THE "CORRIDOR X" TASK FORCE
DEDICATED TO THE ECONOMIC DEVELOPMENT OF NORTHWEST ALABAMA

TASK FORCE CHAIRPERSONS

CITIZEN CHAIR

DON GOETZ
WALKER COUNTY

BUSINESS CHAIR

STEVE FOSHEE
MARION COUNTY

GOVERNMENT CHAIR

HON. MARY BUCKELEW
JEFFERSON COUNTY

COUNTIES IN THE TASK FORCE

JEFFERSON
MARION
WALKER
FAYETTE
LAMAR
WINSTON

CORRIDOR X ACCESS MANAGEMENT AND DEVELOPMENT PLAN

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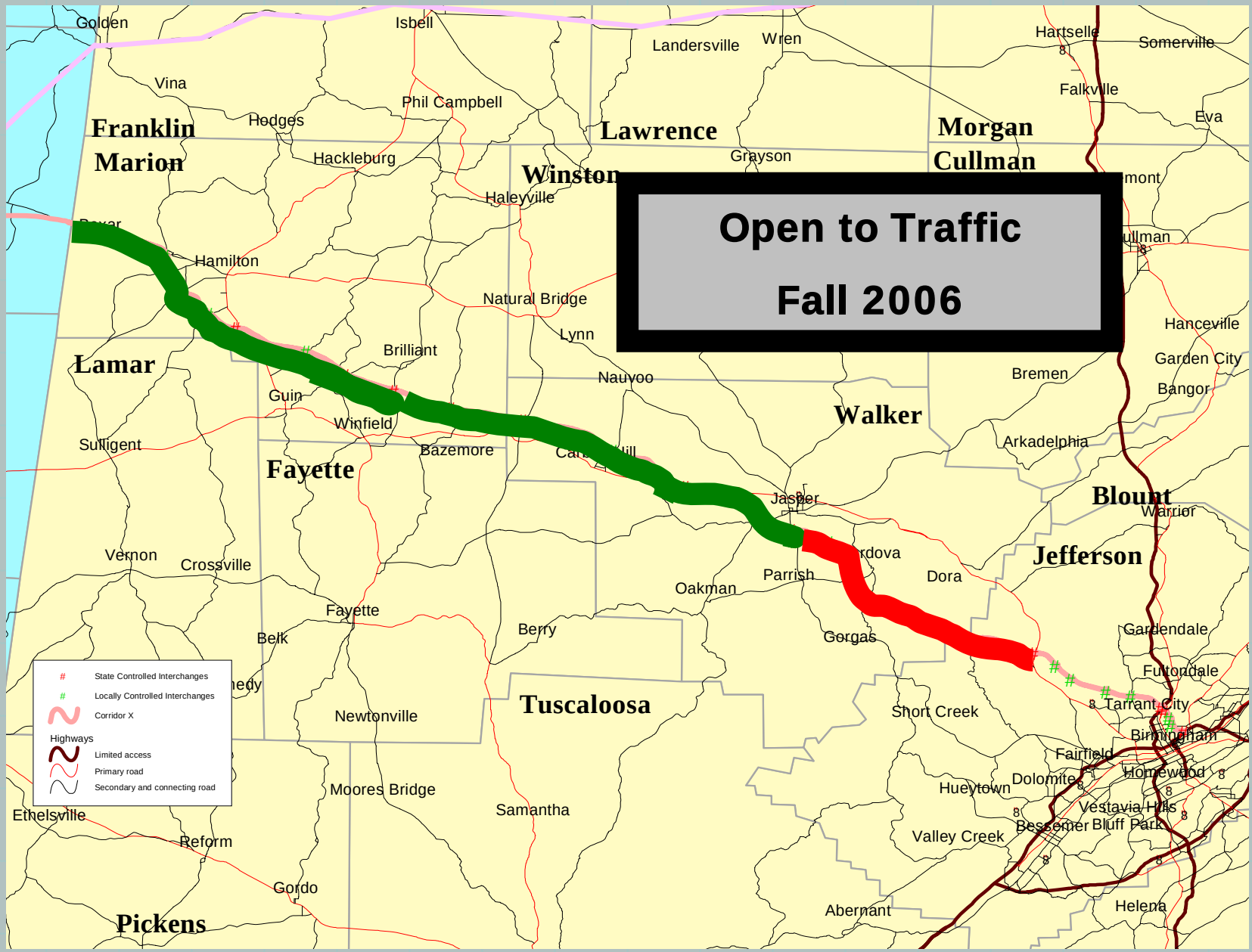
Civil, Construction & Environmental Engineering
University of Alabama

August 14th 2006

2006 Access Management Conference

CORRIDOR "X" TASK FORCE
1731 1st Ave. North - Regional Planning Commission of Greater Birmingham- Birmingham, AL 35203


Open to Traffic
Golden
Isbell
Landersville
Wren
Hartselle
Somerville
Falkville
Vina
Phil Campbell
Hodges
Franklin
Marion
Lawrence
Morgan
Cullman
Eva
Hackleburg
Grayson
Winston
Vinemont
Haleyville
Addison
Jones Chapel
Cullman
Hamilton
Natural Bridge
Lynn
Hanceville
Garden City
Brilliant
Lamar
Nauvoo
Bremen
Bangor
Guin
Walker
Winfield
Sulligent
Bazemore
Arkadelphia
Fayette
Jasper
Blount
Warrior
Vernon
Crossville
Cordova
Jefferson
Parrish
Dora
Oakman
Fayette
Berry
Belk
Gorgas
Gardendale
Fultondale
Tuscaloosa
Short Creek
Tarrant City
Birmingham
Fairfield
Homewood
Dolomite
Huevtown
Moores Bridge
Samantha
Vestavia Hills
Ethelsville
Bessemer
Bluff Park
Valley Creek
Reform
Gordo
Abernant
Helena
Pickens
State Controlled Interchanges
Locally Controlled Interchanges
Corridor X
Highways
Limited access
Primary road
Secondary and connecting road


Open to Traffic
Fall 2006
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Fall 2010 / 2011 ?
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The Project

Participant	Role/Contribution
University of Alabama at Birmingham (UAB), Department of Civil and Environmental Engineering	Overall project management, operational analyses of traffic impacts, technical assistance on trip generation and land use projections, report and project documentation development
University of Alabama at Huntsville (UAH), Department of Civil and Environmental Engineering	Map development for technical analyses, technical assistance on trip generation and land use projections, project documentation (maps) development
University of Alabama, Center for Business and Economic Research (CBER)	Economic analyses of existing conditions along corridor, projection of future industrial and economic activity
Renaissance Planning Group	Lane use modeling, assistance in trip generation and land use forecasting and visualization
4-Site Engineering and Planning	Site suitability analyses, development of implementation guidelines

The Resources

Access management on crossroads in the vicinity of interchanges. NCHRP Synthesis 332
A Guidebook for Including Access Management in Transportation Planning. NCHRP Report 548
Current Practices for Assessing Economic Development Impacts from Transportation Investments, NCHRP Synthesis 290
Guidebook for Assessing the Social and Economic Effects of Transportation Projects, NCHRP Report 456
Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects, NCHRP Report 466
Impacts of Access Management Techniques, NCHRP Report 420
Land Development Regulations that Promote Access Management, NCHRP Synthesis 233
Corridor Preservation, NCHRP Synthesis 197
Guidebook for Transportation Corridor Studies: A Process for Effective Decision-Making, NCHRP 435
Building Effective Relationships between Central Cities and Regional, State, and Federal Agencies, NCHRP Synthesis 297
Access Rights. NCHRP 351

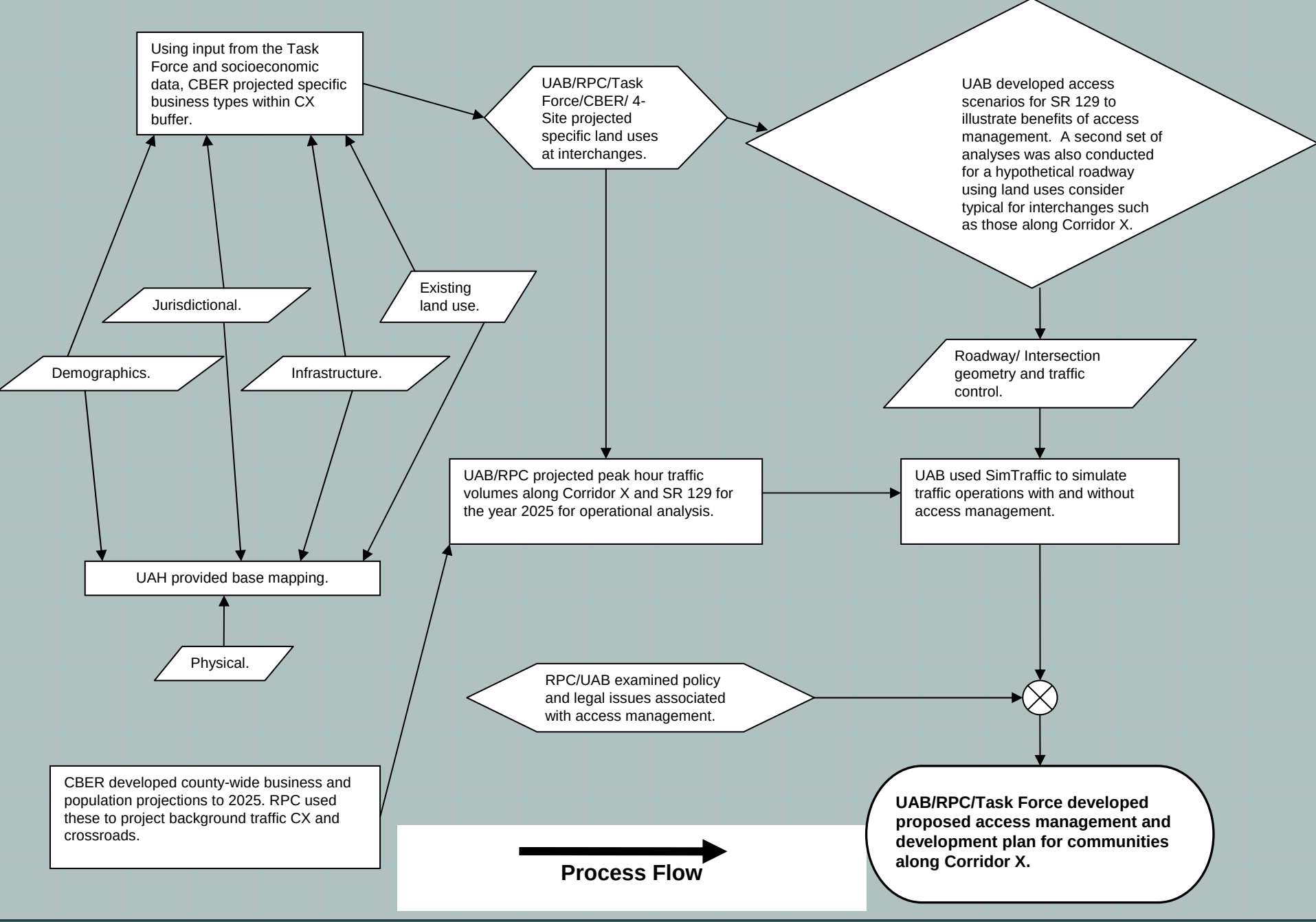
The Team

- The purpose of the project is to apply the analytical tools (regional economic forecasting models, GIS, transportation planning software, and traffic simulation software) to inform the planning and development process along Corridor X.

- Specifically, these tools are used to illustrate the benefits of advanced planning and access management intended to preserve the functional integrity of Corridor X and its interchanges and crossroads.

The Focus

Jefferson	Marion	Walker
Snowville Brent Rd	CR 33	SR 13
US 78	SR 74	CR 11
CR 112	SR 17	US 78
CR 65	CR 35	SR 118W
CR 105	CR 45	SR 118E
Coalburg Road	US 43	SR 69
I-65	SR 129	SR 269
US 31	SR 223	Industrial Park Blvd
	SR 44	CR 22
		CR 61
		CR 81


Using input from the Task Force and socioeconomic data, CBER projected specific business types within CX buffer.
UAB/RPC/Task Force/CBER/ 4-Site projected specific land uses at interchanges.
UAB developed access scenarios for SR 129 to illustrate benefits of access management. A second set of analyses was also conducted for a hypothetical roadway using land uses consider typical for interchanges such as those along Corridor X.
Jurisdictional.
Existing land use.
Demographics.
Infrastructure.
Roadway/ Intersection geometry and traffic control.
UAB/RPC projected peak hour traffic volumes along Corridor X and SR 129 for the year 2025 for operational analysis.
UAB used SimTraffic to simulate traffic operations with and without access management.
UAH provided base mapping.
Physical.
RPC/UAB examined policy and legal issues associated with access management.
CBER developed county-wide business and population projections to 2025. RPC used these to project background traffic CX and crossroads.
Process Flow
UAB/RPC/Task Force developed proposed access management and development plan for communities along Corridor X.

The Product

CORRIDOR X ACCESS MANAGEMENT AND DEVELOPMENT PLAN

By
The Regional Planning Commission or Greater Birmingham
The Center for Regional Planning and Design
1731 First Avenue North
Suite 200
Birmingham, AL 35203

Prepared by

UTCA
University Transportation Center for Alabama
The University of Alabama, The University of Alabama at Birmingham, and
The University of Alabama in Huntsville

The Report

- Section 1.0 presents background and purpose information.
- Section 2.0 describes the economic analysis used to base future land use and traffic projections. The existing and future economic analysis information in Section 2.0 also serves as ***references material for public officials and developers*** active in the study counties.

The Report

- Section 3.0 presents the methodology and results of a detailed effort to analyze the suitability of each Corridor X interchange for various types of possible land development. This information is also of ***particular value to public officials and developers*** and also informed the study team of potential land uses that would affect traffic projections for later portions of the study.

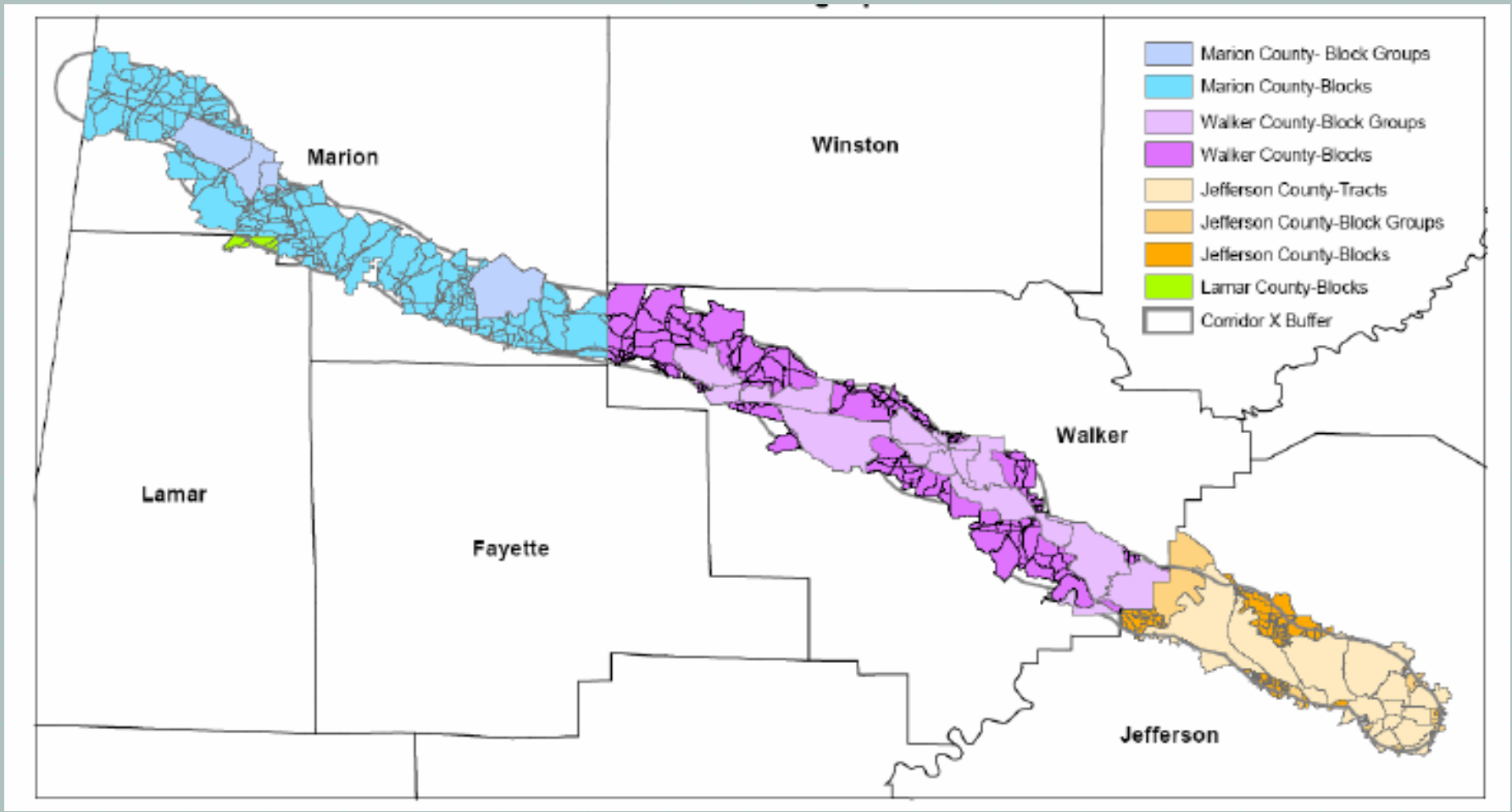
The Report

- In particular, the traffic analysis presented in Section 4.0 describes how future traffic conditions along Corridor X and its crossroads were developed for the years **2010,2020,and 2030**.
- Section 5.0 presents the ***principles of access management*** along with engineering examples of how it can be used to improve and preserve safe and efficient traffic operations.

The Report

- Section 6.0 presents ***specific guidance*** for implementing the access management and development concepts presented throughout the report.
- Finally, Section 7.0 presents general conclusions from the study and offers several recommendations in the form of ***"next steps."***

Socioeconomic Analysis



Socioeconomic Analysis

Population, 2000			
County	In 3-5 mile zone	Total	Percent in zone
Jefferson	78,059	662,047	11.8%
Lamar	10	15,904	0.1%
Marion	8,084	31,214	25.9%
Walker	23,796	70,713	33.7%
Economic Entities, 2003			
County	In 3-5 mile zone	Total	Percent in zone
Jefferson	6,645	33,408	19.9%
Marion	255	1,180	21.6%
Walker	1,044	2,659	39.3%

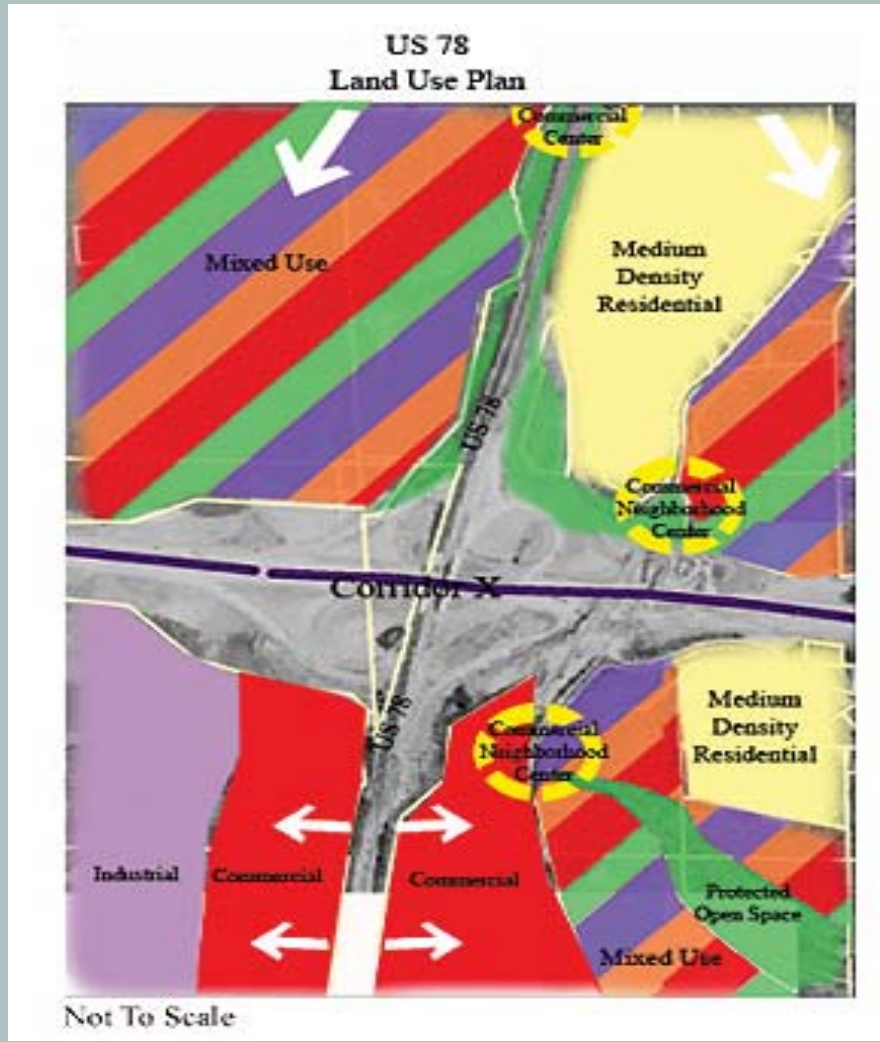
Site Suitability

- Infrastructure criteria
  - sewer
  - water
  - electric
  - gas
  - rail
- Environmental criteria
  - % land in floodplain
  - slope stability
  - soil suitability

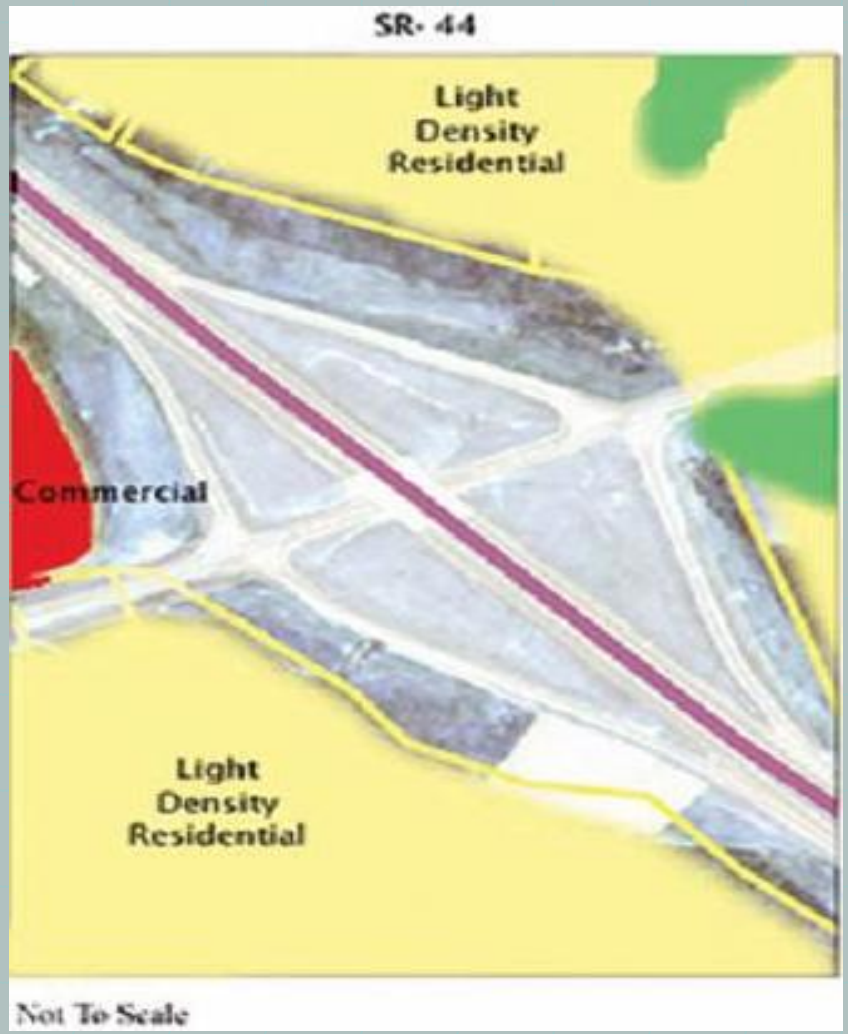
Site Suitability

- Low density residential
- High density residential/light commercial
- Heavy commercial/industrial
- Recreation greenway
- Wetland/preserved open space

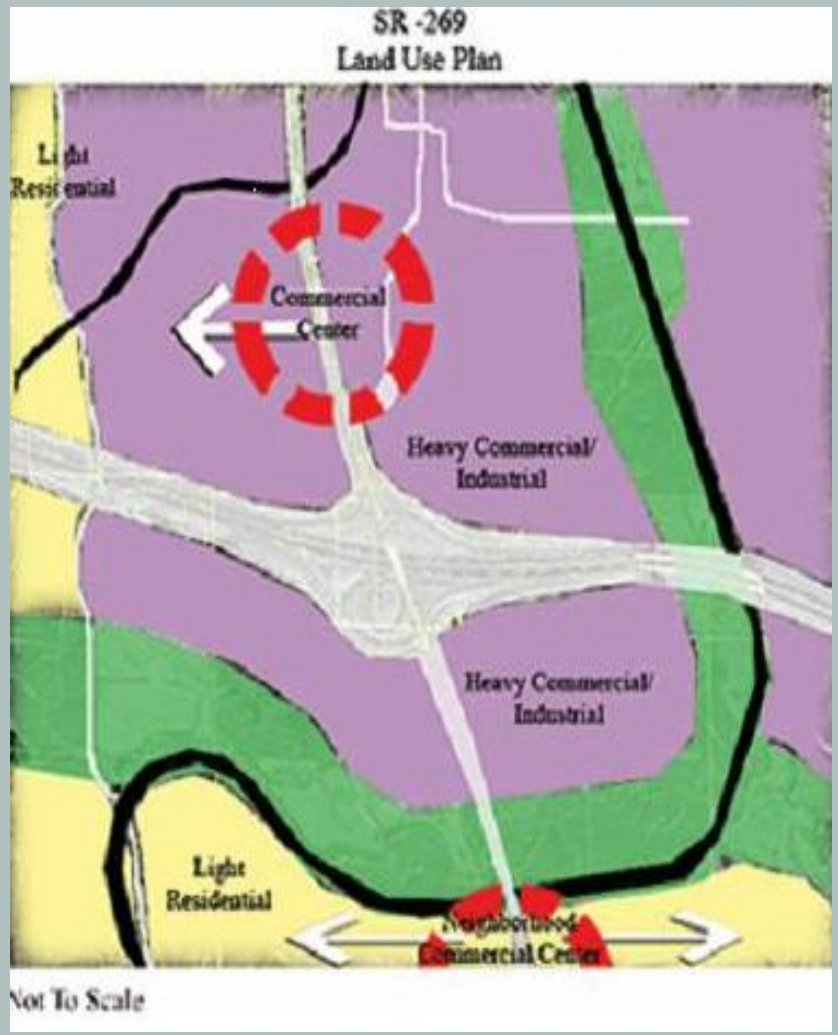
Site Suitability



Site Suitability

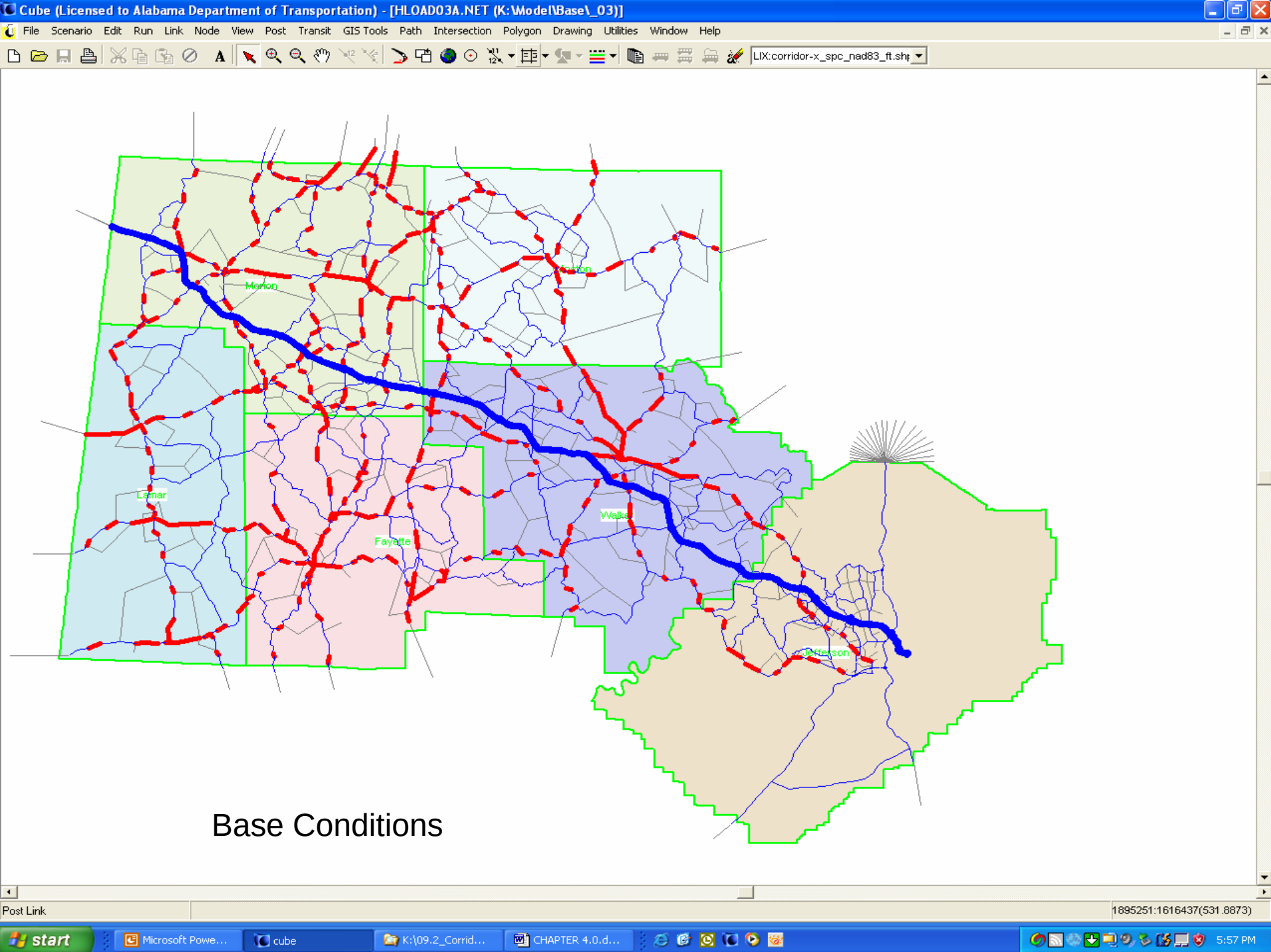


Site Suitability



IT IS A MODEL

- Not an exact representation
- A close regional approximation
- A planning tool that can be influenced by changes in demographics.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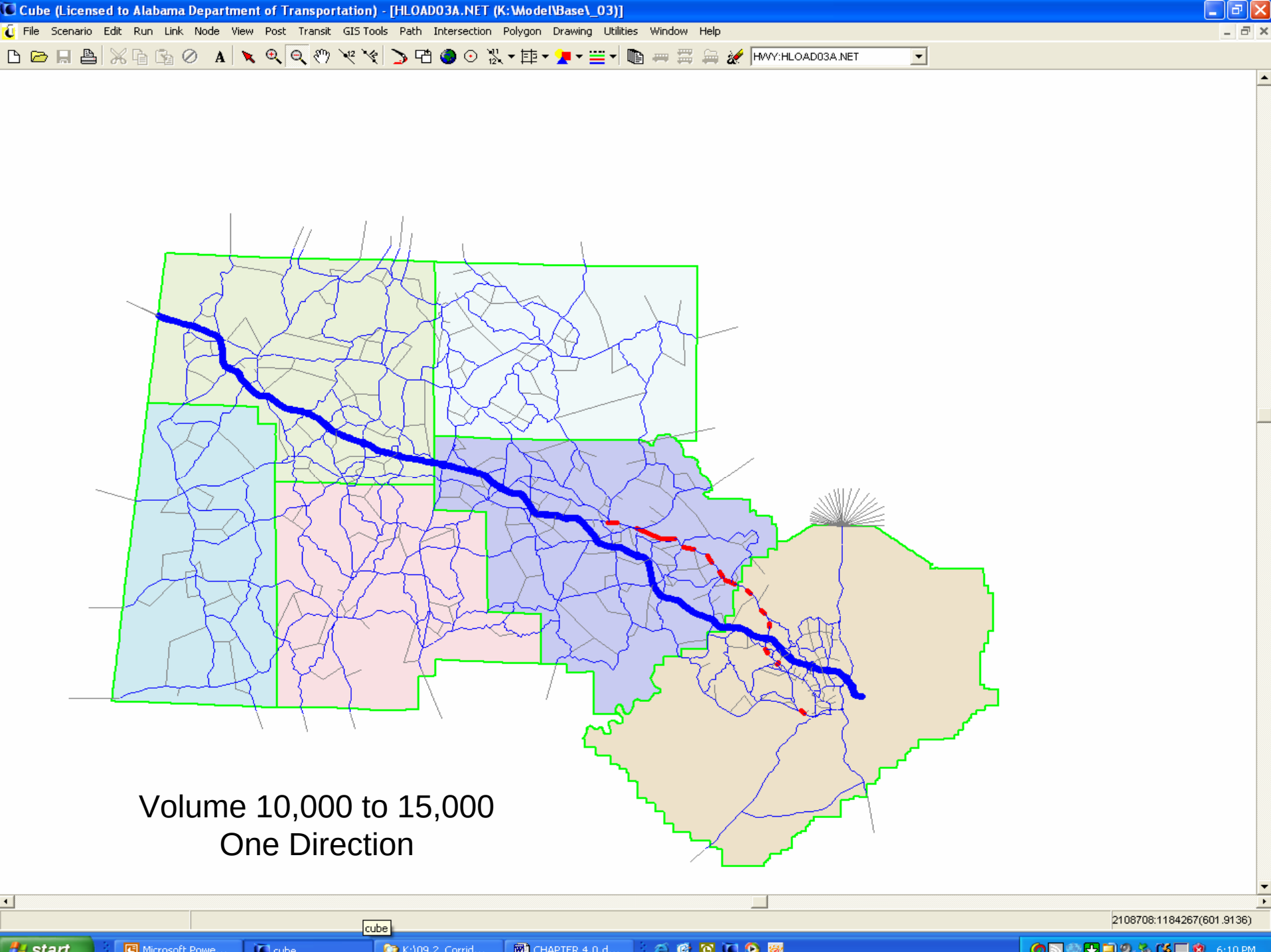
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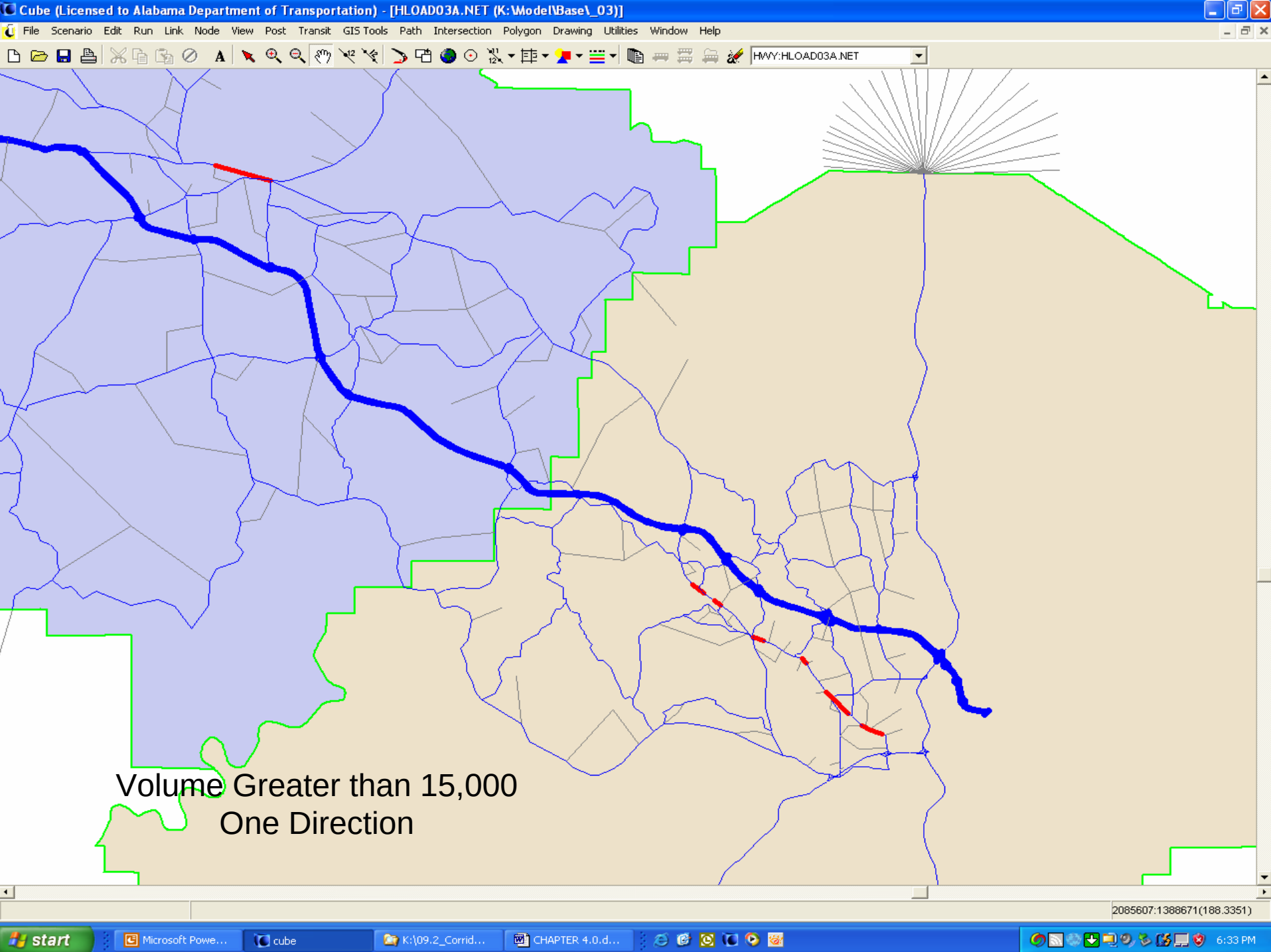
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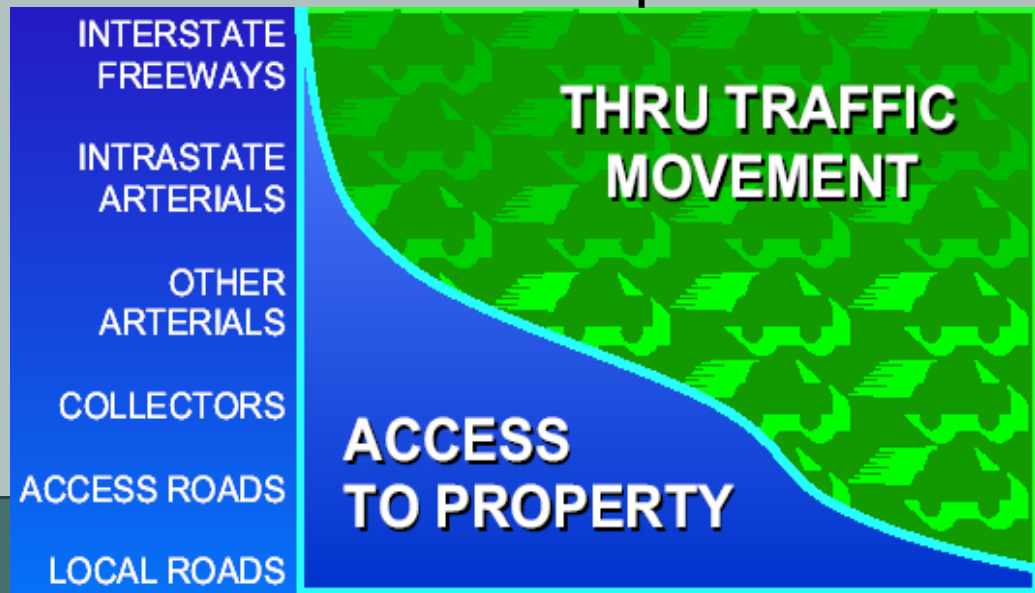
Volume Group	Number of Sections	Average Count	Average Projected Volume	Percentage of Ground Count
1- 1000	246	575	831	145%
1001- 2000	250	1,526	1,692	111%
2001- 3000	110	2,454	2,199	90%
3001- 5000	102	3,883	3,526	91%
5001- 7000	46	5,953	6,130	103%
7001- 10000	38	7,687	8,422	109%
10001- 15000	***32***	***13,683***	***13,897***	***102%***
15001- 20000	12	18,489	17,169	93%
20001- 25000	10	22,061	15,556	71%
0- 1000	246	575	831	145%
1001- 2500	312	1,672	1,731	104%
2501- 5000	150	3,505	3,230	92%
5001- 10000	84	6,737	7,167	106%
10001- 25000	54	16,302	14,931	92%
TOTAL	**846**	3115	3117	**100%**

Background Traffic Projections

Screen/Cut Line	2010	2020	2030
Corridor X west of Winfield	17,913	21,388	25,552
Corridor X Jasper/SR-118	40,451	47,549	55,918
Corridor X/US-78 Jefferson/Walker County Line	41,780	49,014	57,524
Corridor X /US-78 west of Graysville	54,439	66,360	80,893

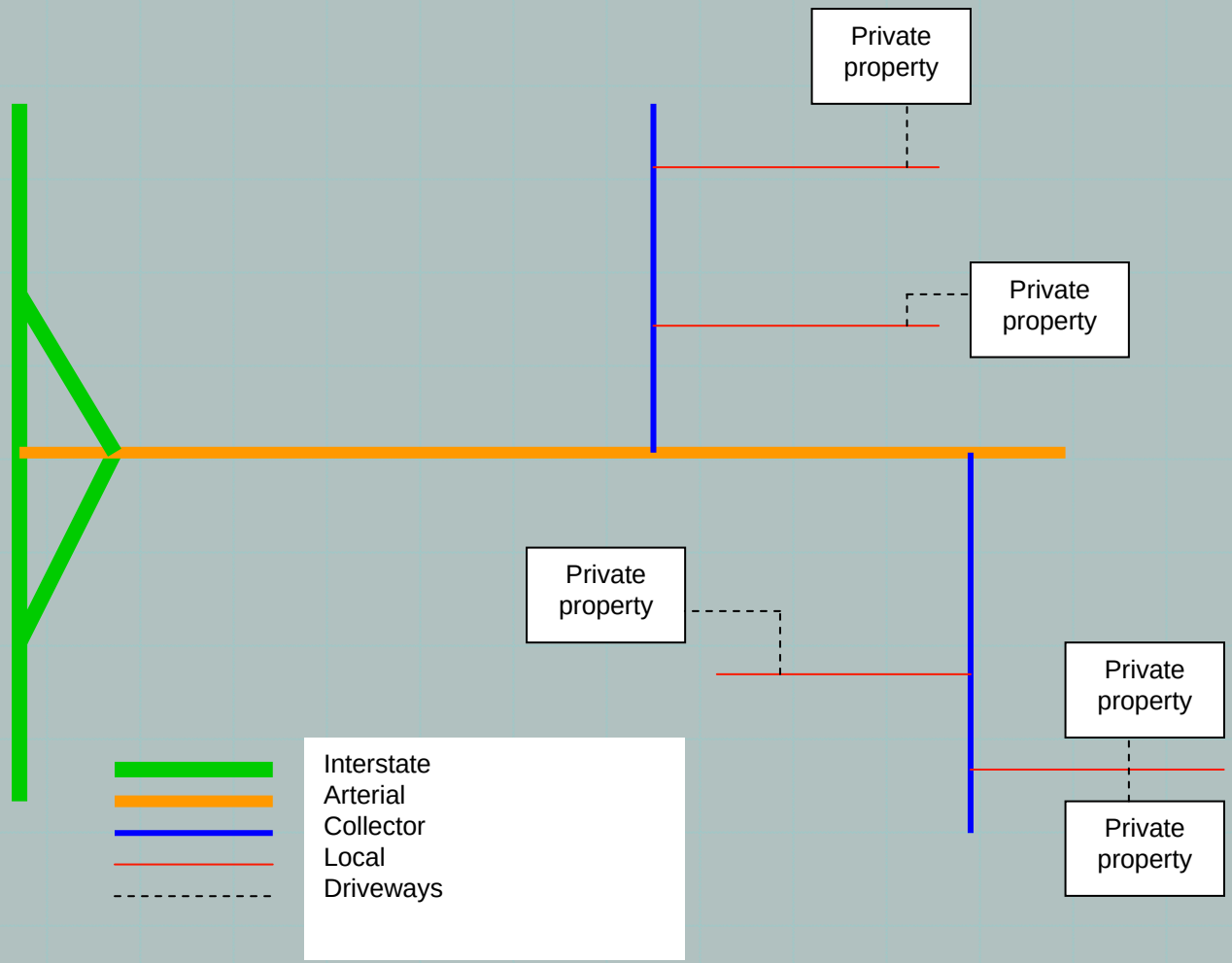
Access Management

- **Mobility** – moving people (and goods) from one place to another
- **Accessibility** – allowing people (and goods) to get to and from the transportation system
- Unfortunately, there is often an inverse relationship between mobility and accessibility.



Source: TRB Access Management Manual, 2003

Access Management



Access Management

Intersecting Route	Exit #	Functional Class
CR-33	3	Collector
CR-94 / SR-74	7	Principal Arterial
SR-17	11	Minor Arterial
CR-35	14	Collector
US 278 / US 43	16	Minor Arterial
CR-45	22	Collector
SR-44	26	Collector
SR-129	30	Minor Arterial
SR-233	TBD	Collector
SR-13	TBD	Principal Arterial

Implementation

Authorities in Support of Access Management	County	City	State
To Plan Future Roadways	**Y**	**Y**	**Y**
To Plan Future Land Use	**N**	**Y**	**Y**
To Establish Subdivision Regulations	**N**	**Y**	**Y**
To Approve Driveway Access on State Route	**Y**	**N**	**N**
To Approve Driveway Access on County Route	**N**	**Y**	**N**
To Approve Driveway Access on Local Streets	**N**	**N**	**Y**
To Establish A Driveway Ordinance	**N**	**N**	**Y**
To Approve Signal Spacing on State Routes	**Y**	**N**	**N**
To Approve Signal Spacing on County Routes	**N**	**Y**	**N**
To Approve Signal Spacing on Local Streets	**N**	**N**	**Y**
To Establish Zoning	**N**	**P**	**Y**
To Establish a Major Street Plan	**N**	**N**	**Y**
To Develop A Comprehensive Plan	**Y**	**Y**	**Y**
To Establish An Overlay District	**N**	**P**	**Y**
To “Reserve” Future Right of Way	**N**	**N**	**Y**

Y=Authority is Available N=Authority is not Available P=Possible

Implementation

- **Alabama Improvement Districts** – tax free bonds issued by landowners and assessed by local authority. gives the landowner the benefit of having all improvement cost become “taxes” and not fixed asset improvements.

- **Tax Increment District** – allow incremental taxes to be assessed in specific area to fund improvements for blighted or distressed areas. Inadequate street system meets distressed criteria.

- **Capital Improvement Cooperative District** – extends taxation abilities across jurisdictions working on regionally beneficial projects.

Conclusions

- Put Access Management infrastructure in place ahead of or in conjunction with development
- Action needs to be taken by public officials, engineers, planners, attorneys and the public
- Preservation of corridor capacity is key
- Partnerships between the public sector and private sector

Conclusions

This study was made possible with funding provided by:

- Fayette, Jefferson, Lamar, Marion, Walker and Winston Counties
- Alabama Department of Transportation
- Department of Housing and Urban Development
- **And the many hours of service from the participants in the Task Force**

Availability

http://corridorx.uah.edu

www.bhammpo.org

(under Corridor Studies)