections requiring additional right-of-way* 40.3 m
- *Sections with existing right-of-way* 32.3 m
- *New location* 60.6 m
- *Two-lane bridge* 13 m
- *Four-lane bridge* 26 m

The SR 53 project will decrease the quality of impacted wetlands. Habitat will be altered when vegetation is cleared for roadway construction. Habitat alteration will be a long term effect of the proposed project.

Wetland impacts are localized in the vicinity of proposed crossings. Construction of the project should not affect the overall stability of

wetlands adjacent to the preferred alternate. Bridges and culverts will not substantially affect floodwater conveyance. Sedimentation and erosion will generally continue at current levels after the project is complete. Cycling of dissolved and particulate compounds will continue in wetland areas that remain unaffected.

Compensatory mitigation is required for unavoidable impacts that remain after all appropriate steps have been taken to avoid and minimize wetland loss. In general, options for mitigating for the unavoidable loss of wetlands include: (1) wetland restoration, (2) wetland enhancement, and (3) wetland creation. Wetland restoration typically entails restoring hydrology to an area which was historically a wetland but has been effectively drained or filled. Wetland enhancement can be similar to restoration, with the distinction being that some improvement could include hydrological adjustments to provide a more natural hydroperiod or water level within the wetland, the replacement of nuisance or exotic plants with native wetland vegetation, habitat diversification, etc. Wetland creation involves excavating or flooding historic non-wetland areas to create wetlands. While all of these types of mitigation have been used successfully to create wetlands, wetland restoration is now considered by most wetland biologists as having the greatest potential for success as a mitigation option.

The Alabama Department of Transportation proposes to mitigate the loss of wetlands for this project by restoring hydrology to prior converted farm lands or if available, by the utilization of wetland mitigation areas established as wetland mitigation banks. Proposed mitigation will be addressed in conjunction with the 404 permitting process. Mitigation measures will be in compliance with the policies stated in Executive Order 11990.

3.14. Floodplain Assessment

Section 60.3 (d)(3) of the National Flood Insurance Program (NFIP) states that a community shall prohibit encroachments, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base (100-year) flood discharge.

A Location Risk Assessment Record has been completed for this project. Preliminary grades, bridge lengths and culvert sizes are intended to minimize impacts to the 100-year floodplain. The project has been coordinated with the Federal Emergency Management Agency (FEMA). FEMA coordination is included in Section 4.2. A Location Risk Assessment is included in Appendix G.

The necessary hydraulic and hydrologic studies will be performed during final design. Final bridge lengths, culvert sizes, locations and profiles will be determined and steps will be taken to insure that any changes in the 100-year flood elevations are within the allowable standards.

The proposed structures will have an effective waterway opening equal to or greater than existing structures, and backwater surface elevations are not expected to increase. As a result, there will be no impacts on natural and beneficial floodplain values; there will be no significant change in flood risks; and there will be no increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that these encroachments will not be significant.

In conclusion, the preferred alternate is a feasible and acceptable proposal from a flood risk standpoint. The following considerations have been observed in relation to the project:

- There is minimal potential for the interruption of any roadway which is needed for emergency vehicles or provides an evacuation route;
- There is minimal adverse impacts on the natural and beneficial floodplain values;
- There is minimal associated increased flood risk;
- There is avoidance of any substantial longitudinal encroachment.

3.15. Wildlife Impacts

Land use in the study area ranges from urban to a mixture of residential and agricultural land use. The southern half of the study area is urban with numerous commercial properties adjacent to the existing road. The northern half of the study area consists of residential properties mixed with small tracts of agricultural land. Agricultural tracts in the northern portion of the study area are predominantly rural residential properties that are not actively farmed.

Agricultural lands serve as foraging areas for resident birds and mammals in the study area. Local wildlife consists of white-tailed deer, raccoon, opossum, skunk, bobcat, fox, squirrel, eastern cottontail rabbit, and a variety of birds of prey. Wetlands typically support aquatic species and indigenous reptiles.

3.15.1. No-Action Alternative

No new adverse impacts to wildlife will occur.

3.15.2. Preferred Alternate

The preferred alternate primarily parallels existing SR 53. Therefore, established wildlife travel corridors will not be altered. Impacts on new location sections are expected to be minimal. Coordination with TVA, the

Alabama Department of Conservation and Natural Resources, and the US Fish and Wildlife Service is included in Section 4.2.

3.16. Threatened and Endangered Species

Advanced coordination for SR 53 began in 1996. Advanced coordination from the Daphne, Alabama office of the US Fish and Wildlife Service dated February 12, 1996 (H4396106a) indicated no listed, proposed or candidate species present (Section 4.2). Correspondence from the Cookeville, Tennessee office of the US Fish and Wildlife Service dated March 5, 1996 (FWS#96-0785) indicated that Anthony's river snail (Endangered), Gray bat (Endangered), and Spring pigmy sunfish (Candidate) may occur in the vicinity of the proposed project (Section 4.2).

Biologists from the study team field surveyed the study area for the presence or absence of protected species and habitat suitable for protected species. Field surveys were conducted December 25-27, 1996, May 6-9, 1997, and August 27-29, 1997. In addition, a field review of the proposed project was conducted on August 28, 1997 and attended by US Fish and Wildlife Service representatives. No listed species were observed in the study area.

Anthony's river snail is an olive green to yellowish brown, ovate, freshwater snail. Anthony's river snail is primarily a big river species that was historically associated with shoal areas in the main stem of the Tennessee River and the lower reaches of some of its tributaries. Due to impoundments of the Tennessee River, only two small populations of the snail are known to survive – one in the Sequatchie River, Marion County, Tennessee, and one in Limestone Creek, Limestone County, Alabama.

The proposed project crosses an upper reach of Limestone Creek. Aquatic habitat at the proposed crossing is characterized by seasonally variable discharge flowing over a predominantly bedrock and gravel substrate. No proposed crossings of

Dry Creek, Limestone Creek, Little Limestone Creek, Tyrone Creek, or Piney Creek contain habitat typical of big river shoal areas. All portions of the proposed project are located a minimum of 17.7 kilometers (11 miles) northeast of areas of potential habitat for Anthony's river snail. Conversations with Alabama Department of Conservation and Natural Resources' malacologist familiar with Anthony's river snail, confirmed that the upper reaches of Limestone Creek do not contain Anthony's river snail or habitat for Anthony's river snail. The proposed project is not expected to affect Anthony's river snail or critical habitat for the species.

Gray bats are dark gray to russet colored bats. They are small (7 to 16 grams) and are distinguished by wing membranes connecting at the ankles. Colonies of Gray bats inhabit limestone caves that are usually 1 to 4 kilometers from a lake, river, or reservoir. Gray bat caves are typically located near open water because the bats forage for insects over water.

The US Fish and Wildlife Service noted that caves harboring summer and winter colonies of Gray bats are known to exist west approximately 13 kilometers (8 miles), south 48 kilometers (30 miles) and southeast 55 kilometers (34 miles) of the project area. A survey of Gray bat caves in Madison, Limestone, and Morgan Counties identified the following:

Cave	Designation	County
Cave Spring Cave	Priority 1	Morgan
Indian Cave	Priority 2	Limestone
Shelta Cave	Priority 2	Madison
Hering Cave	Priority 3	Madison
Hughes Cave	Priority 3	Morgan
Talucuh Cave	Priority 3	Morgan
Woody Cave	Priority 3	Morgan

No caves were discovered during field surveys of the SR 53 study area. None of the caves listed above are in the study area. None of the caves are within 13

kilometers (8 miles) of the proposed project. The proposed project is not expected to affect Gray bats or critical habitat for the species.

The US Fish and Wildlife Service also noted that Beaverdam Creek supports populations of Spring pigmy sunfish, a federal candidate species. The proposed project does not cross Beaverdam Creek. The proposed project is not located within the drainage basin of Beaverdam creek. The proposed project is not expected to affect the Spring pigmy sunfish.

3.16.1. No-Action Alternative

No new adverse impacts will occur.

3.16.2. Preferred Alternate

Coordination with the US Fish and Wildlife Service has been conducted in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) The US Fish and Wildlife Service has concurred that no significant adverse effects on fish and wildlife resources or federally listed species are expected to result from the proposed project. Copies of this correspondence are contained in Section 4.2.

3.17. Historic and Archaeologic Preservation

Archaeological and standing structure surveys were conducted in accordance with Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act. The results of these studies are presented in *A Cultural Resources Survey of the Proposed SR 53 Expansion from Huntsville to I-65 Near Ardmore, Madison and Limestone Counties, Alabama* and *A Historic Standing Structure Survey of the Proposed State Route 53 Improvements Corridor, Madison and Limestone Counties, Alabama*. A total of 27 archaeological sites were recorded during these surveys, two of which are

considered potentially eligible for nomination to the National Register of Historic Places (NRHP). A total of 22 historic structures were identified in the study corridor. Four of these are considered eligible for the NRHP.

3.17.1. Archaeological Sites

Assessment of archaeological resources within the corridor was begun by first identifying known sites (from the Alabama site file) located within the study area. Areas of high artifact probability (e.g. confluent stream areas, floodplains adjacent to streams crossings, sink holes of spring heads, bluff shelters, etc.) were also identified on 7.5 minute topographic maps.

Two techniques were used to accomplish the reconnaissance survey. The primary technique was a pedestrian walkover utilizing visual inspection of the exposed ground surface. Another technique used was excavation of 30 x 30 cm areas (shovel tests). Shovel testing was employed when ground surfaces were obscured and/or to help define the stratigraphic integrity of an archaeological site. Soils from shovel tests were screened through a 6 mm mesh to help recover any cultural material. Archaeological sites are shown on Figure 3.13.

3.17.2. No-Action Alternative

No new adverse impacts will occur.

3.17.3. Preferred Alternate

The preferred alternate will not impact archaeological sites considered eligible for preservation in place. The preferred alternate may have an effect on site 1Ma672 (Figure 3.13). The archaeological site is located 25 to 35 meters (82 to 115 feet) west of existing SR 53. The proposed limits of construction extend approximately 16 meters (52 feet) into the site. The proposed right-of-way extends approximately 26 meters (85 feet) into

the site. Limits of construction and right-of-way will be further developed during the design phase of the project. Project area of effect for site 1Ma672 will be established as right-of-way plans are further developed. The State Historic Preservation Officer (SHPO) has determined that site 1Ma672 is not eligible for preservation in place. The Alabama Department of Transportation has committed to conduct additional research and, if required, conduct data recovery, should the final design of the proposed project affect site 1Ma672. Concurrence from the SHPO is included in Section 4.2.

3.17.4. Historic Standing Structures

An architectural historian surveyed the entire project area as well as portions of the surrounding area. Every standing structure located in the vicinity of the right-of-way of the proposed project was inspected to determine the age of each resource. Only those identified structures that were determined to be fifty years or older, the minimum requirement for designation as a historic structure, were documented. Identified historic structures were photographed and keyed to 7.5 minute topographic maps. Additionally, pertinent information (e.g. date of construction, construction materials, architectural type, and condition) was recorded for each structure. Historic structures in the study area are shown of Figure 3.13.

3.17.5. No-Action Alternative

No new adverse impacts will occur.

3.17.6. Preferred Alternate

The preferred alternate will not impact standing structures eligible for the NRHP. Concurrence from the State Historic Preservation Officer is included in Section 4.2.

3.18. Potential Hazardous Materials Sites

Field investigations were performed in order to determine the location of underground storage tanks (USTs) at presently operating, as well as abandoned fuel dispensing facilities. Other areas such as junk yards and hazardous materials storage sites were also assessed for potential contamination. Field investigations were conducted in May 1997. Twenty-one sites were identified during field investigations.

3.18.1. No-Action Alternative

No acquisition of right-of-way from potential hazardous materials sites will occur.

3.18.2. Preferred Alternate

The preferred alternate will impact eight potential hazardous materials sites. These sites are labeled 1 through 8 on Figure 3.13. Coordination with the Alabama Department of Environmental Management was conducted in August 1998 to determine if any complaints, citations, or enforcement actions have been recorded at the eight potential hazardous materials sites on the preferred alternate. Alabama Department of Environmental Management records do not record any complaints, citations or enforcement actions at the eight sites. Individual site comments are included on the Hazardous Materials Notification Forms. Hazardous Materials Notification Forms are included in Appendix H.

Site 1 Key Machinery Co., Inc.

This commercial facility is a heavy equipment dealership located approximately 20 meters (66 feet) west of existing SR 53. The facility has repair bays located at the west end of the building. Potential contaminants of concern are oils, motor fuel and hydraulic fluids.

Site 2 Auto Works

Auto Works is a garage and associated salvage yard located approximately 24 meters (79 feet) west of existing SR 53. Potential contaminants of concern are motor fuels, oils and automotive fluids.

Site 3 Don's Used Cars/Auto Repairs/Transmission Service

Don's Used Cars is a six bay auto repair facility located approximately 20 meters (66 feet) west of existing SR 53. Potential contaminants of concern are motor fuels, oils and automotive fluids.

Site 4 B & B Automotive

B & B Automotive is an automobile salvage yard adjacent to SR 53. Potential contaminants include motor fuels, oils and automotive fluids.

Site 5 Exxon

Site 5 is an operating gasoline station/convenience store located in the southwest quadrant of the intersection of Jeff Road and SR 53. Field investigations revealed that there are two USTs and two dispenser islands on-site. USTs and islands are located approximately 25 meters (82 feet) west of existing SR 53. USTs contain unleaded gasoline. Volume of the USTs is unknown. ADEM Facility I.D. Numbers were not available for inspection. The facility is owned by Williamson Oil Company of Fort Payne, Alabama.

Site 6 Exxon/Discount Food Mart # 207

Site 6 is an operating gasoline station/convenience store approximately 16 meters (52 feet) west of existing SR 53. The facility, ADEM Facility I.D. # 16158-089-013028, utilizes two USTs for storage of unleaded gasoline.

One 22,710-liter (6,000-gallon) UST and one 30,280-liter (800-gallon) UST are located on-site. Potential contaminants of concern are motor fuels, oils and automotive fluids.

Site 7 BP/Harvest Jiffy Mart

Site 7 is an operating gasoline station/convenience store approximately 12 meters (39 feet) west of existing SR 53. The facility, ADEM Facility I.D. # 20113 089 003908, utilizes two 18,925-liter (5,000-gallon) USTs for gasoline storage, one 3,785-liter (1,000-gallon) UST for diesel storage, and one 1,892-liter (500-gallon) above ground storage tanks (AST) for kerosene storage. Potential contaminants of concern are motor fuels, oils, and automotive fluids.

Site 8 Towry's Food Mart/Vulcan Discount Gas

Site 8 is an abandoned gasoline station/convenience store approximately 15 meters (49 feet) west of existing SR 53. The facility, ADEM Facility I.D. # 15201 089 013355, utilizes five USTs. There are two 22,710-liter (6,000-gallon) and one 15,140-liter (4,000-gallon) gasoline UST on-site. Also, there is one 7,570-liter (2,000-gallon) diesel UST and one 7,570-liter (2,000-gallon) kerosene UST on-site. Potential contaminants of concern are motor fuels, oils and automotive fluids. Coordination with the owner indicated that the USTs may have been closed by removal on August 7, 1998.

3.19. Visual Impacts

The project area has been the site of a two-lane, two-way roadway for a number of years. Most of the residential and commercial development voluntarily migrated to SR 53 to take advantage of the improved accessibility and exposure afforded by this roadway. These developments have become acclimated to the close proximity of SR 53.

3.19.1. No-Action Alternative

No new adverse impacts will occur.

3.19.2. Preferred Alternate

No adverse impacts will occur along existing SR 53. The introduction of a new roadway south of Ardmore will create views for motorists using the new roadway, as well as views of the roadway by those living in the area. In order to ensure that the proposed action will be aesthetically pleasing, natural elements should be incorporated when possible.

3.20. Construction Impacts

Erosion and sedimentation will be an area of concern regarding water quality during construction. Proper construction procedures will minimize potential impacts to the water quality of the study area. Construction impacts on water quality will be minimized with BMPs.

4. COMMENTS AND COORDINATION

Two public involvement meetings for the project were held on August 28, 1997. The meetings were held in the vicinity of the project at the University of Alabama in Huntsville and at Ardmore High School in Ardmore. The meetings were conducted by the Alabama Department of Transportation in an open house format. The public was provided an information package discussing the project and a questionnaire with accompanying sheets for additional written comments. Aerial mapping of the project was displayed. Questions regarding the project were answered individually by Alabama Department of Transportation representatives. The total attendance was 181. Forty-five people attended the meeting in Huntsville and 136 people attended the meeting in Ardmore. Overall, attendees were in favor of the project. Forty-eight written comments were received following the public involvement meetings with results as follows: 85 percent of the comments were in favor of the project, eight percent opposed the project, seven percent expressed no preference related to the project. Of the 41 comments in favor of the project, only 39 percent indicated a preference toward a specific alternate. Twelve percent favored the preferred alternate, 12 percent favored widening SR 53 to the east of existing and 15 percent favored the north alignment for new location sections of the project. Sixty-one percent showed no preference toward a specific alternate.

4.1. Agency Coordination

Advance notification and early coordination procedures were initiated in accordance with 23 CFR 771.111 to solicit comments from federal, state, regional, and local agencies and groups concerning issues related to the proposed project. Continued agency coordination has taken place throughout the life of this project. Copies of all agency correspondence received are included in Section 4.2. The following is a list of those agencies/persons notified in the early coordination process:

US Environmental Protection Agency
Region IV, Environmental Assessment
Branch, NEPA Review Staff
345 Courtland Street, NE
Atlanta, GA 30365

Recreation Program Coordinator
Planning and Economic Development Division
Alabama Department of Economic
And Community Affairs
PO Box 5690
Montgomery, AL 36103-5690

Mr. R. W. Wagner, P.E.
Regional Environmental Officer
DHHS/ROFEC
101 Marietta Tower, Suite 1503
Atlanta, GA 30323

Regional Director
National Park Service
US Department of the Interior
Southeast Region
75 Spring Street, SW
Atlanta, GA 30303

Regional Director, Region 4
Fish & Wildlife Service
US Department of the Interior
1875 Century Boulevard
Atlanta, GA 30345

Water Resources Division
US Geological Survey
US Department of the Interior
PO Box 210337
Montgomery, AL 36121-0337

Chief, Environmental Impact
Assessment Program
US Geological Survey; MS-760
US Department of the Interior
Reston, VA 22092

Director
US Department of the Interior
Office of Surface Mining
Birmingham Field Office
220 West Valley Avenue, 3rd Floor
Homewood, AL 35209

Regional Environmental Officer
Southeast Region
US Department of the Interior
75 Spring Street, SW
Atlanta, GA 30303

Cahaba River Society
2717 7th Avenue South
Suite 205
Birmingham, AL 35233

Mr. John Hornsby
Environmental Coordination
Game and Fish Division
64 North Union Street
Montgomery, AL 36130

Director
Office of Highway & Traffic Safety
Department of Economic
and Community Affairs
PO Box 5690
Montgomery, AL 36103-5690

Corporate Real Estate Department
Alabama Power Company
PO Box 2641
Birmingham, AL 35291

Assistant to Director
Alabama State Council on the
Arts and Humanities
One Dexter Avenue
Montgomery, AL 36130

Chief
Bureau of Mines
Intermountain Field Operations Center
Building 20, Denver Federal Center
Denver, CO 80225

Director
Geological Survey of Alabama
State Oil & Gas Board
PO Box O
University, AL 35486

Director
Bureau of Publicity and Information
532 South Perry Street
Montgomery, AL 36104

State Conservationist
Soil Conservation Service
US Department of Agriculture
PO Box 311
Auburn, AL 36830

US Department of Housing and
Urban Development
Birmingham Office, Region IV
Beacon Ridge Tower, Suite 300
600 Beacon Parkway, West
Birmingham, AL 35209

Chairman
Transportation Committee
The Alabama Conservancy
1920 Rosalie Ridge
Huntsville, AL 35811

Alabama Forestry Commission
513 Madison Avenue
Montgomery, AL 36130

Superintendent of Education
State Office Building
Montgomery, AL 36130

Forest Supervisor
USDA-Forest Service
1765 Highland Avenue
Montgomery, AL 36107

Chief
Planning & Appraisal Staff, FAA
PO Box 20636
Atlanta, GA 30320

Director
Alabama Department of Industrial Relation
649 Monroe Street
Montgomery, AL 36130

Executive Vice President
Alabama Cattlemen's Association
PO Box 2499
Montgomery, AL 36102-2499

Attorney General
State of Alabama
11 South Union Street
Montgomery, AL 36130

Commissioner
Department of Agriculture & Industries
Richard Beard Building
Montgomery, AL 36130

Soil & Water Conservation Commission
Richard Beard Building
Montgomery, AL 36130

The Alabama Conservancy
2717 7th Avenue South, #201
Birmingham, AL 35233-3405

Chairman
Cahaba Group Sierra Club
872 Burning Tree Trail
Alabaster, AL 35007

Director
Alabama Development Office
c/o State Capitol
Montgomery, AL 36130

Director
Alabama Emergency Management Agency
PO Drawer 2160
Clanton, AL 35045

Regulatory Functions Branch
Attention: Mr. Bill McNeil
Corps of Engineers
PO Box 2288
Mobile, AL 36628

Director, Eastern States Office
Bureau of Land Management
US Department of the Interior
411 Briarwood Drive, Suite 404
Jackson, MS 39206

Honorable Laura Hall
Representative
House District 19
PO Box 3274
Huntsville, AL 35810

Honorable Lee Jorgensen
Representative
House District 6
PO Box 1245
Madison, AL 35758

Honorable Tommy Carter
Representative, House District 5
18216 Upper Fort Hampton Road
Elkmont, AL 35620

Historical Preservation Officer
Alabama Historical Commission
468 S. Perry Street
Montgomery, AL 36130

Alabama Department of
Environmental Management
State Capitol
Montgomery, AL 36130

Chief, Environmental Assessment
Branch
Duval Building
9450 Koger Boulevard
St. Petersburg, FL 33702

Mr. Ron Saunders, EDD
Superintendent
Huntsville City Schools
PO Box 1256
Huntsville, AL 35807-4801

Honorable Eugene Shannon
Mayor, City of Ardmore
PO Box 151
Ardmore, AL 35739

Honorable Steve Hettinger
Mayor, City of Huntsville
PO Box 308
Huntsville, AL 35804

Commissioner Stanley Menefee
310 W Washington Street
Athens, AL 35611

Commissioner Daryl Sammet
310 W Washington Street
Athens, AL 35611

Honorable Dewayne Freeman
Senator
Senate District 7
11 South Union Street, # 729
Montgomery, AL 36130-4600

Commissioner Buddy Shields
310 W Washington Street
Athens, AL 35611

Mr. Don Osborne
Superintendent, Limestone County Schools
300 S. Jefferson Street
Athens, AL 35611

Commissioner Walter McGlocklin
310 W Washington Street
Athens, AL 35611

Mr. Ralph V. Green, EDD
Superintendent, Madison County Schools
PO Box 226
Huntsville, AL 35804

Commissioner Wendell Powers
310 W Washington Street
Athens, AL 35611

Commissioner Mike C. Gillespie
Room 700, Courthouse
Huntsville, AL 35801

Mr. Richard Sanders
310 W Washington Street
Athens, AL 35611

Commissioner Tillman Hill
Room 700, Courthouse
Huntsville, AL 35801

Judge Michael L. Davis
310 W Washington Street
Athens, AL 35611

Commissioner Faye Dyer
Room 700, Courthouse
Huntsville, AL 35801

Sheriff Mike Blakely
309 Green Street
Athens, AL 35611

Commissioner Jerry Craig
Room 700, Courthouse
Huntsville, AL 35801

Mr. David J. Pope
514 Cook Avenue
Huntsville, AL 35801

Commissioner Glen Nunley
Room 700, Courthouse
Huntsville, AL 35801

Judge Frank Riddick
Judge of Probate
Room 700, Courthouse
Huntsville, AL 35801

Commissioner Rob Colson
Room 700, Courthouse
Huntsville, AL 35801

Sheriff Joe Whisante
Room 700, Courthouse
Huntsville, AL 35801

Commissioner Prince Preyer, Jr.
Room 700, Courthouse
Huntsville, AL 35801

4.2. Coordination and Concurrence

The following is a list of coordination and concurrence in support of the proposed improvements to SR 53.



ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050



July 10, 1998

Fob James, Jr.
Governor

Jimmy Butts
Transportation Director

Mr. Paul Griggs
David Volkert & Associates, Inc.
P. O. Box 7434 (36670)
3809 Moffet Road
Mobile, AL 36618

Dear Mr. Griggs:

Re: ST-045-053-001 Limestone & Madison Counties
SR-53 from Huntsville north to Ardmore

Based on the factors discussed in your letters dated April 17, 1998, and June 25, 1998, the Department concurs in your recommendation to proceed with the alignment 1-2-3-4-5 west, 5-7 south, 7-8 north, and 8-9 as the preferred alternate for the above referenced project.

You are advised to proceed with the Environmental Assessment for this project and forward it to Ms. Alfredo Acoff, ALDOT Environmental Technical Coordinator, for her review.

Sincerely,

Don T. Arkle
Chief, Design Bureau

By: 
William F. Adams
Chief, Location Bureau

TWR

cc: Mr. Don T. Arkle
Mr. Dalmus Davidson
Ms. Alfredo Acoff
Location File



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

June 8, 1998

IN REPLY REFER TO
Regulatory Branch

SUBJECT: File No. 980008610; Widening of State Route 53 Between Huntsville and I-65 (Ardmore), in Madison and Limestone Counties, Alabama [Project No. ST-045-053-001]

Kyle E. Parker, P.E.
Vice President
Volkert Environmental Group, Inc.
P.O. Box 7434
Mobile, Alabama 36670



Dear Mr. Parker:

This concerns your request for comments regarding the potential effects of the subject proposal on areas of interest or programs administered by this office. Please reference File No. 980008610 when writing or calling us about this work.

The Alabama Department of Transportation proposes to upgrade SR 53 to a four-lane roadway within the subject limits. Two lanes would be added adjacent to SR 53's existing two-lane section from the termini of the existing four-lane in Huntsville northwestward to a point south of Ardmore. South of Ardmore a bypass would be built consisting of approximately 4.8 miles of divided, four-lane roadway on new alignment linking SR 53 to I-65 at the existing I-65/SR 53 interchange.

According to the Elkmont, Ardmore, Toney, and Jeff U.S. Geological Survey quadrangles and corresponding U.S. Fish and Wildlife Service National Wetland Inventory maps, the proposed widening and new alignment sections of SR 53 would affect waters of the United States, including jurisdictional wetlands. Streams and tributaries affected, among others, include Dry Creek, Tyrone Creek, Denton Branch, Limestone Creek, and Piney Creek. Filling, excavation, and other similar activities associated with roadwork would require Department of the Army (DA) approval under Section 404 of the Clean Water Act.

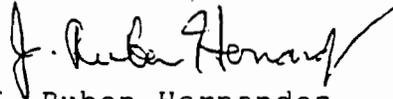
Under Section 404, we are required to evaluate your proposed activity under the Section 404(b)(1) guidelines prepared by the Environmental Protection Agency. The guidelines restrict discharges into aquatic areas where less environmentally damaging, practicable alternatives exist. Based on the information provided, it appears that the western alignment alternative would

impact less wetlands and/or waters of the United States. Therefore, your consideration of the western alternative is proper and strongly encouraged.

Concerning your request for participation as a cooperating agency in preparing the required environmental document for this project, we are pleased to accept this role. In this way, we will avoid duplication of effort in meeting our National Environmental Policy Act responsibilities for the future DA permit review potentially associated with the proposal.

We appreciate your early coordination of this proposed highway project. Please feel free to call us if you need any additional information.

Sincerely,



J. Ruben Hernandez
Project Manager
Construction-Operations Division



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499

August 28, 1997

Mr. Gary W. Moore
Acting Coordinator
Environmental Technical Section
Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050



Dear Mr. Moore:

PROPOSED STATE ROUTE 53 IMPROVEMENT - PROJECT ST-045-053-001,
HUNTSVILLE TO ARDMORE AND ARDMORE BYPASS, WHEELER RESERVOIR
TRIBUTARIES, MADISON AND LIMESTONE COUNTIES, ALABAMA

TVA has reviewed the scoping notice of June 19 for the proposed improvements to State Route 53. Depending on the final highway design, approvals under Section 26a of the TVA Act may be required for crossings of the Piney Creek, Limestone Creek, Dry Creek, Denton Branch, and perhaps other Tennessee River tributaries. In order to reduce the need for a separate and supplemental TVA environmental review following the Federal Highway Administration review and to speed 26a approvals at that time, TVA would like to request of the Alabama Department of Transportation/Federal Highway Administration that TVA be included as a Cooperating Agency for the purposes of National Environmental Policy Act coordination.

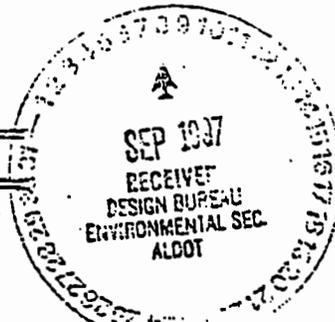
TVA's Wheeler Reservoir Land Management Office is conducting a preliminary inquiry review of the project. This should provide any information TVA has on file on sensitive environmental resources. When this information is available, it will be forwarded to you. Should you have any questions, please contact Harold M. Draper at (423) 632-6889 or hmdraper@tva.gov.

Sincerely,

Jon M. Loney
Jon M. Loney, Manager
Environmental Management

Copy to: 1ST Div. Eng.
 Location
 Utilities
 ETS
 DVA

cc: Mr. Joe D. Wilkerson
Federal Highway Administration
500 Eastern Boulevard, Suite 200
Montgomery, Alabama 36117





Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499

November 3, 1997



Mr. Gary W. Moore
Acting Coordinator
Environmental Technical Section
Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Dear Mr. Moore:

**PROPOSED STATE ROUTE 53 IMPROVEMENT - PROJECT ST-045-053-001,
HUNTSVILLE TO ARDMORE AND ARDMORE BYPASS, WHEELER RESERVOIR
TRIBUTARIES, MADISON AND LIMESTONE COUNTIES, ALABAMA**

As a follow-up to my letter of August 28, 1997, TVA wishes to transmit several additional items resulting from our preliminary inquiry review.

- There are records of the Tuscumbia darter, a Special Concern species, in Indian Creek along the highway corridor. In addition, several caves are near the corridor. The EA should describe how impacts to the darter, caves, and groundwater would be avoided in highway construction.
- From site inspection, it appears that the impacts on wetlands could be minimized by constructing the two additional lanes on the west side of the current highway.
- If the project appears to involve relocations or modifications to the TVA transmission lines in the North Huntsville area and the Ardmore area, these proposed actions should be recognized in the EA.
- The EA should note that approvals under Section 26a of the TVA Act would likely be needed for new bridges or culverts or culvert extensions across the streams in the area.

TVA is pleased to serve as a cooperating agency on this project. Should you have any questions, please contact Harold M. Draper at (423) 632-6889 or hmdraper@tva.gov.

Sincerely,

Jon M. Loney
Jon M. Loney, Manager
Environmental Management

cc: Mr. Joe D. Wilkerson
Federal Highway Administration
500 Eastern Boulevard, Suite 200
Montgomery, Alabama 36117

Copy to: 1ST Dir. Eng.
 Location
 Utilization
 DVA



ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050



Fob James, Jr.
Governor

February 10, 1998

Jimmy Butts
Transportation Director

Mr. Jon M. Loney
Environmental Management
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1499



SUBJECT: Project No. ST-045-053-001
SR 53 from Huntsville
To I-65 in Ardmore,
Madison and Limestone Counties, Alabama

Dear Mr. Loney:

The Alabama Department of Transportation has received your correspondence listing items to be addressed in the Environmental Assessment (EA) for the SR 53 project. We appreciate your preliminary inquiry review of the project and anticipate the EA addressing the following four (4) items included in your correspondence as follows:

Item 1: "There are records of the Tuscumbia darter, a special concern species in Indian Creek along the highway corridor. In addition, several caves are near the corridor. The EA should describe how impacts to the darter, caves, and groundwater would be avoided in highway construction."

Coordination with the U.S. Fish and Wildlife Service has been conducted in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). The U.S. Fish and Wildlife Service has concurred that no significant adverse effects on fish and wildlife resources or federally listed species are expected to result from the proposed project. Copies of this correspondence are attached for your records and will be included in the EA.

The study area was investigated for caves by geologists from the study team. The study area is underlain by Tuscumbia Limestone and Fort Payne Chert. Tuscumbia Limestone and Fort Payne Chert are known to be karstic in the vicinity of the proposed project. No caves were discovered in the study area.

The U.S. Fish and Wildlife Service noted Indian Cave (Limestone County), Shelta Cave (Madison County) and Hering Cave (Madison County) as critical habitat for Gray Bat colonies. The Service has concurred that there are no caves in the study area and that the proposed project is not expected to impact critical habitat for the Gray Bat. The EA will state that the proposed project avoids impacts to caves.

Impacts to groundwater resources will be avoided through Best Management Practices. The EA will list erosion and sedimentation controls as specified in the Temporary Erosion control section of the Alabama Department of Transportation Standard Specifications for highway construction. Also, a National Pollutant Discharge Elimination System permit will be required by the Alabama Department of Environmental Management.

Item 2: "From site inspection, it appears that the impacts on wetlands could be minimized by constructing the two additional lanes on the west side of the current highway."

Constructing two (2) additional lanes to the west of existing SR 53 would involve 2.6 hectares of wetland impacts. Constructing two (2) additional lanes to the east of existing SR 53 would involve 5.3 hectares of wetland impacts. At present, a preferred alternate has not been selected. It is recognized that an alternate widening to the west of existing SR 53 would minimize potential wetland impacts by 2.7 hectares over widening to the east. Alternates will be presented in the EA to avoid, minimize and mitigate wetland impacts in accordance with the Clean Water Act and FHWA Technical Advisory T6640.8A.

Item 3: "If the project appears to involve relocations or modifications to the TVA transmission lines in the north Huntsville area and the Ardmore area, these proposed actions should be recognized in the EA."

A preliminary utility relocation analysis has been performed by the Alabama Department of Transportation, 1st Division, Right-of-Way Engineer. There are no indications of relocations or modifications to Ardmore Substation or Ardmore-Fayetteville 161-kV, Ardmore-Athens 161-kV, Ardmore-Belle Mina 46-kV, or Ardmore-Elkmont-Pulaski 46 kV transmission lines. The utility relocation analysis will be included in the EA.

Item 4: "The EA should note that approvals under Section 26(a) of the TVA Act would likely be needed for new bridges or culverts or culvert extensions across streams in the area."

The permits section of the EA will include references to TVA permits administered in accordance with Section 26(a) of the TVA Act and TVA's Flood Storage Loss Guidelines as applicable to the Tennessee River and all tributaries in the Tennessee Basin. The proposed project will cross Dry Creek, Limestone Creek and Tyrone Creek at existing crossings. Little Limestone Creek and Piney Creek will be crossed on new location. Coordination with TVA will continue during the design phase of the project as specified designed of bridges and culverts are developed.

The Alabama Department of Transportation appreciates TVA's contribution to the project as a cooperating agency. If we can be of further assistance, please advise.

Sincerely,

Don T. Arkle, Chief
Design Bureau

By: 
Gary W. Moore, Acting Coordinator
Environmental Technical Section

RJM:cmf

c: David Volkert and Associates, Inc.
Design File
ETS File



United States Department of the Interior

FISH AND WILDLIFE SERVICE
2001-A Highway 98
P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO:

October 27, 1997

Mr. Don T. Arkle, P.E.
Chief, Design Bureau
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, AL 36130

Attention: Mr. Gary Moore, P.E.

RE: Project No. ST-045-053-001
SR 53 from Huntsville to I-65 in Ardmore
Madison and Limestone Counties

Dear Mr. Arkle:

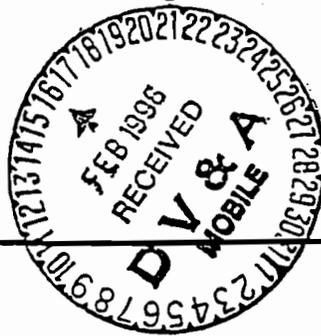
Thank you for your letter dated, September 26, 1997, requesting comments on the above referenced project. The U.S. Fish and Wildlife Service has reviewed the information you enclosed and are providing the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service concurs that no significant adverse effects on fish and wildlife resources or federally listed species are expected to result from the proposed project. If you have questions or need additional information please contact Mr. Steve Seibert at (205) 353-7243.

Sincerely,

E. R. Roach
Acting Field Supervisor

cc: David Volkert & Assoc., Inc. (Attn: Buddy Covington)
P. O. Box 7434
Mobile, AL 36670



DAVID VOLKERT & ASSOCIATES, INC.

Engineers • Architects • Planners

February 12, 1996

Project ST-045-053-001
SR 53 from Huntsville to Ardmore
Madison and Limestone Counties, Alabama



Mr. Larry E. Goldman
Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
P.O. Drawer 1190
Daphne, Alabama 36526

Dear Mr. Goldman:

The Alabama Department of Transportation (ALDOT) has selected David Volkert and Associates (Volkert) to perform engineering studies and an Environmental Assessment for adding two lanes to State Route 53 (SR 53) in Madison and Limestone Counties, Alabama.

The project will begin northwest of Huntsville, Alabama at the existing 4-lane portion of SR 53. The project will extend to the northwest until it approaches Ardmore, Alabama. It will then turn to the west and intersect I-65. The estimated length of the project is 29 km and it is anticipated to parallel existing SR 53, as shown on the enclosed map.

Volkert requests written correspondence from your office concerning threatened and endangered species that may inhabit the project study area. It is understood that this correspondence will not constitute Section 7 consultation. The information will be used to estimate future investigations for projected species.

If you should have any questions or require additional information, please feel free to contact Buddy Covington at (334) 342-1070.

Sincerely,

Paul H. Griggs, P.E.
Project Manager

H4396106a

/lwh
Enclosures
c: Buddy Covington

No listed, proposed or candidate species present

U.S. Fish & Wildlife Service Field Supervisor

2/14/96

Date



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, Tennessee 38501

FILE
USBS



March 5, 1996

Mr. Paul H. Griggs
Project Manager
Volkert & Associates, Incorporated
P.O. Box 7434
Mobile, Alabama 36670

Re: FWS #96-0785

Dear Mr. Griggs:

Thank you for your letter and enclosure of February 12, 1996, regarding a proposed widening of State Route 53 in Madison and Limestone Counties, Alabama. The Fish and Wildlife Service (Service) has reviewed the information submitted, and that provided by Mr. Buddy Covington of Volkert & Associates during a telephone conversation with Jim Widlak of my staff on February 23, and we offer the following comments.

The proposed highway widening project will involve crossings of Beaverdam Creek, Limestone Creek, and Little Limestone Creek. Our records indicate that the federally endangered Anthony's river snail occurs in Limestone Creek. Although collection records indicate that the species occurs far downstream from the project crossing, it is possible that a population of this species exists in the upper reaches of the drainage, provided that suitable habitat exists. We recommend that you determine if suitable habitat exists in the project area for Anthony's riversnail. If surveys are performed, they should be conducted by qualified biologists with experience in identifying aquatic snails and suitable habitat.

Information available to the Service indicates that the federally endangered gray bat may occur in the project impact area. Caves harboring summer and winter colonies of this species are known to exist to the west (approximately 8 miles), south (30 miles), and southeast (34 miles) of the project area. We therefore recommend that you determine if any caves exist within the impact area of the proposed project, or within four miles of any streams crossed by the project. The gray bat is known to fly up to four miles between its colony sites (caves) and foraging areas; thus, streams in the project area may provide foraging habitat for gray bats roosting within four miles of the stream. If caves are encountered, an attempt should be made to determine if they are used by gray bats. Any surveys should be conducted by qualified biologists with experience in

conducting such surveys and identifying bats. Caves within the project area should be avoided if possible. If caves are identified within four miles of project areas on Beaverdam Creek, Limestone Creek, or Little Limestone Creek, strict measures should be employed during stream crossings to avoid water quality degradation and to minimize removal of riparian vegetation.

Section 7 of the Endangered Species Act requires Federal agencies to ensure that actions they authorize, fund, or carry out do not jeopardize the continued existence of listed species. Agencies (or their designated non-Federal representatives) must assess impacts to listed species and determine if proposed actions may affect them. A finding of "may affect" may require initiation of formal consultation.

The Beaverdam Creek drainage supports populations of the spring pygmy sunfish, a Federal candidate species. This species is not legally protected under the Endangered Species Act, and the consultation requirements of Section 7 of the Act do not currently apply to it. However, this species is being considered by the Service for possible listing in the future and we would appreciate anything you might do to avoid impacting it.

Thank you for the opportunity to comment on this action. If you have any questions, please contact Jim Widlak at 615/528-6481.

Sincerely,



Lee A. Barclay, Ph.D.
Field Supervisor

xc: Field Supervisor, ES, FWS, Daphne, AL

~~SECRET~~
98.0453



ALABAMA DEPARTMENT OF TRANSPORTATION
1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050



Fob James, Jr.
Governor

May 27, 1998

Jimmy Butts
Transportation Director

Elizabeth Ann Brown
Deputy State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
Montgomery, Alabama 36130-0900

RE: SR 53 from Huntsville to I-65 in Ardmore
Project ST-045-053-001
Madison & Limestone Counties



Dear Ms. Brown:

In your letter of April 7, 1998, the Survey and Registration Division had several questions concerning the above referenced project. A meeting was requested so that ALDOT and its contractor, Volkert & Associates, could address their concerns and obtain the necessary concurrence to proceed with the project. As a result of that meeting the following items were agreed upon:

- Resources 2, 3, 4, 6, 7, 8, 15, 16, 17, 18, 19, 20 and 22 are not considered eligible for the National Register.
- The cemeteries, the Seay Cemetery, the St. James Chapel Cemetery, the Delap-Clemant Cemetery and the Hastings Cemetery, are all screened in a manner to make them out of the area of potential effect.
- Resource 1, a frame bungalow situated in a stand of trees some 295 feet east of existing SR 53 and separated from SR 53 by a number of new commercial structures, is out of the area of potential effect for either the east or west widening alternative.
- Resource 5, a two-story I-house is eligible for the register under Criteria C for its architecture. Because of the large amount of intrusive new construction surrounding the house, only the land on which the structure sits is included in the National Register Property. Widening on either side of the current roadway will have a no adverse effect on the eligibility of this

structure. However, road construction will be kept as far away from this structure as practicable.

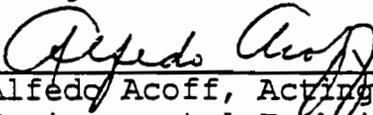
- Resources 9, 10, 11, 14 and 21, are all considered out of the area of potential effect of this project
- The northern alternative of the new alignment portion of this project will have a no adverse effect (only a visual effect) on resource 12 and an adverse effect (taking of property) on resource 13. The southern alternative will have a no adverse effect on resource 13 and resource 12 is out of the area of potential effect of this alternative.

If this is also the understanding of you and your staff please indicate by signing below and returning a copy of this letter to this office.

Sincerely,

Don T. Arkle, Chief
Design Bureau

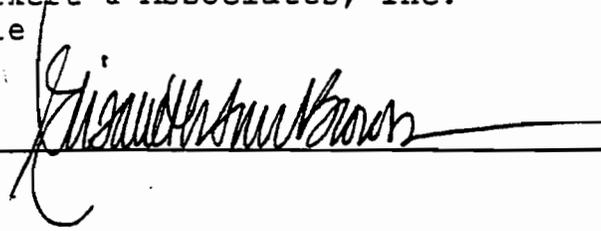
By:


Alfredo Acoff, Acting Coordinator
Environmental Technical Section

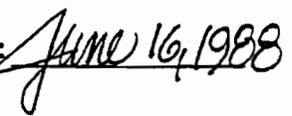
MLC

cc: Volkert & Associates, Inc.
File

CONCUR:



DATE:



STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION

468 South Perry Street
MONTGOMERY, ALABAMA 36130-0900



TELEPHONE NUMBER
334-242-3184

F. LAWRENCE OAKS
EXECUTIVE DIRECTOR

March 9, 1998



Bill Garnett
Alabama DOT
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Re: AHC 98-0455
DOT ST-045-053-001
Historic Standing Structures Report
SR 53 From Huntsville to I-65 in Ardmore
Madison and Limestone Counties, Alabama

Dear Mr. Garnett:

This is to advise you that our office shall be making a site visit to this project area for a more in-depth review. We shall forward written comments upon completion of this review. We appreciate your efforts on this project. Should you have any questions or comments, please contact Nathan Farris of our office.

Sincerely,

A handwritten signature in cursive script, appearing to read "Elizabeth Ann Brown".
Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/GCR/NF



ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050



Fob James, Jr.
Governor

Jimmy Butts
Transportation Director

September 18, 1997

Mr. F. Lawrence Oaks
State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
Montgomery, Alabama 36130

RE: Archaeological Phase I Survey of the Proposed State
Route 53 Expansion from Huntsville to I-65 near
Ardmore, ALDOT Project ST-045-053-001, Madison and
Limestone Counties, Alabama

Dear Mr. Oaks:

Please find enclosed for your review two copies of the above referenced report. As the report details, twenty-seven archaeological sites were recorded within the project's area of effect. However, only two of these, 1Ma672 and 1Ma678 are considered to have sufficient research potential to warrant further work.

1Ma672 will be adversely affected by western expansion of existing SR 53, but will suffer no adverse effect if eastern expansion of SR 53 is the chosen Alternate. 1Ma678 will be adversely affected by eastern expansion of SR 53. The site will receive no adverse effect from west-side widening because the site portion west of SR 53 has been heavily disturbed and this portion of 1Ma678 is considered NR ineligible.

We request concurrence with the report and its findings. We also request concurrence with the proposed project. The Alabama Department of Transportation will sponsor Phase II evaluative testing to establish the National Register status of these sites should they fall within the preferred alternate (not yet selected). Should Phase II Testing results demonstrate that either or both of the sites are National Register eligible, ALDOT will sponsor Phase III Data Recovery prior to initiation of construction. Based on current knowledge, neither site is the type of resource recommended for preservation in place.

The Alabama Department requests concurrence with the report findings and the project based on commitments detailed above. Please indicate concurrence by signing the provided line.

Thank you in advance for your attention to this matter. Please direct questions to Bill Turner of this office.

Sincerely,

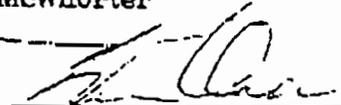
Don T. Arkle, Chief
Design Bureau

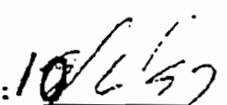
By:


Gary W. Moore, Coordinator
Environmental Technical Section

WBT

c: David Volkert & Associates, Inc.
Bob McWhorter

CONCUR: 

DATE: 



ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050



Fob James, Jr.
Governor

February 10, 1998

Jimmy Butts
Transportation Director

Mr. Robert McBeth
Chief, Hazard Mitigation Branch
Federal Emergency Management Agency
1371 Peachtree Street, N.E.
Suite 736
Atlanta, Georgia 30309-3108



SUBJECT: Project ST-045-053-001
SR 53 from Huntsville
To I-65 in Ardmore,
Madison and Limestone Counties, Alabama

Dear Mr. McBeth:

This letter is to initiate correspondence with FEMA regarding potential impacts associated with the SR 53 project from Huntsville, Alabama northwest to Interstate 65 in the vicinity of Ardmore, Alabama. The project consists of adding two lanes to the existing two-lane roadway at Huntsville to a point south of Ardmore, a distance of approximately 25.6 km. From this point, the project consists of four-lane on new location for a distance of approximately 7.7 km. The 7.7 km section would bypass Ardmore to the south and tie to the existing I-65/SR 53 interchange. An Environmental Assessment is currently being developed for the project.

The proposed project is expected to cross Dry Creek, Limestone Creek, Tyrone Creek, Little Limestone Creek, and Piney Creek. Dry Creek, Limestone Creek, and Tyrone Creek will be traversed at existing crossings along SR 53. Little Limestone Creek and Piney Creek will be crossed on new location.

Structure and culvert requirements crossing regulatory floodways will be determined in the design phase of the project. Proposed structures and culverts will be placed and sized in accordance with Hydraulic Circulars, Alabama Department of Transportation (ALDOT), Hydraulic Manuals, FEMA Flood Insurance Programs, ALDOT Drainage Manuals, ALDOT Guidelines for Operations, Section 26(a) of the TVA Act and TVA's Flood Storage Loss Guidelines.

Correspondence will continue as design of the project develops.

Sincerely,

Don T. Arkle, Chief
Design Bureau

By: *Gary W. Moore*
Gary W. Moore, Acting Coordinator
Environmental Technical Section

RJM:cmf

c: David Volkert and Associates, Inc.
Design File
ETS File



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Southeast/Caribbean
Richard B. Russell Federal Building
75 Spring Street, S.W.
Atlanta, Georgia 30303-3388

August 5, 1996

Mr. Don Arkle, Chief
Design Bureau
ATTENTION: Mr. Gary Moore
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, AL 36130-3050

Dear Mr. Arkle:

This is in response to your requests for comment on Project ST-045-053-001, State Road 53 from Huntsville to Ardmore, Madison and Limestone Counties improvements. The staff of the Southeast/Caribbean Environmental Team of the U.S. Department of Housing and Urban Development (HUD) would like the opportunity to review the effect of the project on housing and businesses that may be relocated due to this project. We are also interested in the impact increased Noise may have on HUD funded projects.

We encourage your Office to coordinate this project with the community development and housing departments of the local governments impacted by the project. Generally, local government community development and housing departments are responsible for housing and economic development activities associated with implementation of HUD's programs.

Also, these departments may provide information helpful in the business and residential relocation activities for the project. If it is determined that a Public Housing development is involved in this project, please notify this Office, so that we may facilitate any internal compliance actions required.

Thank you for the opportunity to comment on this project. Please contact me or Linda Poythress, Environmental Specialist at 404-331-3167 extension 2557, for further information.

Sincerely,

Thomas A. Ficht
Supervisory Environmental
Officer
Southeast/Caribbean

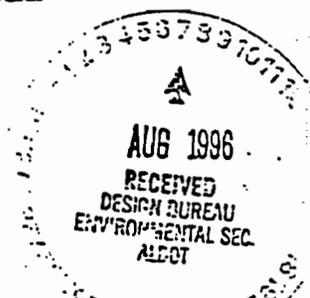
Copy to: 157 Div. Eng.

✓ Location

✓ Utilities

✓ ETS

✓ D.V.A.





U.S. Department
of Transportation
Federal Aviation
Administration

Airports District Office
120 North Hangar Drive, Suite B
Jackson, MS 39208-2306
(601) 965-4628 FAX: (601) 965-4632

July 2, 1996

Mr. Don T. Arkle, Chief
Design Bureau
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, AL 36130-3050
Attention: Mr. Gary W. Moore

Project ST-045-053-001
SR 53 from Huntsville to Ardmore
Madison & Limestone Counties, AL

Dear Mr. Moore:

We have received your proposal sent via letter dated July 26, 1996, to construct additional lanes adjacent to the existing alignment from the four lane roadway just north of Huntsville to a point south of Ardmore, in Madison and Limestone Counties, AL. We have no adverse comments or objections to your proposal as described.

We thank you for the opportunity to review your proposal. If we may be of further assistance, please do not hesitate to contact this office.

Sincerely,

Roderick T. Nicholson
Project Manager

cc:
Alabama Department of Aeronautics

Copy to: ST

Div. Eng.

Location

Utilities

ETS

DVAE



ADEM

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



Fob James, Jr
Governor

James W. Warr
Director

August 12, 1996

(334) 271-7700

1751 Cong. W. L.
Dickinson Drive
Montgomery, AL
36109-2608

Mailing Address:
PO Box 301463
Montgomery, AL
36130-1463

FAX: (334)
Admin: 271-7950
Air: 279-3044
Land: 279-3050
Water: 279-3051
Sp Proj: 213-4399
Field Ops: 272-8131
Backup: 270-5612

Field Offices:

110 Vulcan Road
Birmingham, AL
35209-4702
(205) 942-6168
FAX: 941-1603

400 Well St, N.E.
P.O. Box 953
Decatur, AL
35602-0953
(205) 353-1713
FAX: 340-9359

2204 Perimeter Rd
Mobile, AL
36615-1131
(334) 450-3400
FAX: 479-2593

Mr. Gary Moore
Department of Transportation
1409 Coliseum Boulevard
Montgomery, AL 36130-3050

Dear Mr. Moore:

The Alabama Department of Environmental Management has received proposals for improvement and modification to the county road system of Alabama. The projects are:

Project ST-045-053-001
SR 53 from Huntsville to Ardmore
Madison & Limestone Counties

The Department has made a review based on the information provided. Air and water quality impacts were not specifically addressed. We are assuming that "Best Management Practices" are used to prevent erosion and avoid siltation of streams during construction of the referenced project. "Best Management Practices" consist of the use of silt fences or hay bales across drainage courses and grassing or rip rap to prevent erosion. Large projects may require the use of settling basins with filter dikes to prevent excessive instream turbidity and stream siltation.

The proposed project is not expected to cause exceedances of National Ambient Air Quality Standards; therefore, the proposals are consistent with our State Implementation Plan for air quality.

We hope this letter satisfies the intent of the Federal Statutes requiring intergovernmental review and coordination. If additional information is needed, please contact this office.

Sincerely,

James W. Warr
Director

JWW/ME/em

Copy to: ST
 Div. E.E.
 Location
 Utilities
 ETS

MADISON COUNTY, ALABAMA



OFFICE OF
JOE. W. WHISANTE, SHERIFF

PHONE (205) 532-3413
FAX (205) 532-6976



MADISON COUNTY COURT HOUSE
100 NORTHSIDE SQUARE
HUNTSVILLE, ALABAMA 35801

August 6, 1996

Gary W. Moore, Acting Coordinator
Environmental Technical Section
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Al 36130-3050

Re: Project ST-045-053-001
SR 53 from Huntsville to Ardmore
Madison & Limestone Counties

Dear Mr. Moore:

After review of the proposal to widen Alabama Highway 53 from it's current two to four lanes from, essentially, the Huntsville city limits to just south of Ardmore, Alabama, I can speak with regard to that portion of the project which lies within Madison County.

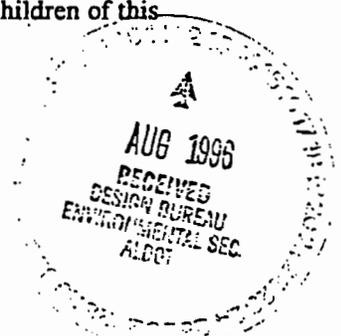
While I have not personally reviewed data from the past several years with regard to traffic fatalities and/or serious accidents on Alabama Highway 53 between Huntsville and the Madison/Limestone County Line, I do know there have been many tragedies along this route. In fact, I would venture to guess that Alabama Highway 53, as a major artery into and away from Huntsville, is one of the most dangerous in the state of Alabama. It stands alone, in addition, as the only major artery into and out of the city which has not been upgraded to a four-lane highway.

Regardless of whether an extension from this highway to Interstate 65 is included in the project, the time is long past when top priority should have been given to extending the number of lanes needed to adequately sustain traffic flow.

Alabama Highway 53 serves, as I am sure you are aware, as the major artery into Huntsville for those persons who live in northwest Madison County and southern Tennessee who work in Huntsville and the industrial areas around the city of Madison. The completion of the "Rideout Road" extension project should serve to increase, even more, the amount of traffic on this segment of highway.

Prior to the opening of the "Rideout Road" extension, a substantial number of motorists were exiting Highway 53 and using county roads Old Railroad Bed Road, Wall-Triana Highway (not depicted on the map you enclosed), and Jeff Road as sub-arteries into the industrial area surrounding the city of Madison. This practice has placed a substantial strain on rural roads which bisect small communities and pass major schools (elementary and middle) therefore creating even greater hazards to the children of this area of Madison County.

- Copy to: Div. Eng.
- Location
- Utilities
- ETS
- DVA



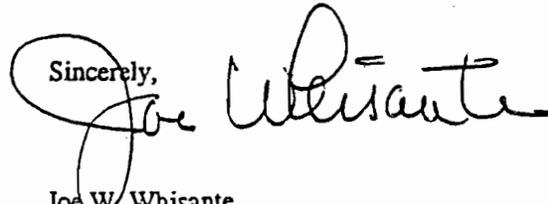
August 6, 1996

PAGE 2

As Sheriff of Madison County, I represent all of our citizens when their safety is at issue, including the safety of those who pass through Madison County in transit. The traffic "overload" on Alabama Highway 53 has long been of concern to me.

There have been studies in the past related to extending Alabama Highway 53 from two to four lanes. To me, the only step left is to move forward with the project. As I have stated, I cannot comment on the feasibility of any construction outside Madison County, but it would seem to me that, given the number of miles of highway which common sense dictates must be expanded from the Huntsville city limits to Ardmore, it's time to get the project underway. While this construction is underway, the feasibility of a "by-pass" from south of Ardmore to Interstate 65 would have plenty of time for continued study.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Whisante". The signature is written in a cursive style with a large, looping initial "J".

Joe W. Whisante
Sheriff

JWW/jpd

5. LIST OF PREPARERS

NAME	TITLE	QUALIFICATIONS
FEDERAL HIGHWAY ADMINISTRATION		
Bill Van Luchene, PE	Safety and Environmental Engineer	Federal Highway Administration Highway Engineer since 1975
ALABAMA DEPARTMENT OF TRANSPORTATION		
Alfredo Acoff	Environmental Coordinator	BS in Civil Engineering, Environmental Coordinator responsible for coordinating environmental studies, reviews, and documents for the Alabama Department of Transportation.
William O. Garnett, PE	Civil Engineer	BS in Business, Highway Engineer responsible for development of environmental documents, 34 years experience in engineering and transportation planning.
Bob McWhorter	Environmental Planning Specialist	BS in Political Science, ten years experience as an Environmental Planning Specialist with the Alabama Department of Transportation.
DAVID VOLKERT & ASSOCIATES, INC.		
Rodney W. Summerford, PE	Vice President of Administration	BS in Civil Engineering with over 33 years experience on various projects for federal, state, local, and private clients. Concentrated
Malcolm N. Beasley, PE	Vice President	BS in Civil Engineering with over 30 years experience on various civil roadway projects for clients such as the Alabama Department of Transportation, Florida Department of Transportation, and various other local and private clients.
Paul H. Griggs, PE	Project Manager	BS in civil Engineering. 24 years experience in engineering. Responsible for overall project management and design.

NAME	TITLE	QUALIFICATIONS
VOLKERT ENVIRONMENTAL GROUP, INC.		
Kyle E. Parker, PE	Civil Engineer Vice President of Environmental Programs	BS in Civil Engineering. 15 years experience in engineering and environmental programs. Principal-in-charge of Volkert Environmental Group, Inc. responsible for administration of all environmental programs.
Henry H. Covington	Project Manager	BS in Geology, BS in Biology with six years experience in environmental and roadway projects.
David J. McDowell	Environmental and Computer Specialist	BS in Communication Arts