



Southeast Corridor High Performance Transit Alternatives Study

Public Meetings

November 30 - December 2, 2004

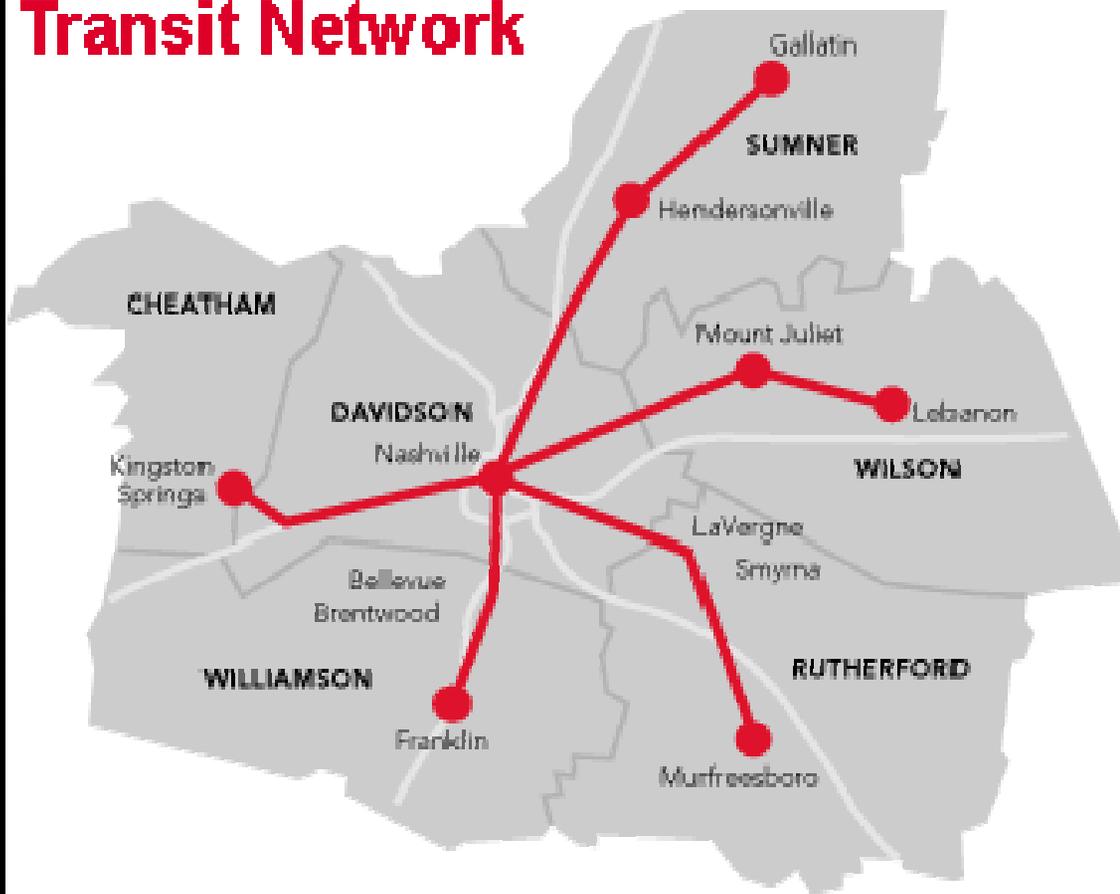
Thanks for Coming!

- ❖ Introductions
- ❖ Needs and Goals
- ❖ What We've Heard
- ❖ Evaluation Criteria
- ❖ Alternatives Under Consideration
- ❖ Next Steps
- ❖ Your Questions and Comments



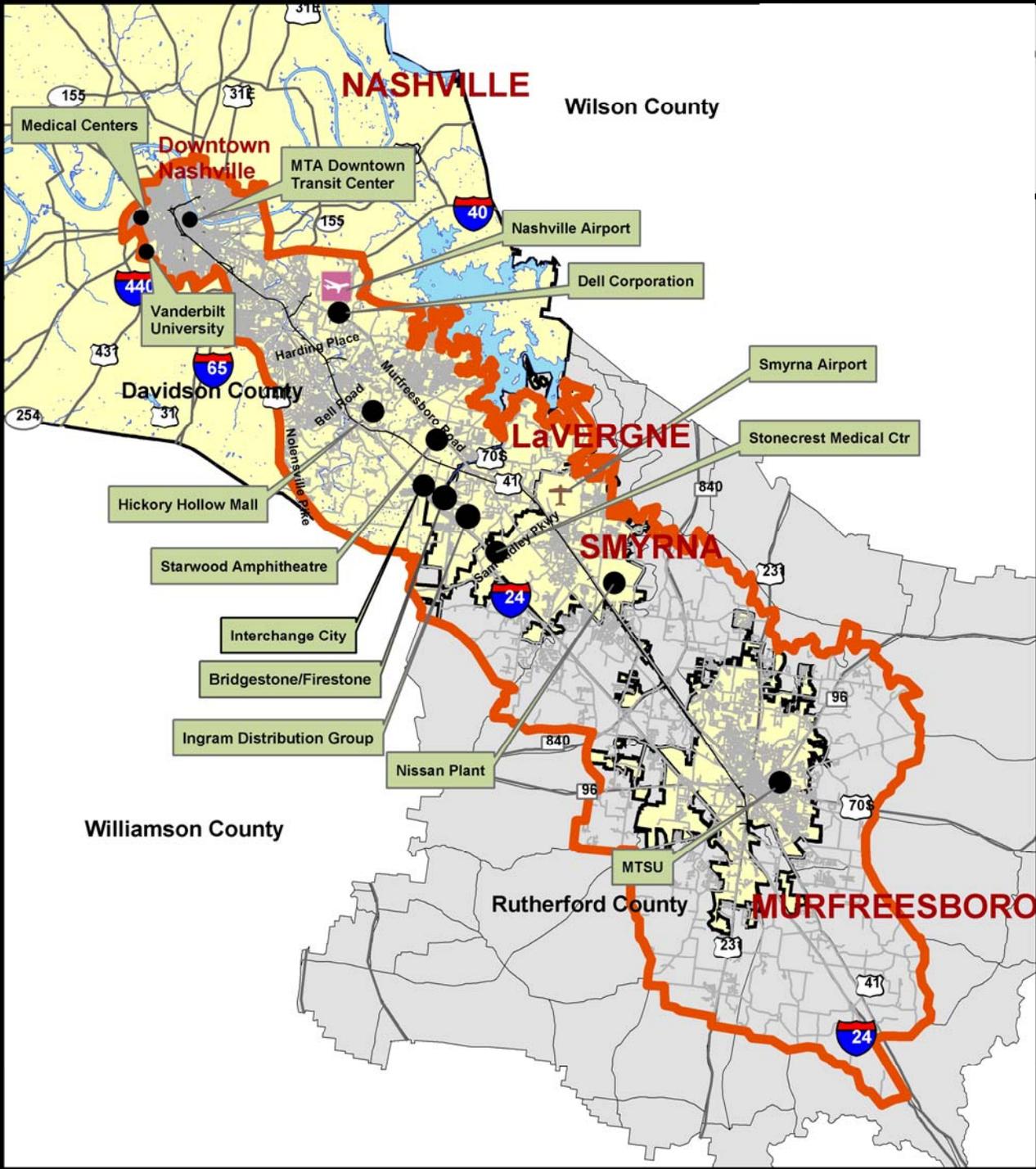
Needs and Goals

Middle Tennessee Transit Network



- ❖ Region has 15-year commitment to high-capacity transit
- ❖ East Corridor – Open in 2005
- ❖ Southeast Corridor – Alternatives Study
- ❖ Northeast Corridor - Next

Project Study Area



Identifying the Need

- ❖ Analysis of Existing System, Future Plans
- ❖ Comments from the Public
- ❖ Recommendations of local leaders, transportation officials



Project Need and Goals

- ❖ Expand Mass Transit Options
- ❖ Address Traffic Congestion
- ❖ Enhance Economic Development
- ❖ Address Land Use
- ❖ Environmental Benefits
- ❖ Use Transportation Funding Efficiently

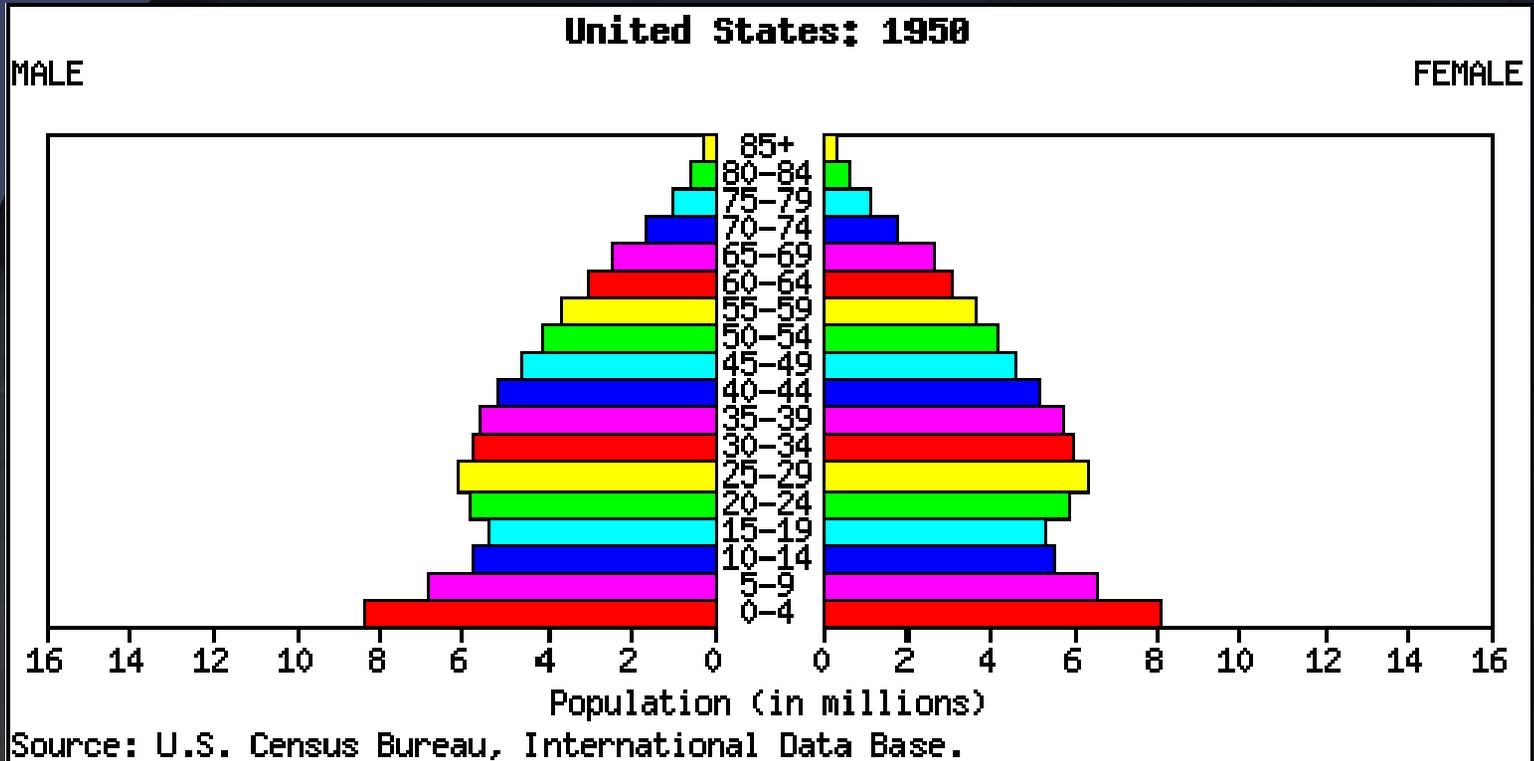


Key Findings

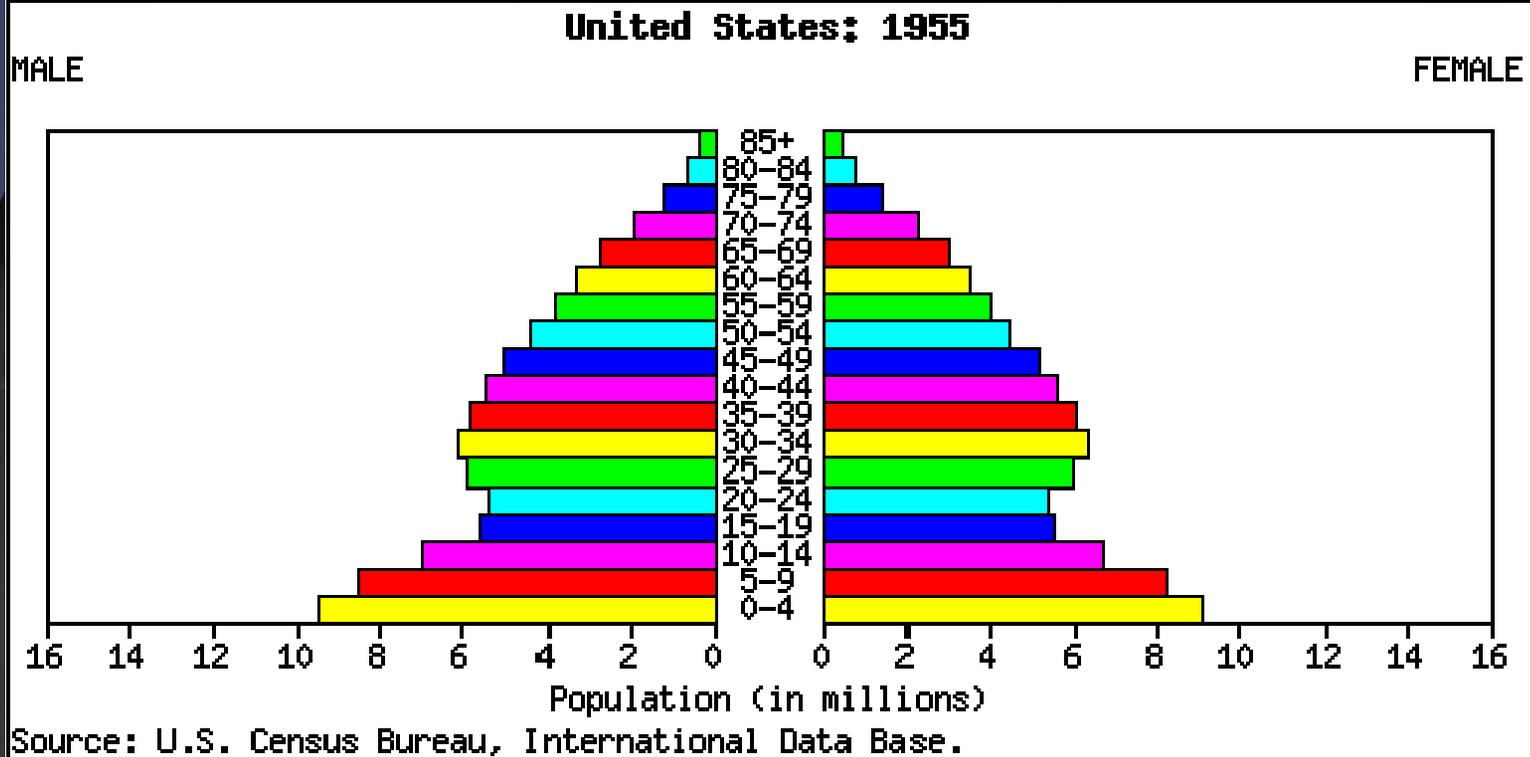
- ❖ Southeast Corridor is fastest growing in the Nashville region
- ❖ Corridor roadways face worsening traffic congestion
- ❖ Current plans do not provide sufficient roadway capacity or transit options to support future growth



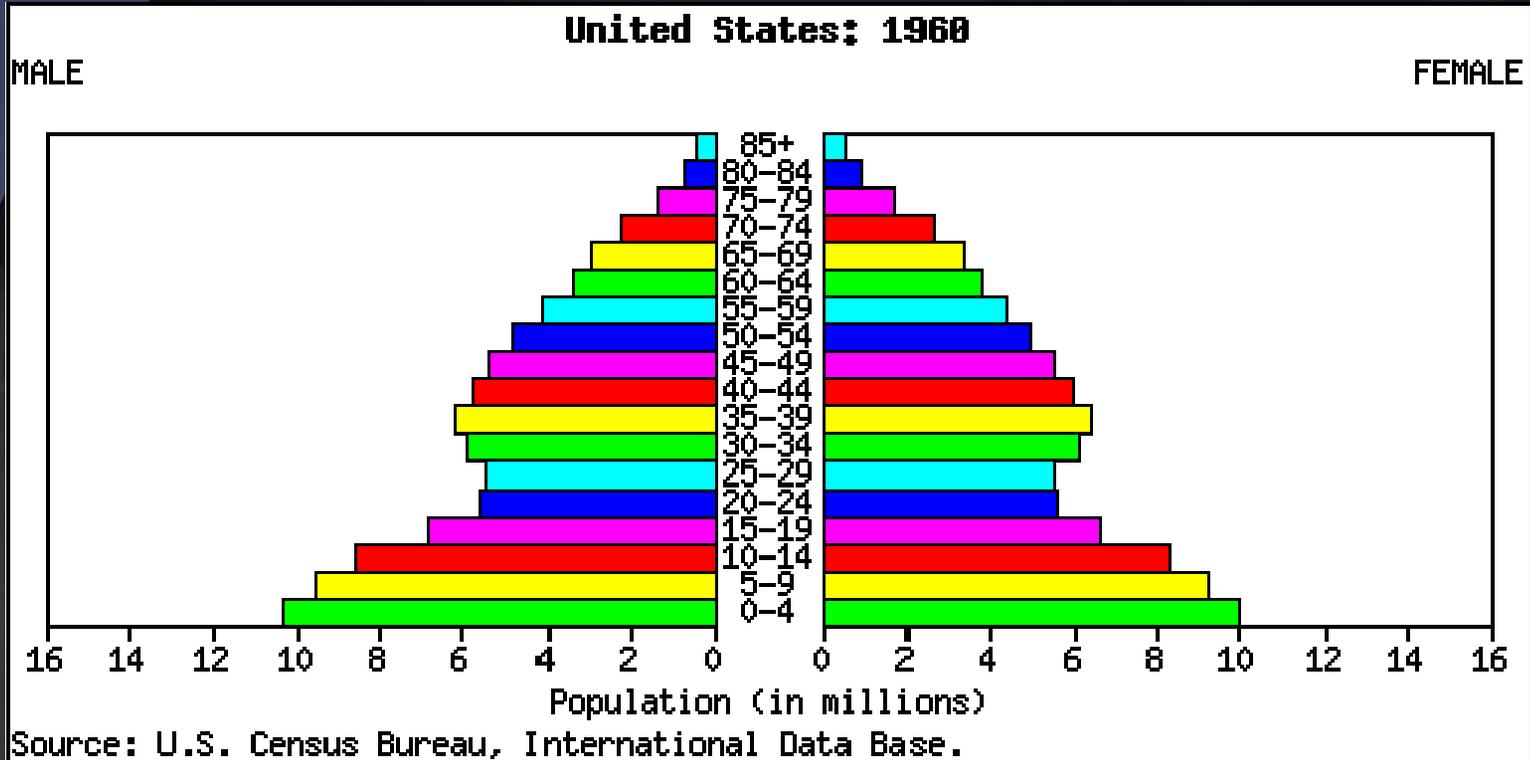
Changing Demographics



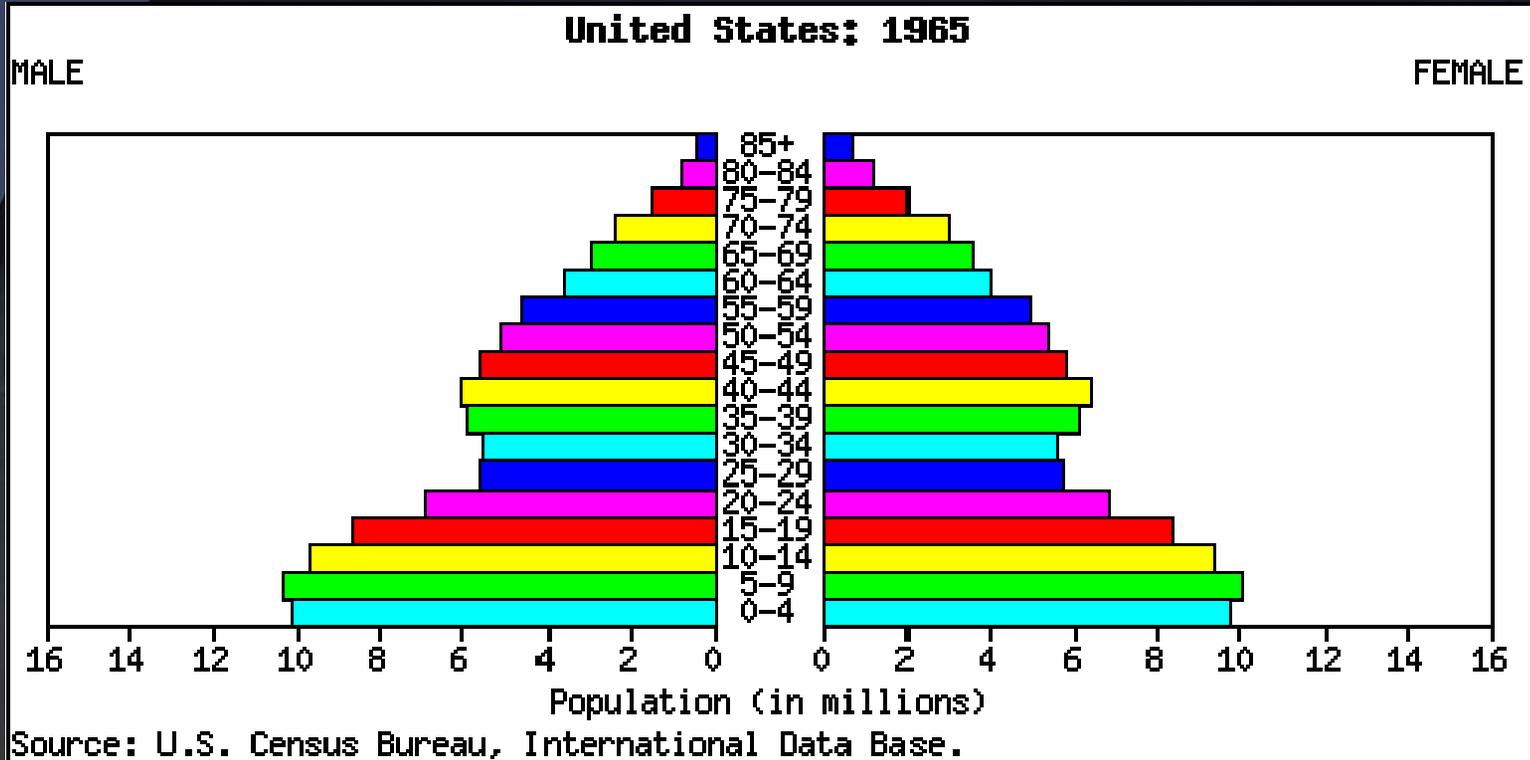
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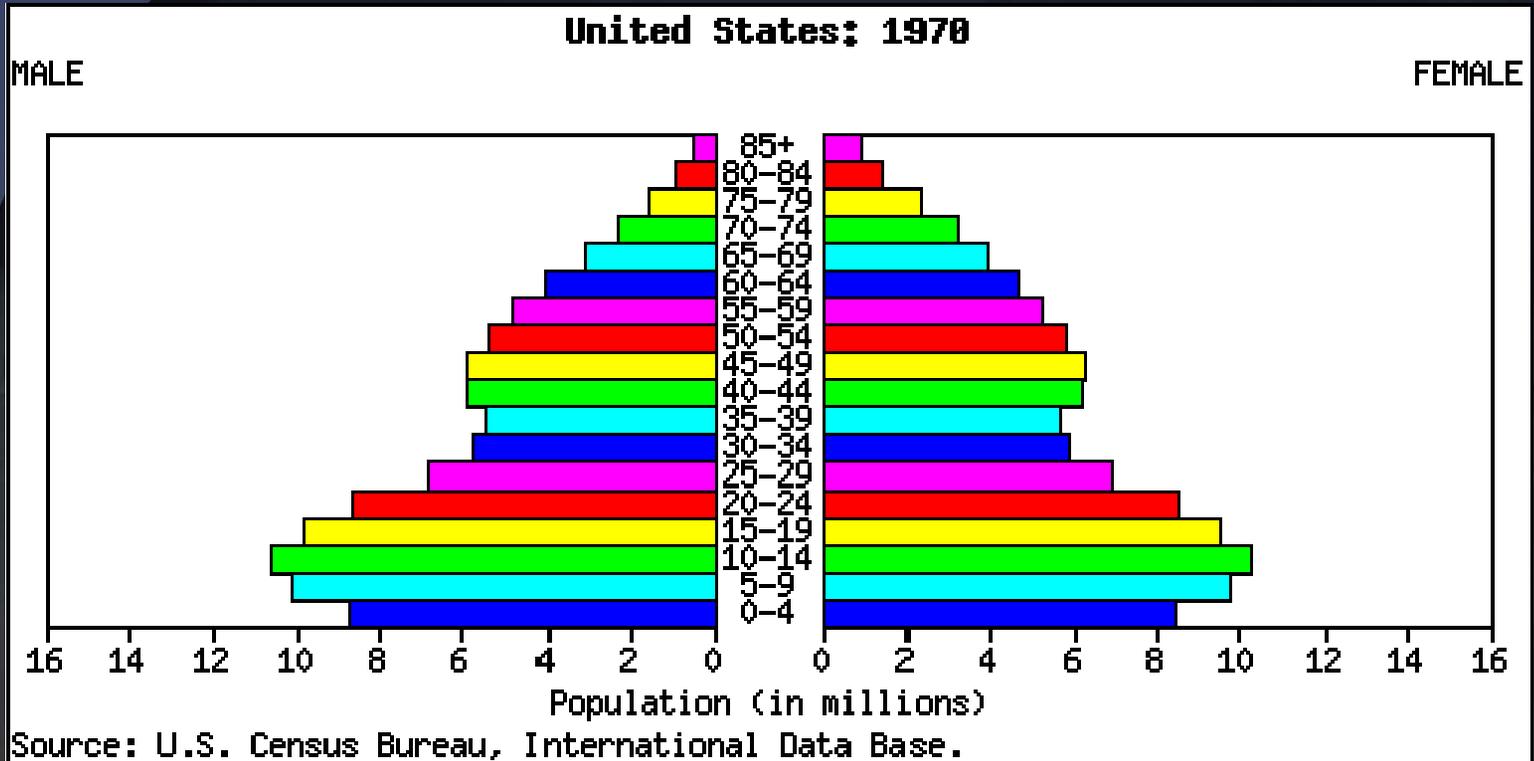
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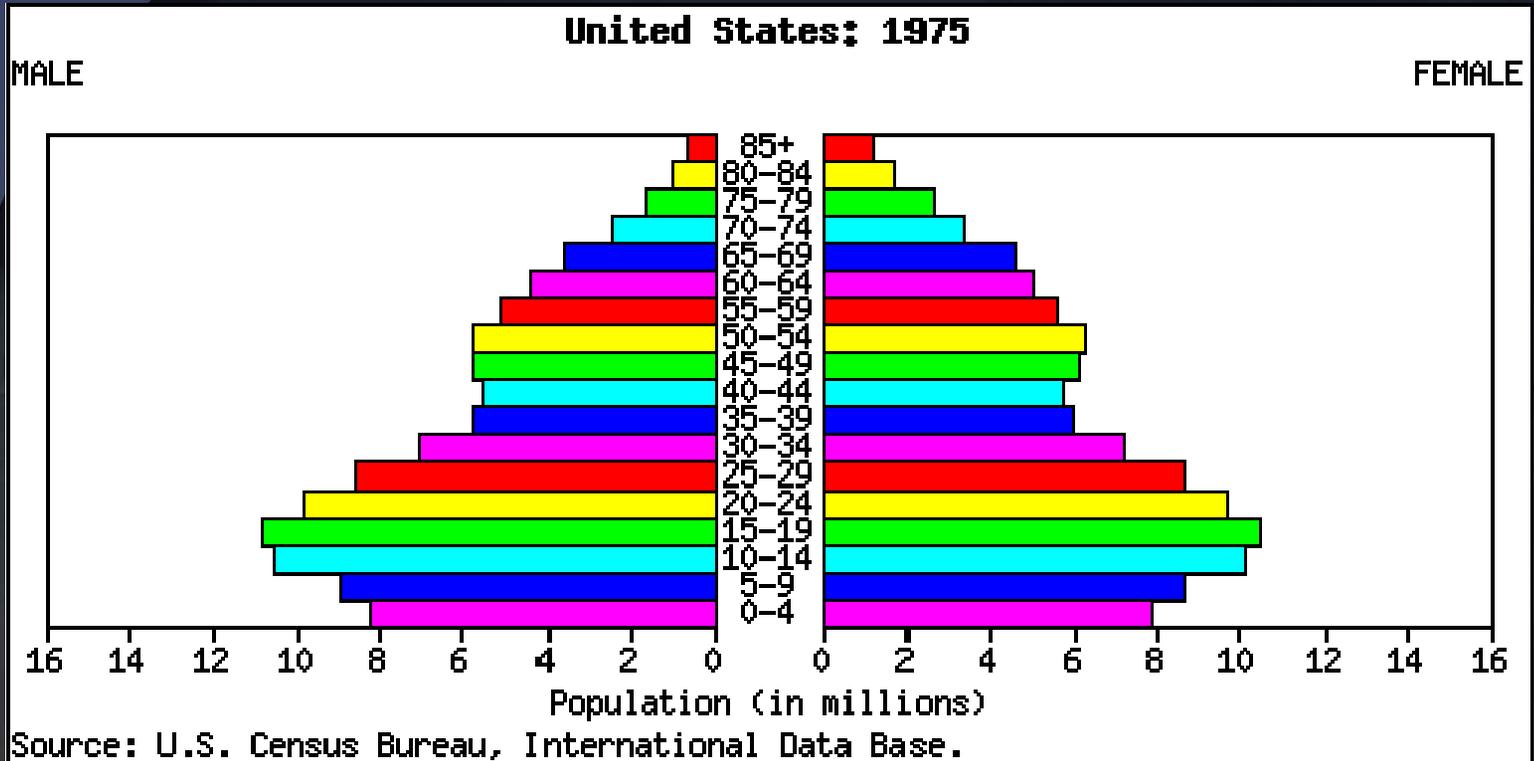
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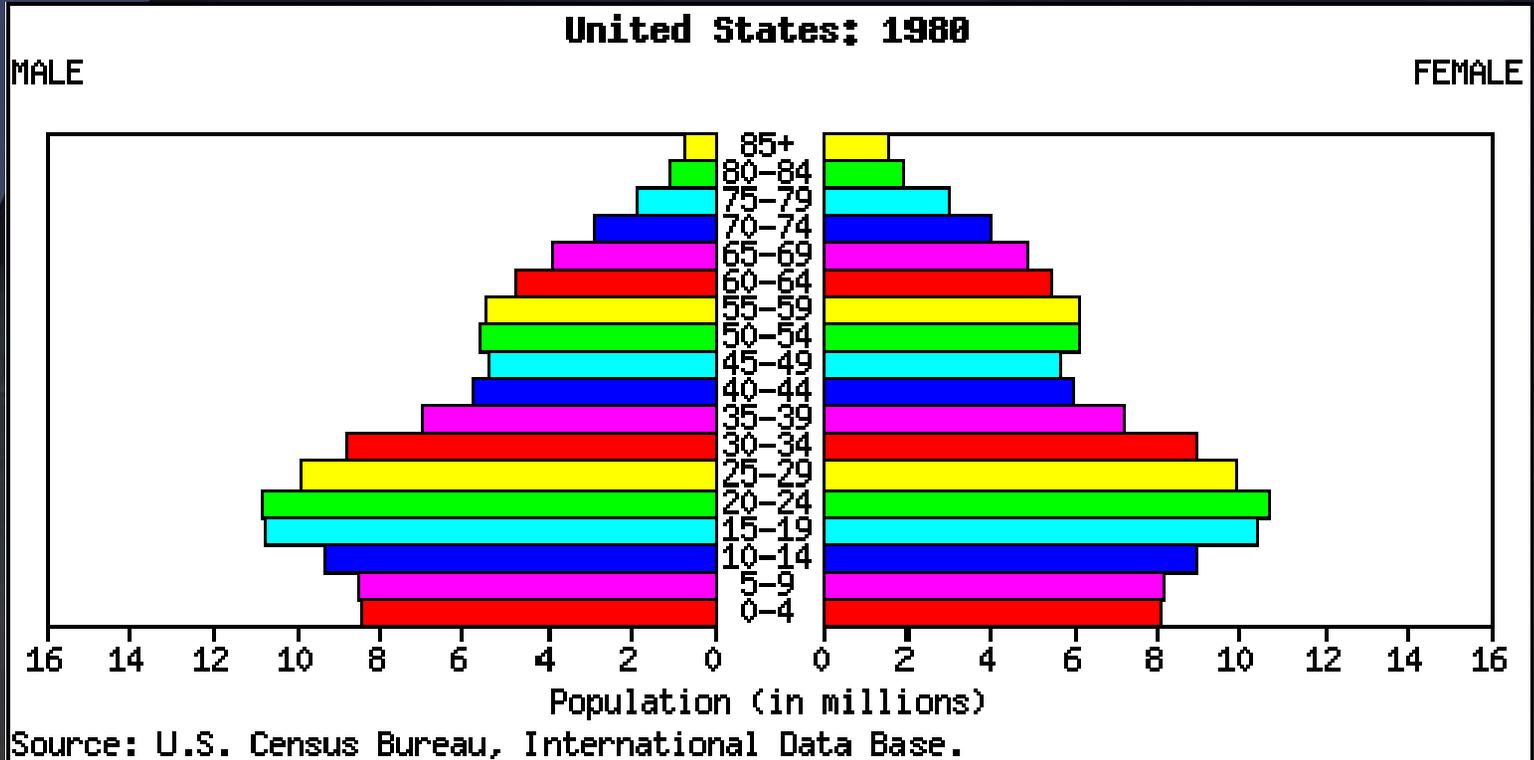
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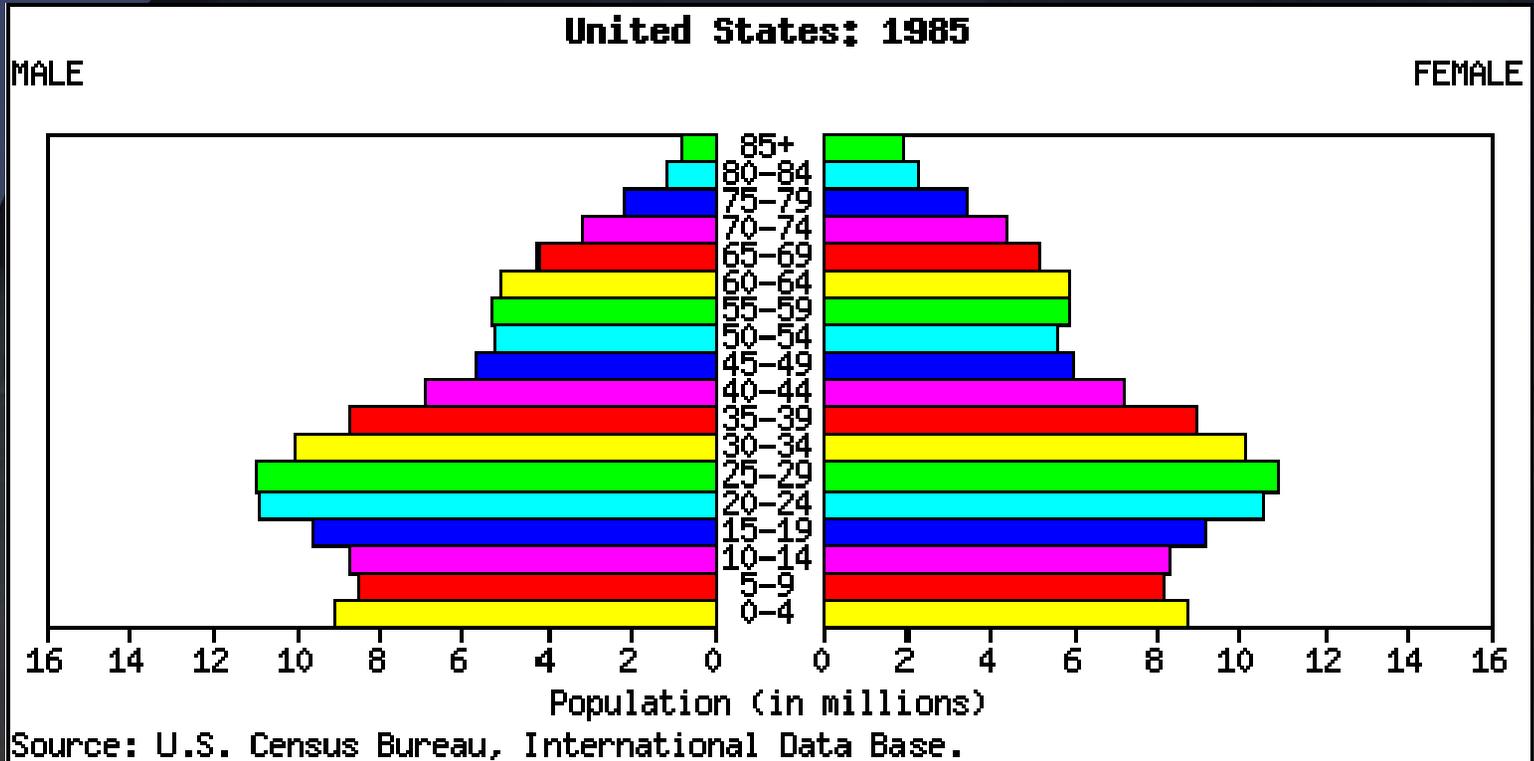
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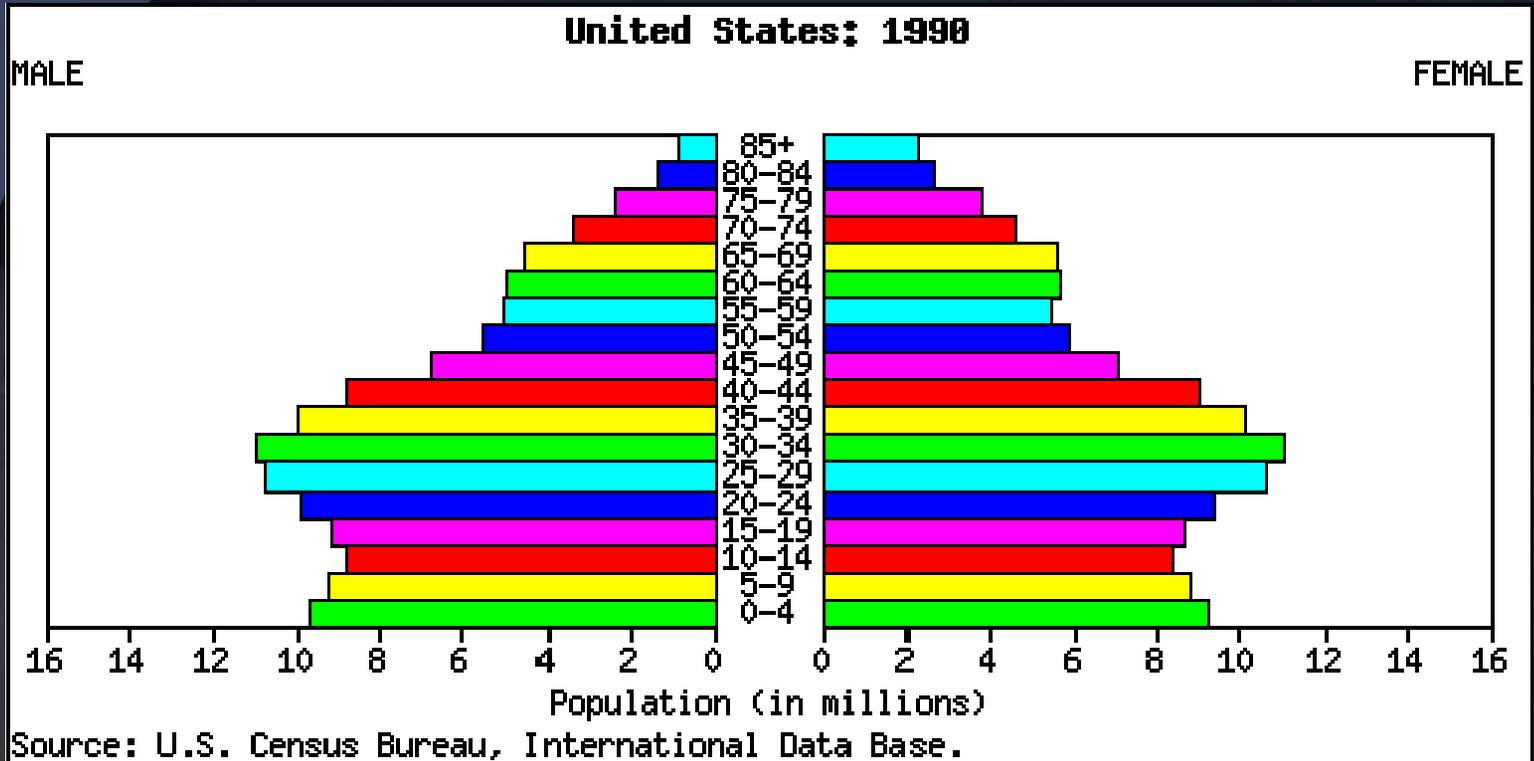
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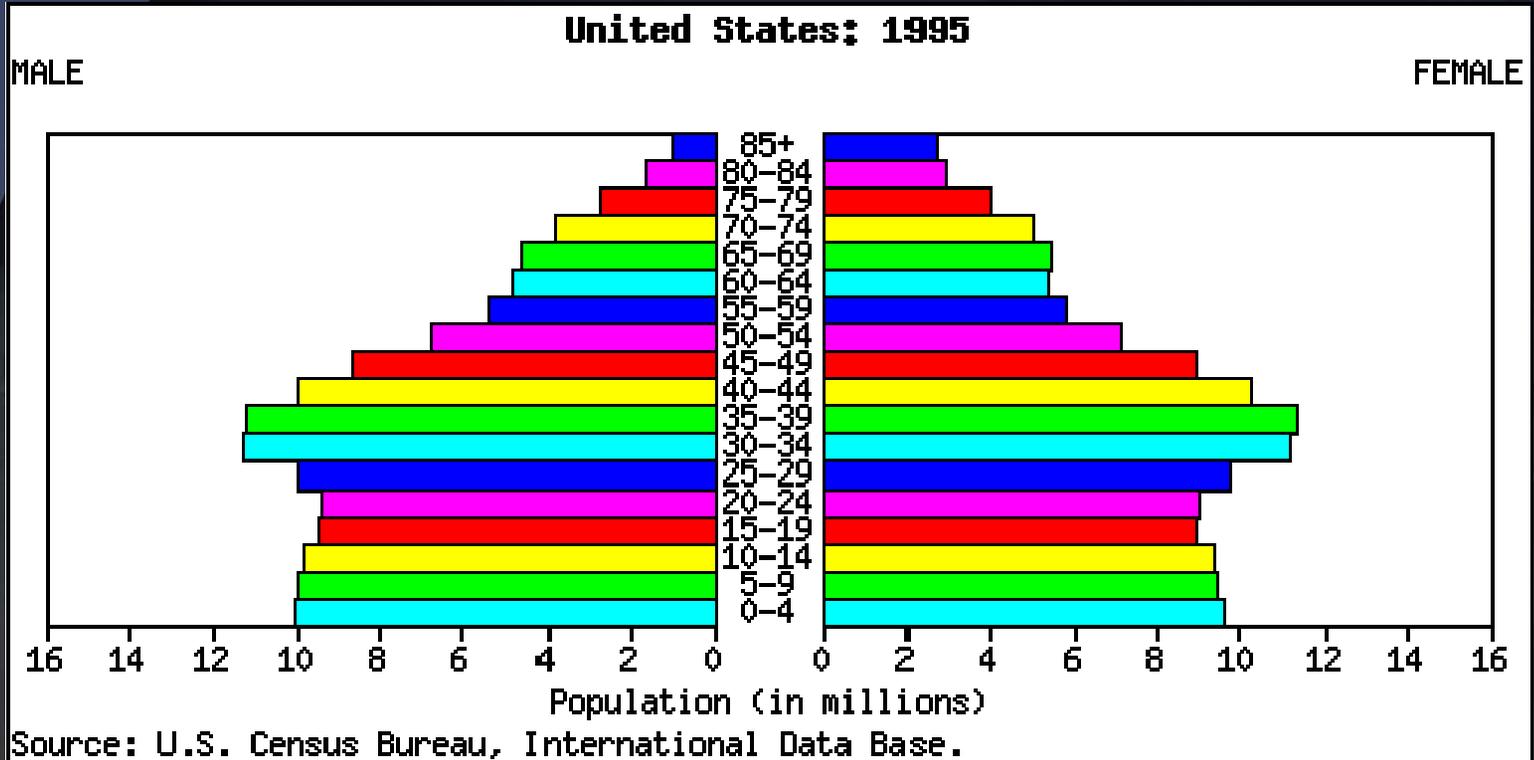
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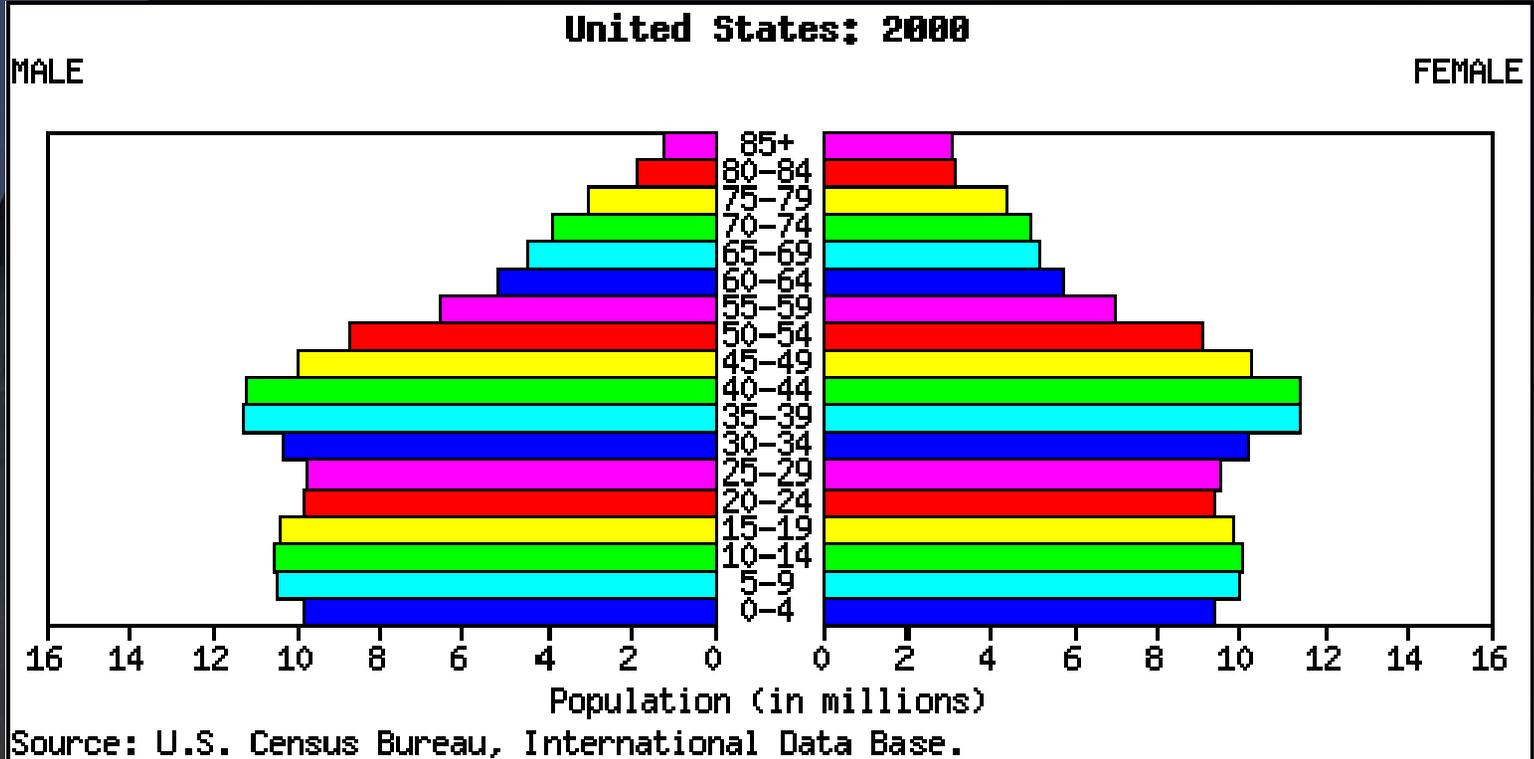
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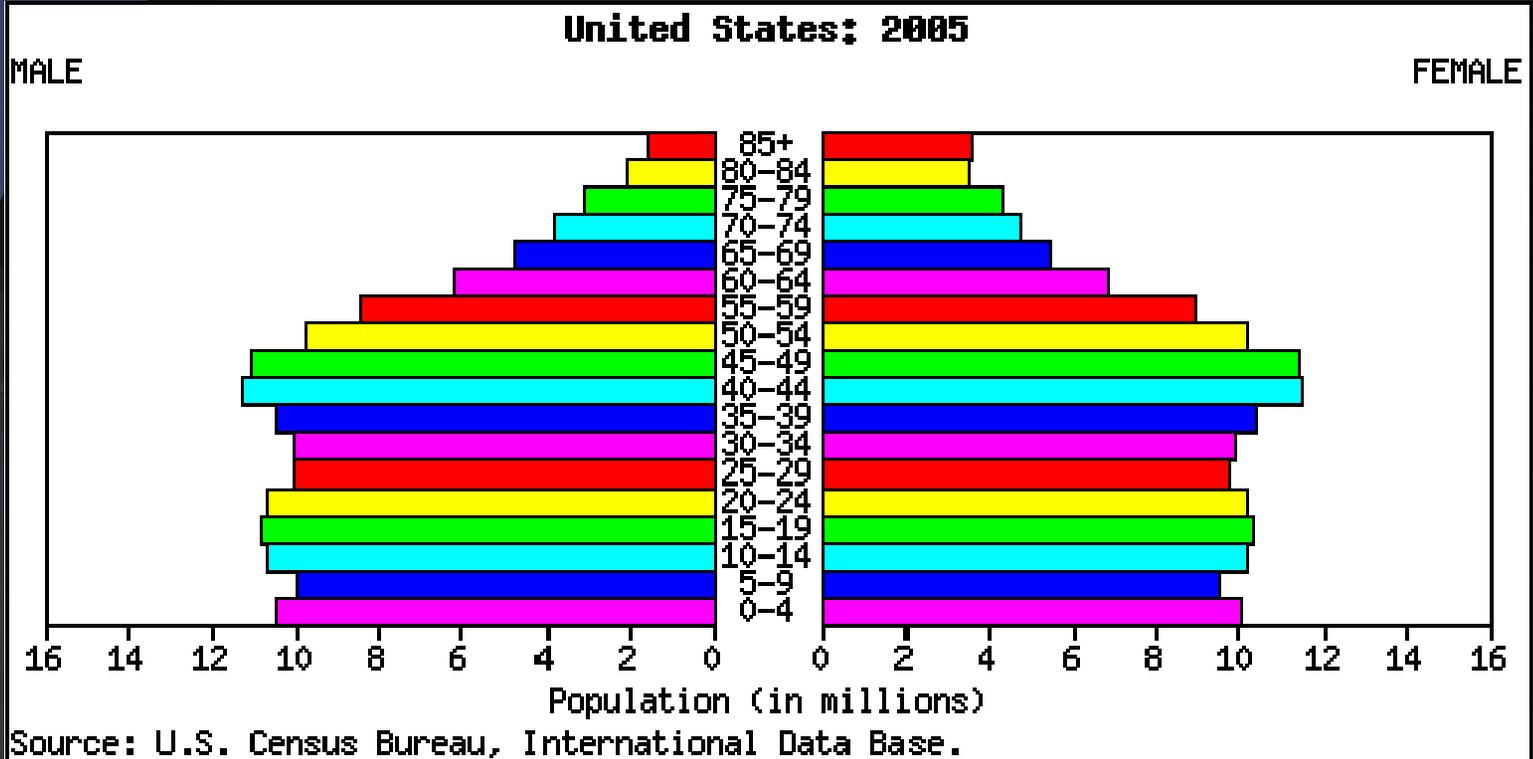
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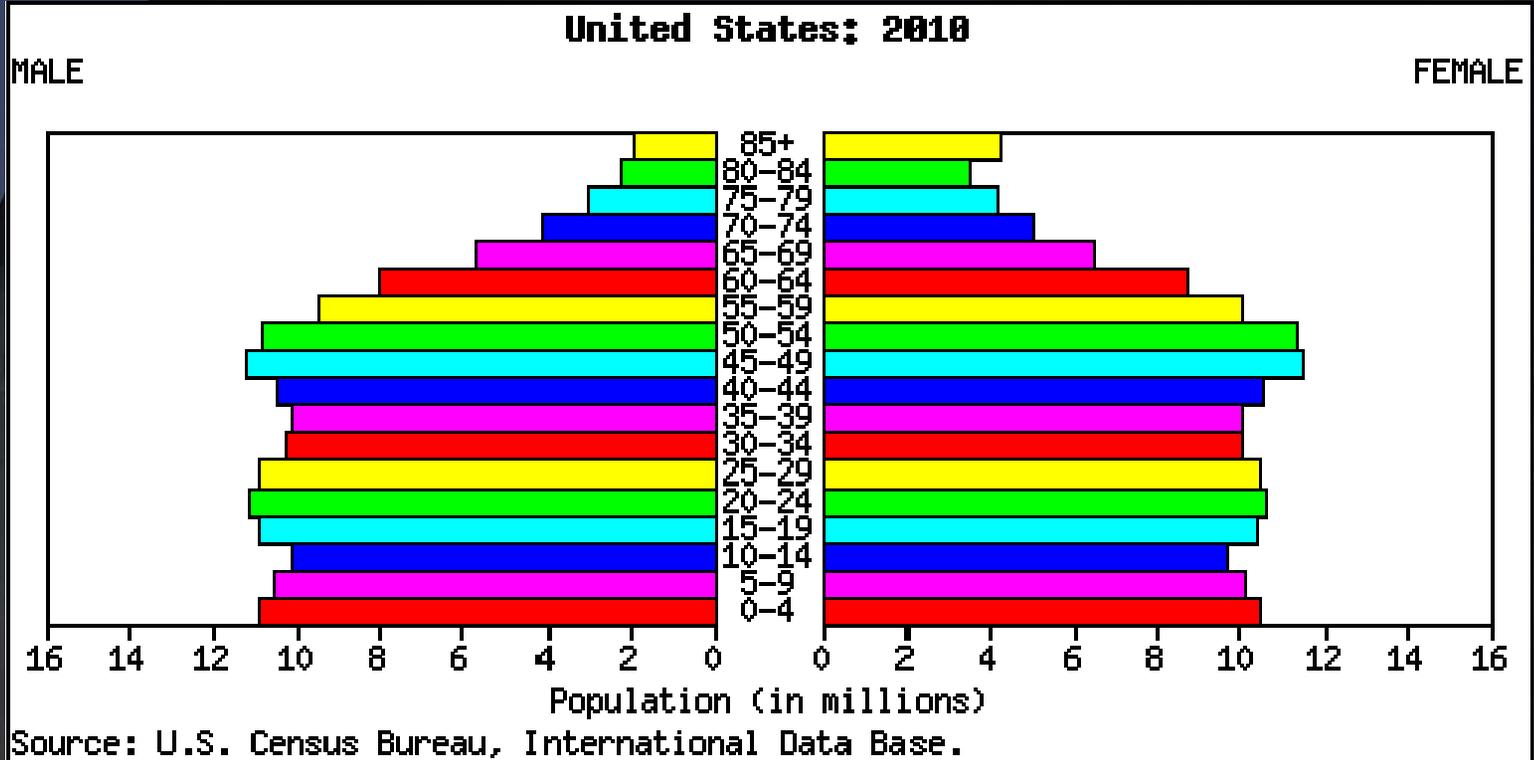
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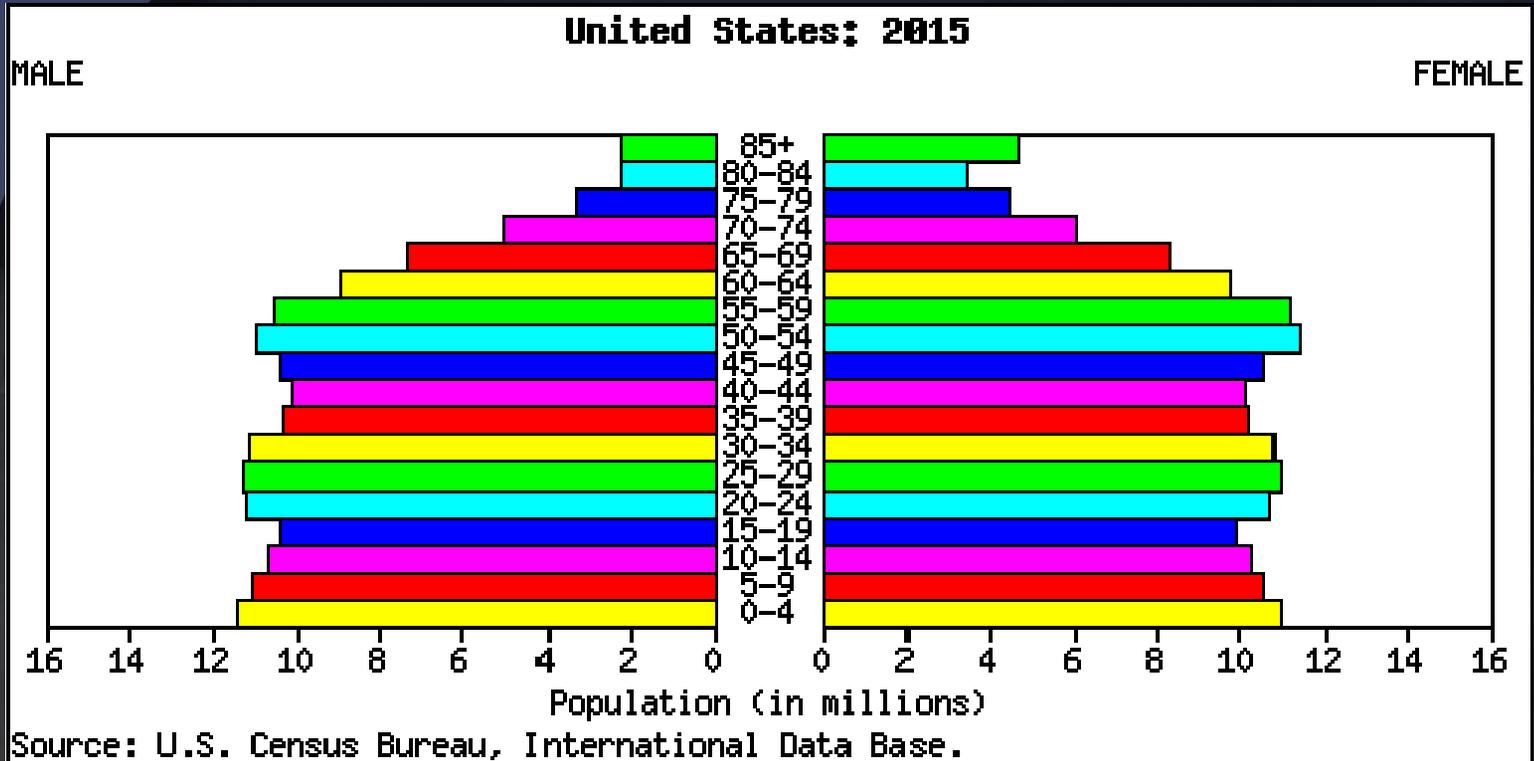
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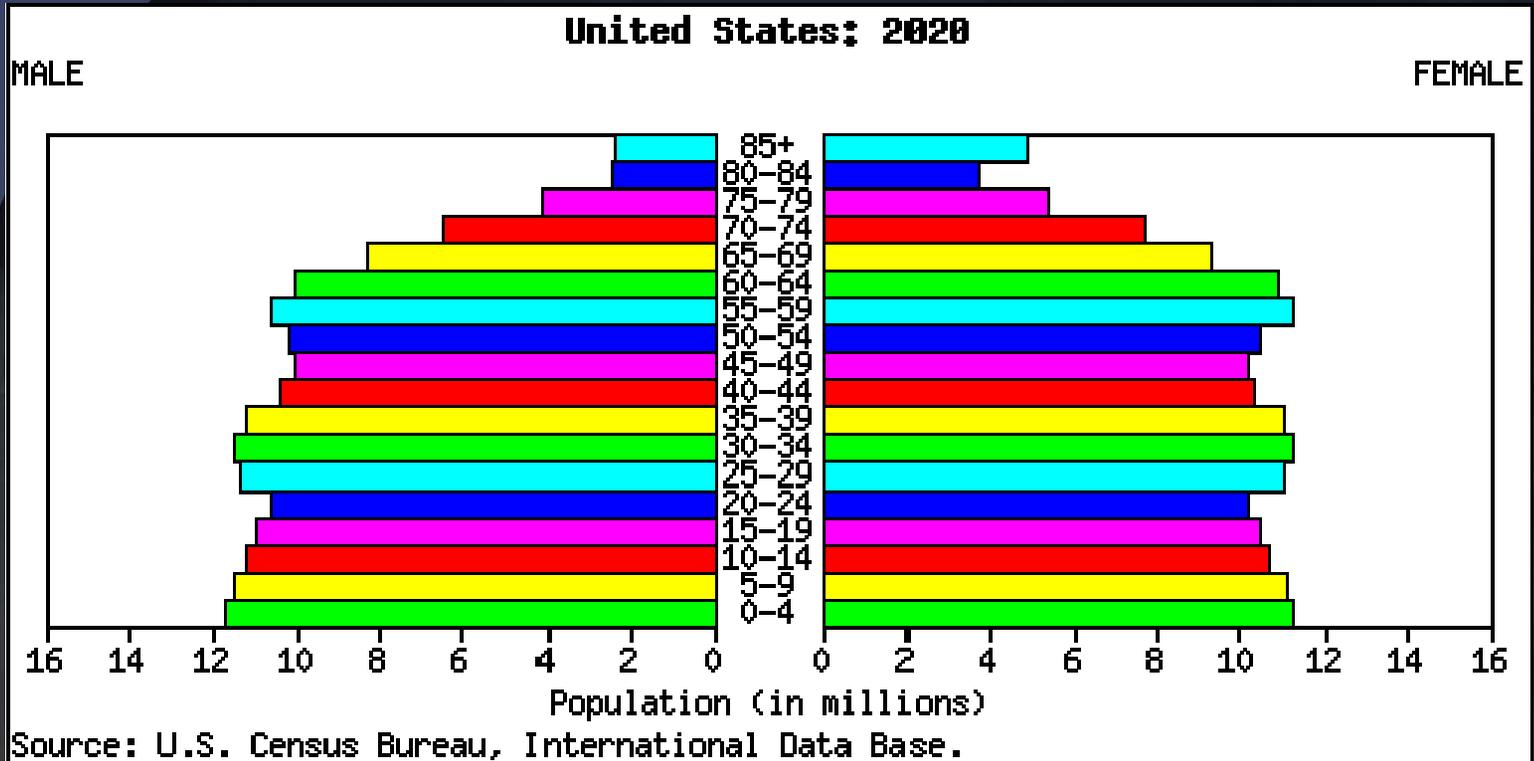
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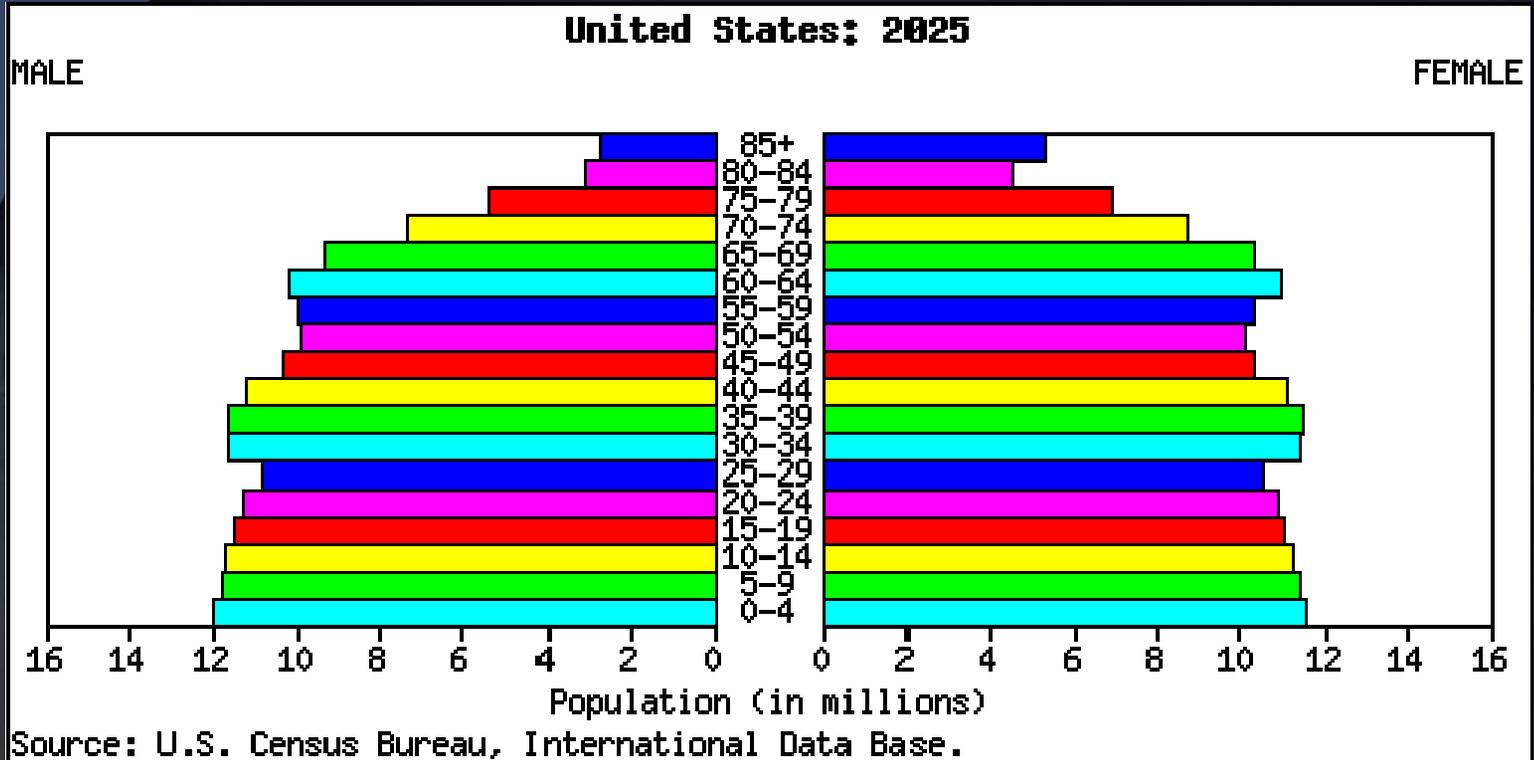
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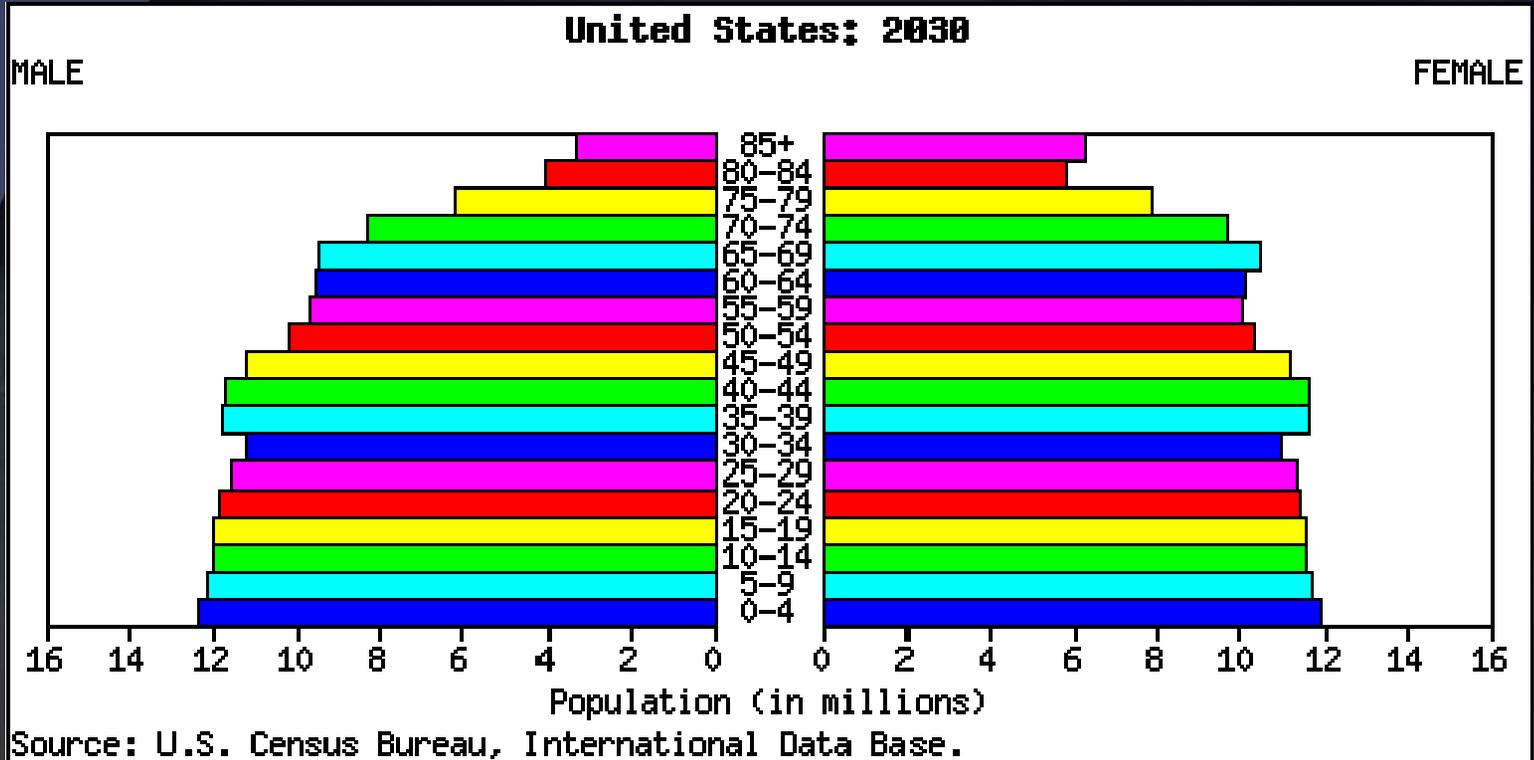
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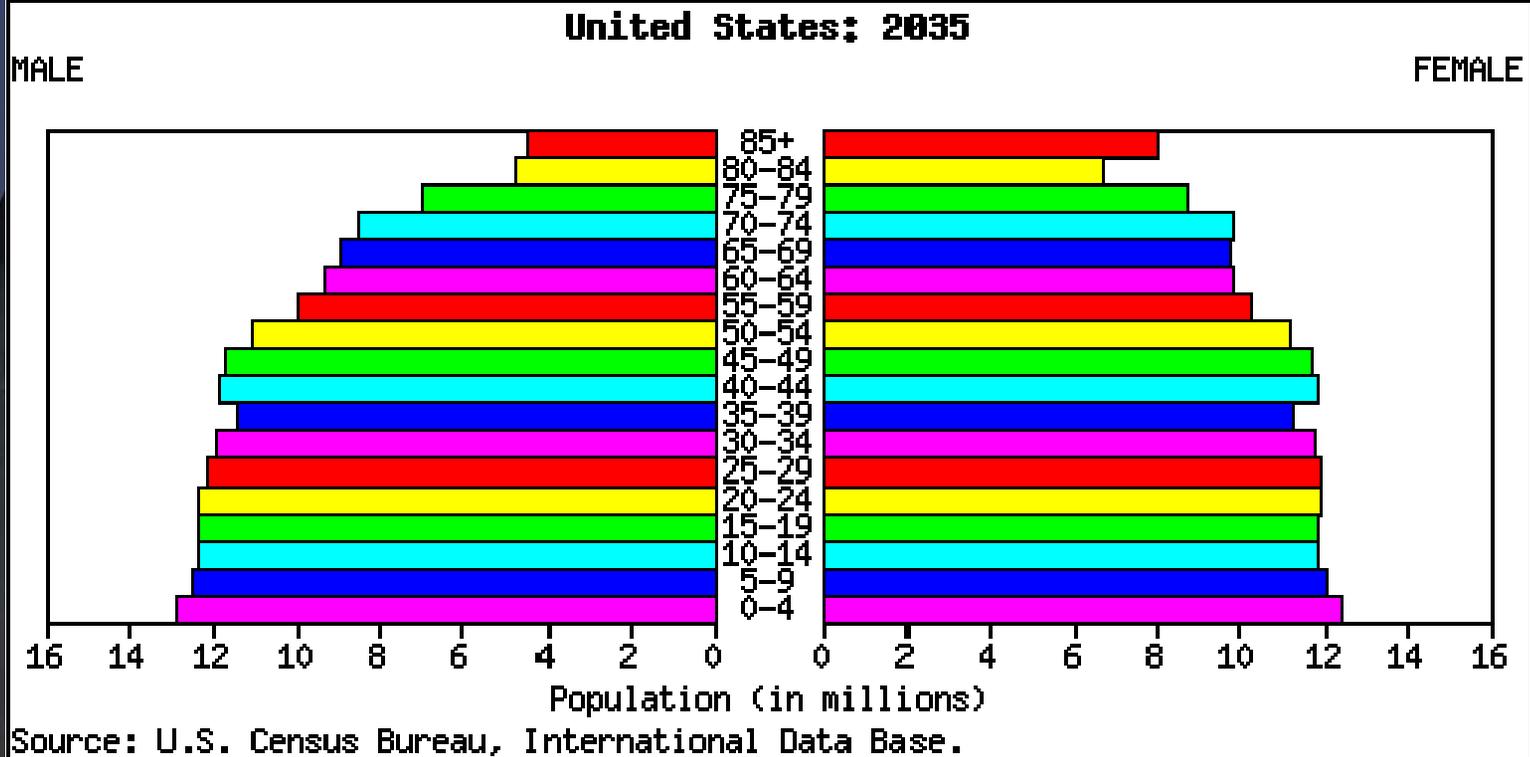
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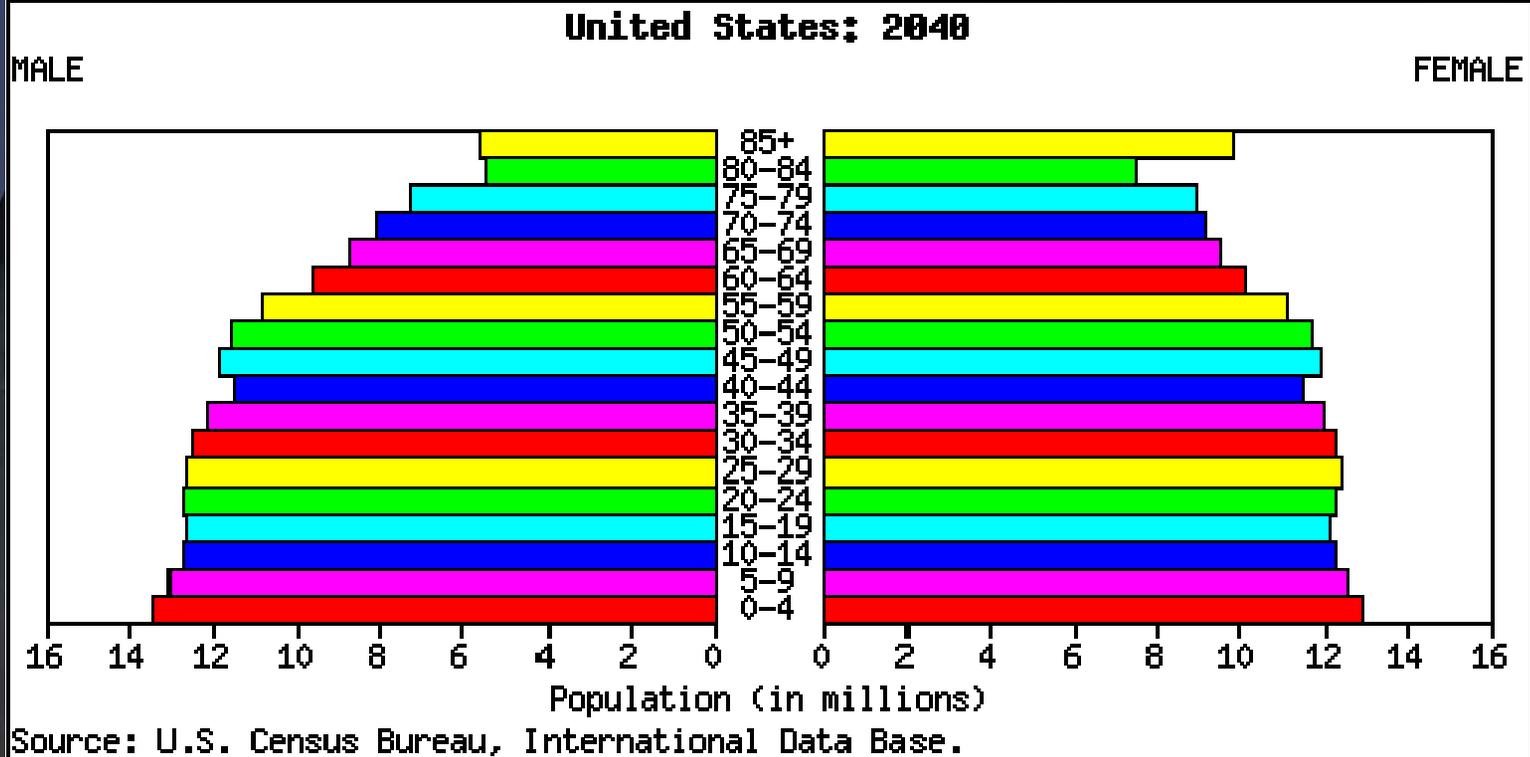
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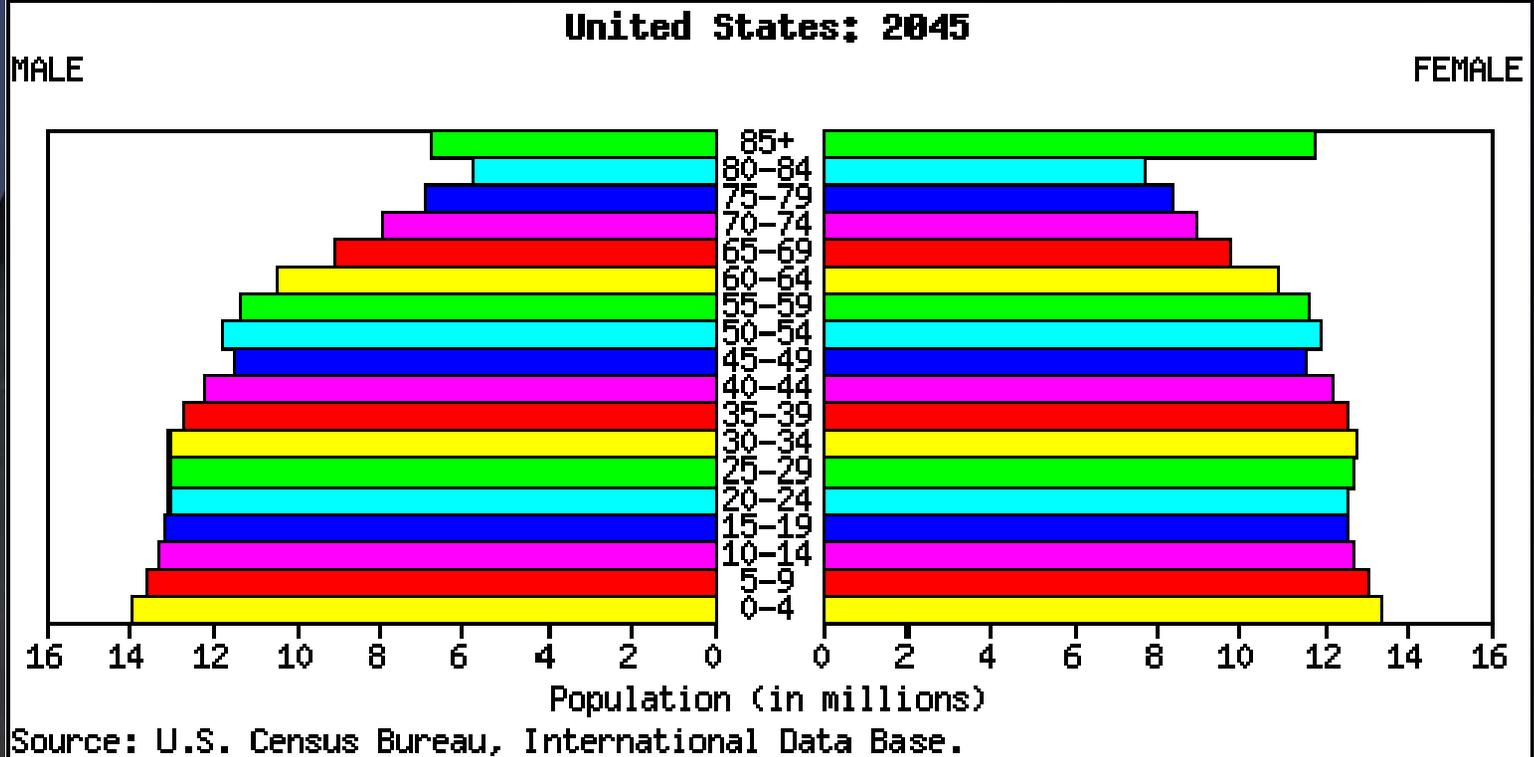
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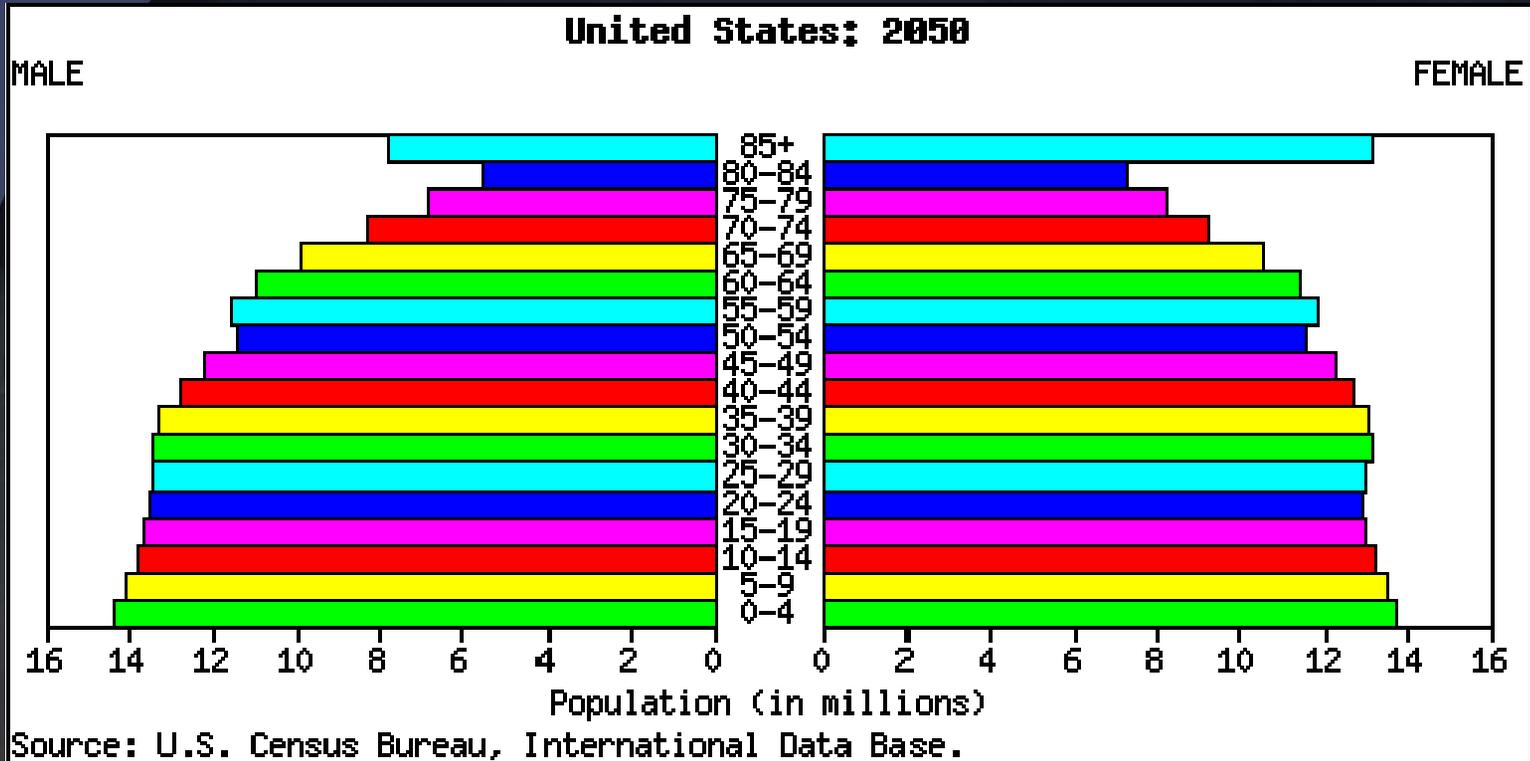
Changing Demographics



Changing Demographics



Changing Demographics





Making More Capacity

- ❖ Average passengers in a commuting automobile: about 1.1
- ❖ Seated capacity of a commuter bus: 50
- ❖ Seated capacity of a light rail vehicle: 90 (can operate in 2-3 car trains)
- ❖ Seated capacity of a commuter rail car: 135 (can operate in up to 4 car

Vehicle Capacity

1 Person Car



2 Person Carpool



Vanpool



Bus



Light Rail



Commuter Rail

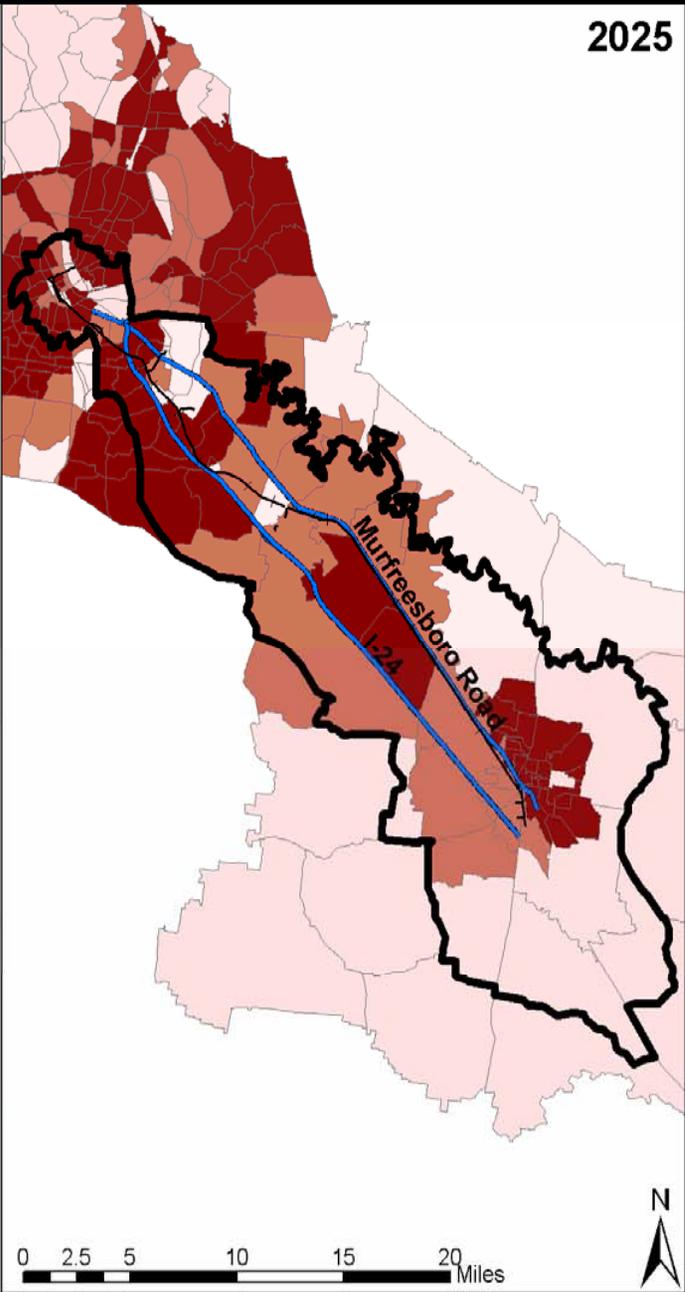
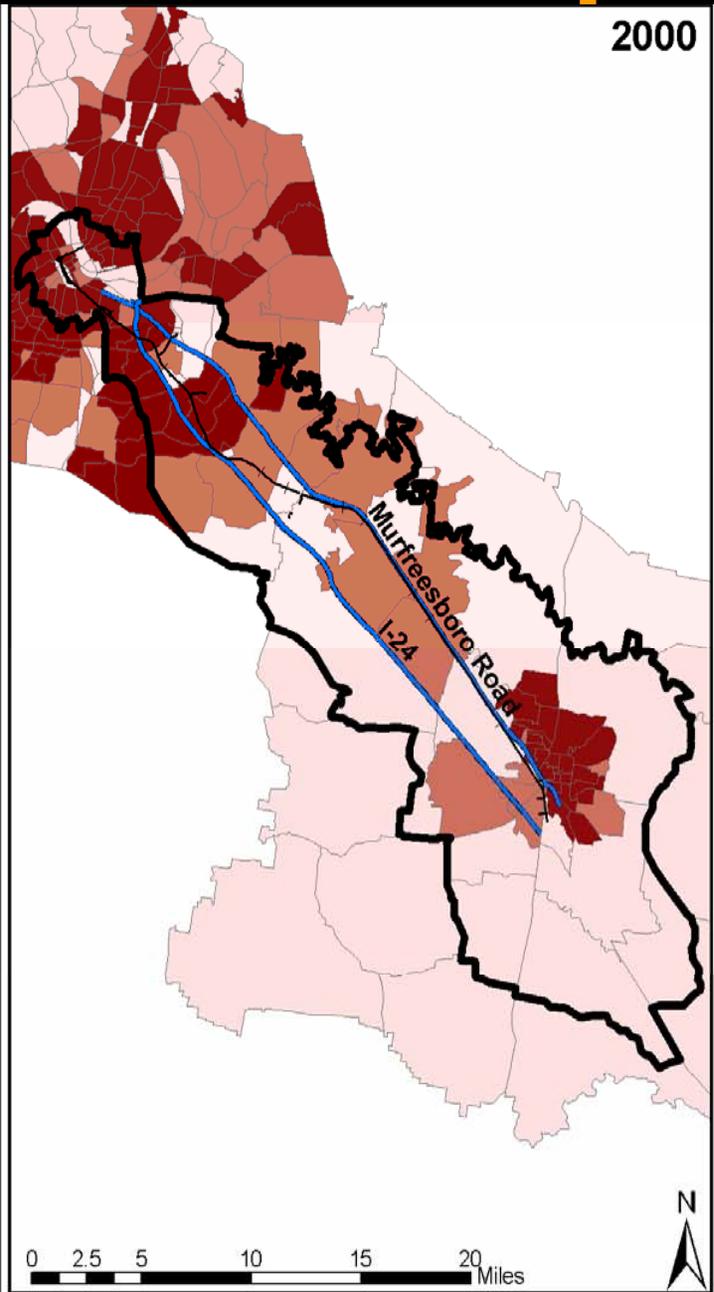


Number of Vehicles Needed to Carry 90 People

Population Growth

	2000	2015	2025	Percent Change 2000-2025
Davidson County Portion	177,101	200,698	227,450	28%
Rutherford County Portion	153,676	193,588	210,801	37%
Total Study Area	330,777	394,286	438,251	32%

Population Density



POPULATION DENSITY
 Southeast Corridor High Performance
 Transit Alternatives Study

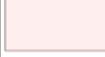


Nashville Area MPO

Legend

 SE Corridor Boundary

Persons per Square Mile

 0- 499

 500 - 1499

 1499- 25000

 Traffic Analysis Zone (TAZ)

Source: Nashville MPO

Study Area



Sumner

Davidson

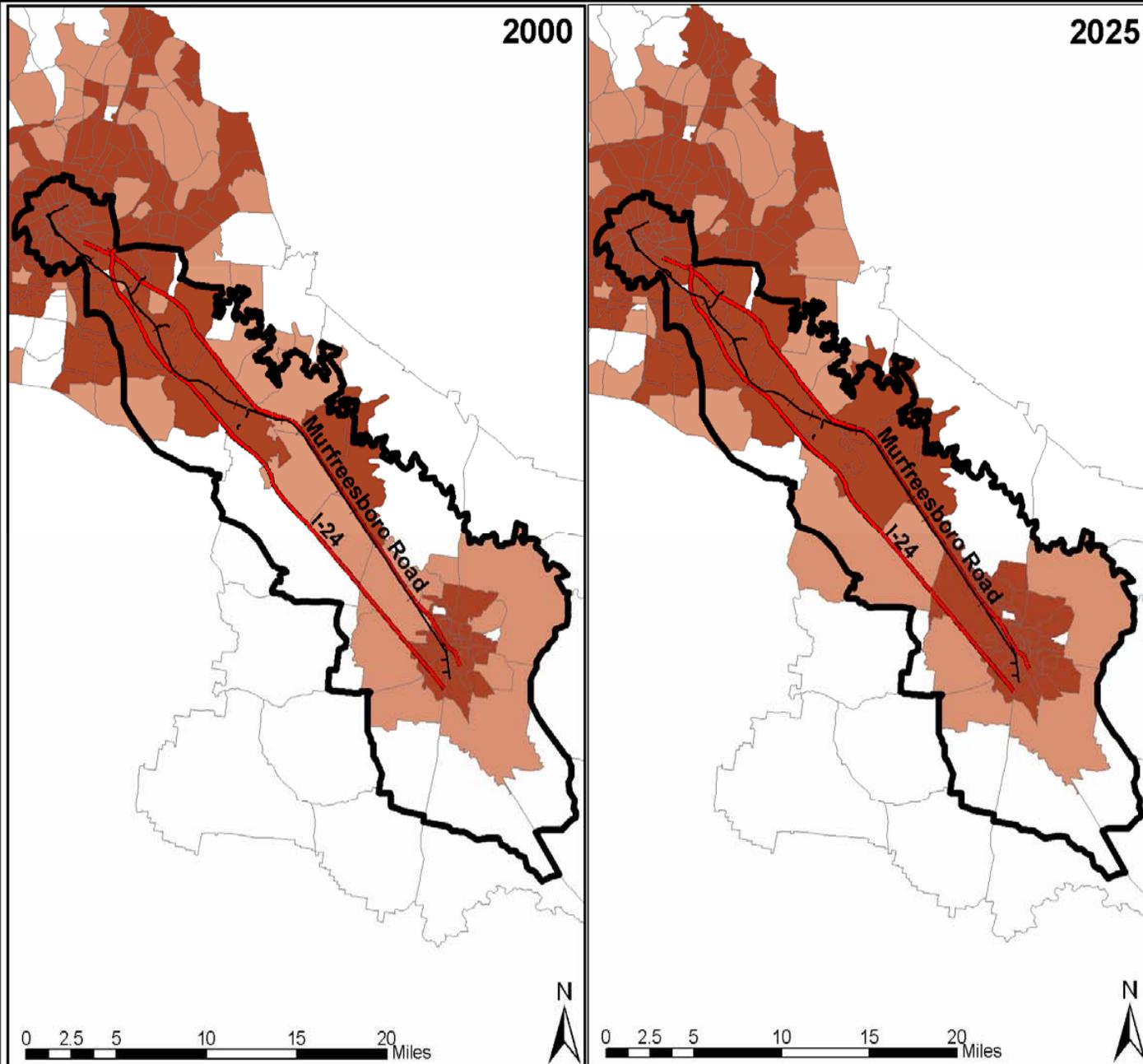
Wilson

Williamson

Rutherford



Employment Growth



EMPLOYMENT DENSITY
 Southeast Corridor High Performance
 Transit Alternatives Study
 **Nashville Area MPO**

Legend
 SE Corridor Boundary

Employees per Square Mile

	0 - 50
	51 - 250
	251+

 Traffic Analysis Zone (TAZ)
Source: Nashville MPO



Traffic Congestion-I-24

I-24 From I-40 Downtown Nashville to:	2003			2025		
	Average Daily Traffic (ADT)	Level of Service (LOS)	Existing Number of Lanes	Traffic Forecasts	Level of Service (LOS)	Future Number of Lanes*
Fesslers Lane	176,060	F	8	216,557	F	8
Briley Parkway (SR 155)	121,230	D	8	133,746	E	8
Bell Road	100,660	D	8	140,220	E	8
Old Hickory Blvd (SR 171)	102,180	D	8	131,881	E	8
Sam Ridley Pkwy (SR 266)	84,940	C	8	123,583	E	8
Nissan Drive (SR 102)	83,910	C	8	103,948	D	8
SR 840	80,710	E	8	88,693	C	8
SR 96	64,240	E	4	92,954	C	8
US 231	52,550	D	4	88,572	C	8
Rutherford/Coffee Co. Line	39,230	C	4	62,710	E	4

* Based on Nashville Area MPO 2025 Long Range Transportation Plan
Source: Nashville Area MPO and TDOT

Traffic Congestion- Murfreesboro Road

Murfreesboro Road From 8th Avenue to:	2003			2025		
	Average Daily Traffic (ADT)	Level of Service (LOS)	Existing Number of Lanes	Traffic Forecasts	Level of Service (LOS)	Future Number of Lanes*
Fessler's Lane	28,700	B	5	27,206	B	5
Thompson Lane	24,340	B	5	32,206	D	5
Briley Pkwy (SR155)	27,670	A	7	38,741	B	7
Bell Road	37,510	F	4	36,003	F	4
OHB/Hobson Pike (SR 171)	21,820	B	4	64,604	F	4
Sam Ridley Pkwy	22,790	B	4	50,954	F	4
Nissan Pkwy	21,920	B	4	30,338	C	4
SR-840	40,780	F	4	57,002	F	6
SR 96	32,190	D	4	32,227	A	6
S Church Street (SR 231)	33,250	B	6	28,358	A	6

* Based on Nashville Area MPO 2025 Long Range Transportation Plan
Source: Nashville Area MPO and TDOT

What We Have Heard

- ❖ 200+ Visitors to Public Meetings and Forums
- ❖ Interviews with more than 20 Key Regional Leaders
- ❖ Input from the public through phone, e-mail, Web Site



What We Have Heard

- ❖ Need for Transit Options
- ❖ Skepticism that Nashville will Use Transit – “Car Town,” Rural Lifestyle
- ❖ Enthusiasm for Rail
- ❖ Need for “Cost-Realistic” Options



Evaluation of Alternatives

Three Step Evaluation Process

**Initial Screening of Alternatives:
Project Need and Goals, Order-of-Magnitude Costs**

**Detailed Screening of
3 Alternatives**

**Refinement of Alternative,
Comparison of Alternative to Baseline**



Evaluation of Alternatives

- ❖ **Project Goals and Objectives**
- ❖ **Federal Transit Administration Evaluation Measures**
 - **Capital Investment Costs**
 - **Operating Costs**
 - **User Benefits**
 - **Financial Feasibility**



Evaluation of Alternatives

- ❖ Expand Mass Transit Options
- ❖ Address Traffic Congestion
- ❖ **Enhance Economic Development**
- ❖ Address Land Use
- ❖ Environmental Benefits
- ❖ Use Transportation Funding Efficiently

Objective:

Provide improved access to employment centers throughout the corridor by providing improved transportation access and options



Evaluation of Alternatives

- ❖ Expand Mass Transit Options
- ❖ Address Traffic Congestion
- ❖ **Enhance Economic Development**
- ❖ Address Land Use
- ❖ Environmental Benefits
- ❖ Use Transportation Funding Efficiently

Initial Screening Measure:

Does the alternative improve access to downtown Nashville; to the Vanderbilt/West End area; to interchange city; to Dell; Nissan; downtown Murfreesboro/MTSU?



Evaluation of Alternatives

- ❖ Expand Mass Transit Options
- ❖ Address Traffic Congestion
- ❖ **Enhance Economic Development**
- ❖ Address Land Use
- ❖ Environmental Benefits
- ❖ Use Transportation Funding Efficiently

Detailed Screening Measure:
Distance of alternative
stations/alignment from
employment.



Potential Alternatives

- ❖ Modes=type of vehicle and guideway



Commuter Rail

Chicago METRA



Colorado Railcar FRA-Compatible Diesel Multiple Unit

Bus Rapid Transit



Las Vegas MAX



Curitiba, Brazil



Light Rail



Portland Streetcar



Sacramento, CA

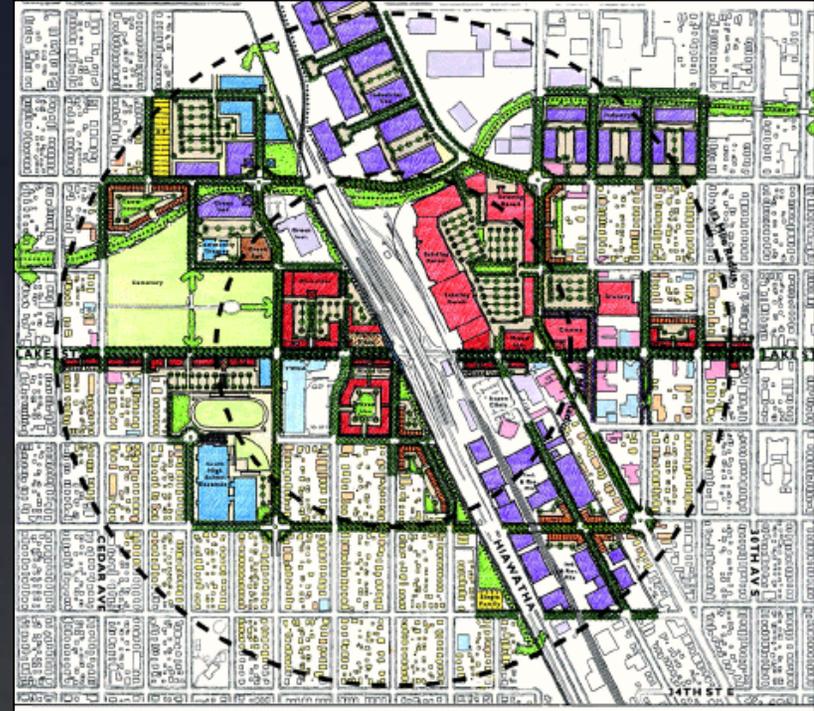
Transit Oriented Development

- ❖ **Transit-Supportive Development for existing and future growth**
 - Development Pattern
 - Compact with Significant Concentration of Residential / Retail / Commercial
 - Orientation of Buildings
 - Pedestrian Elements



Transit Oriented Development

- ❖ Compact Development
- ❖ Mix of Uses within Small Area
- ❖ Walkable Scale



Transit Oriented Development

- ❖ Transit is Integral to the Development
- ❖ Buildings are Oriented to Transit



Is it Better This Way?



BEFORE

Emeryville, CA

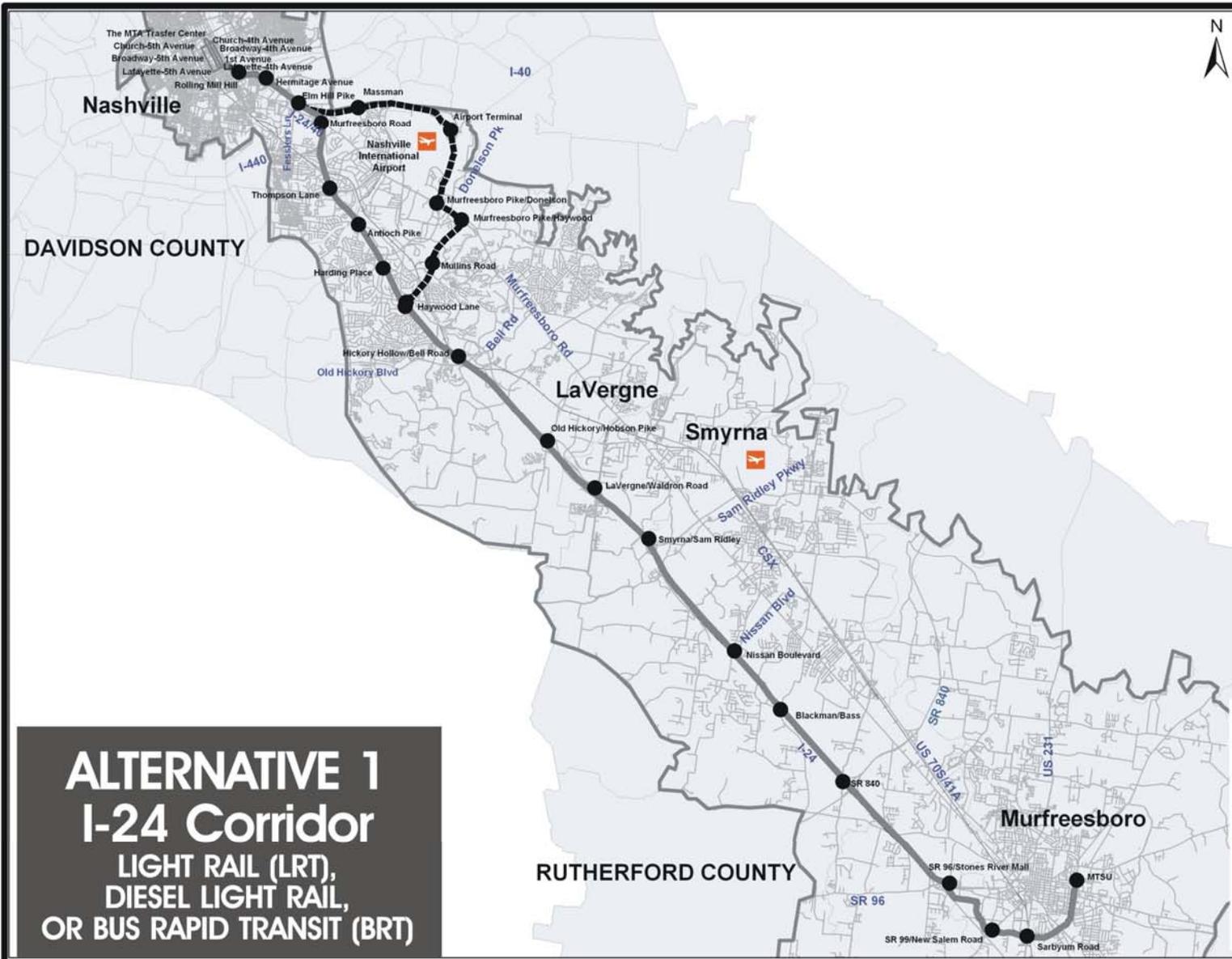
...Or This Way?

AFTER



Transit Makes Great Urban Development Work!

Alternative 1: I-24 LRT/BRT



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High Performance
Transit Alternatives
Study**
Nashville Area MPO

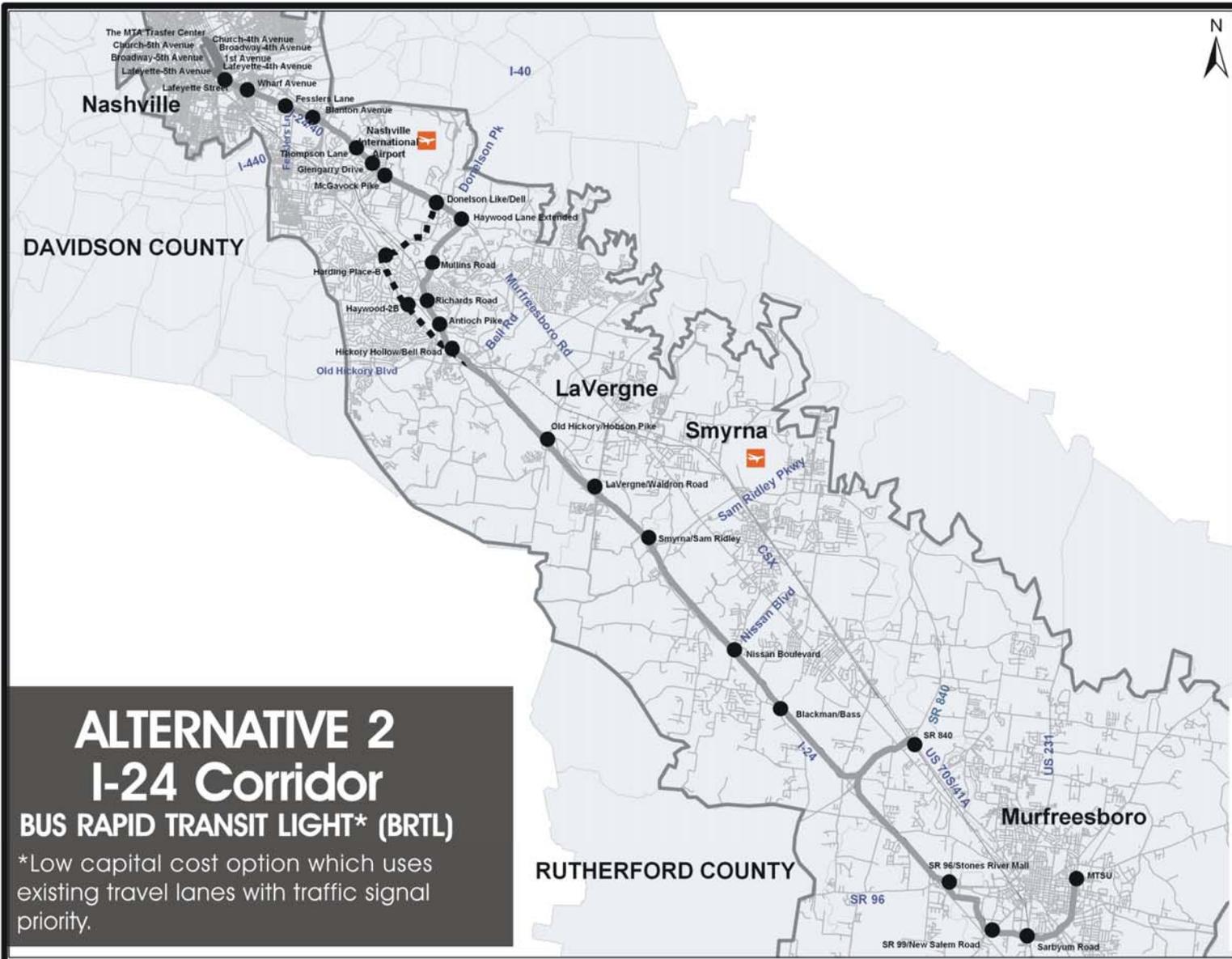
Legend

- Alt 1-stations
- Alt 1 Route Segment
- 1A
- - - 1B



**ALTERNATIVE 1
I-24 Corridor
LIGHT RAIL (LRT),
DIESEL LIGHT RAIL,
OR BUS RAPID TRANSIT (BRT)**

Alternative 2: I-24 BRT "Lite"



Southeast Corridor
High Performance
Transit Alternatives
Study



Legend

- Alt 2-stations
- Alt 2 Route Segment**
- 2A
- - - 2B

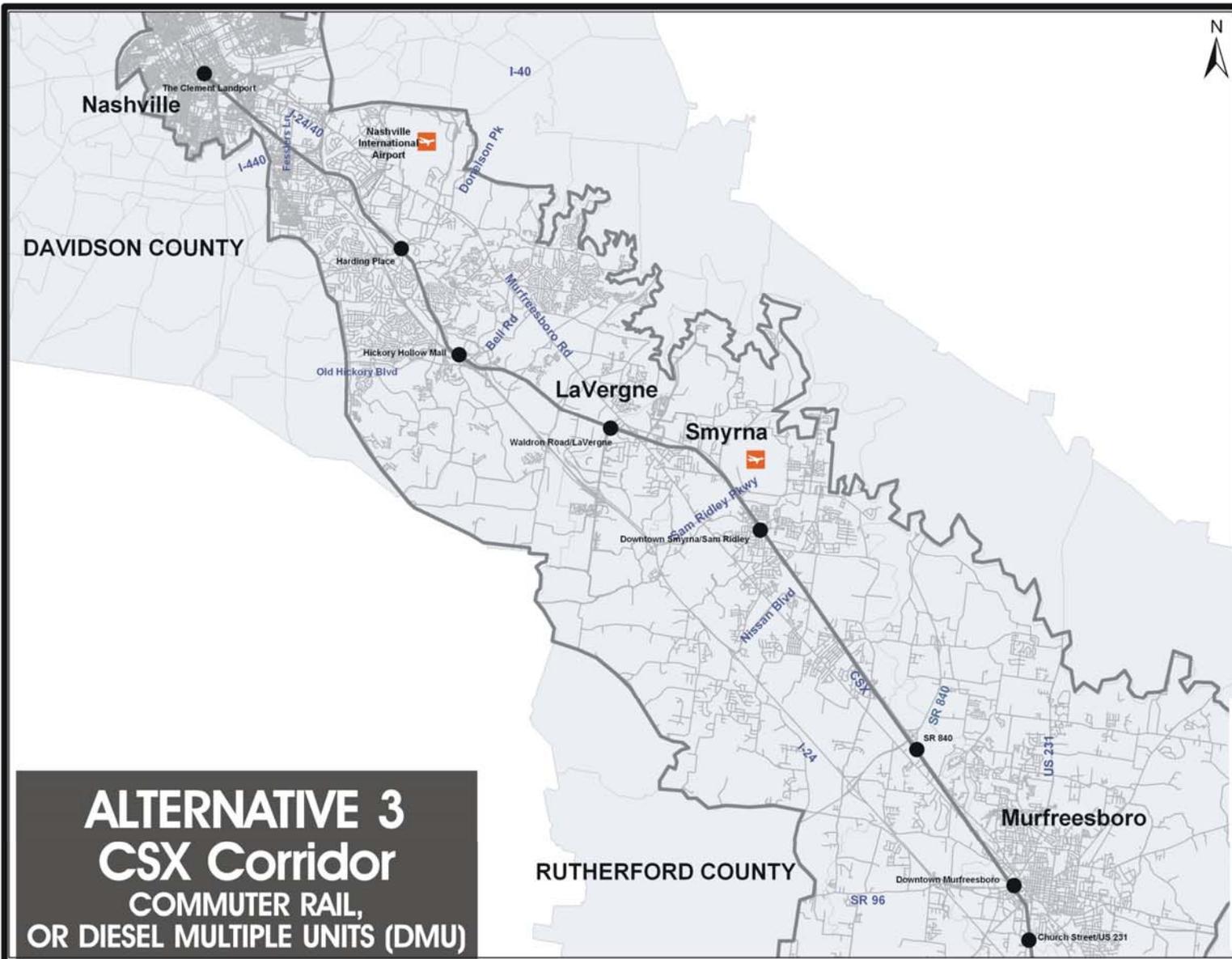


ALTERNATIVE 2
I-24 Corridor
BUS RAPID TRANSIT LIGHT* (BRTL)

*Low capital cost option which uses existing travel lanes with traffic signal priority.



Alternative 3: CSX Commuter Rail



**ALTERNATIVE 3
CSX Corridor
COMMUTER RAIL,
OR DIESEL MULTIPLE UNITS (DMU)**



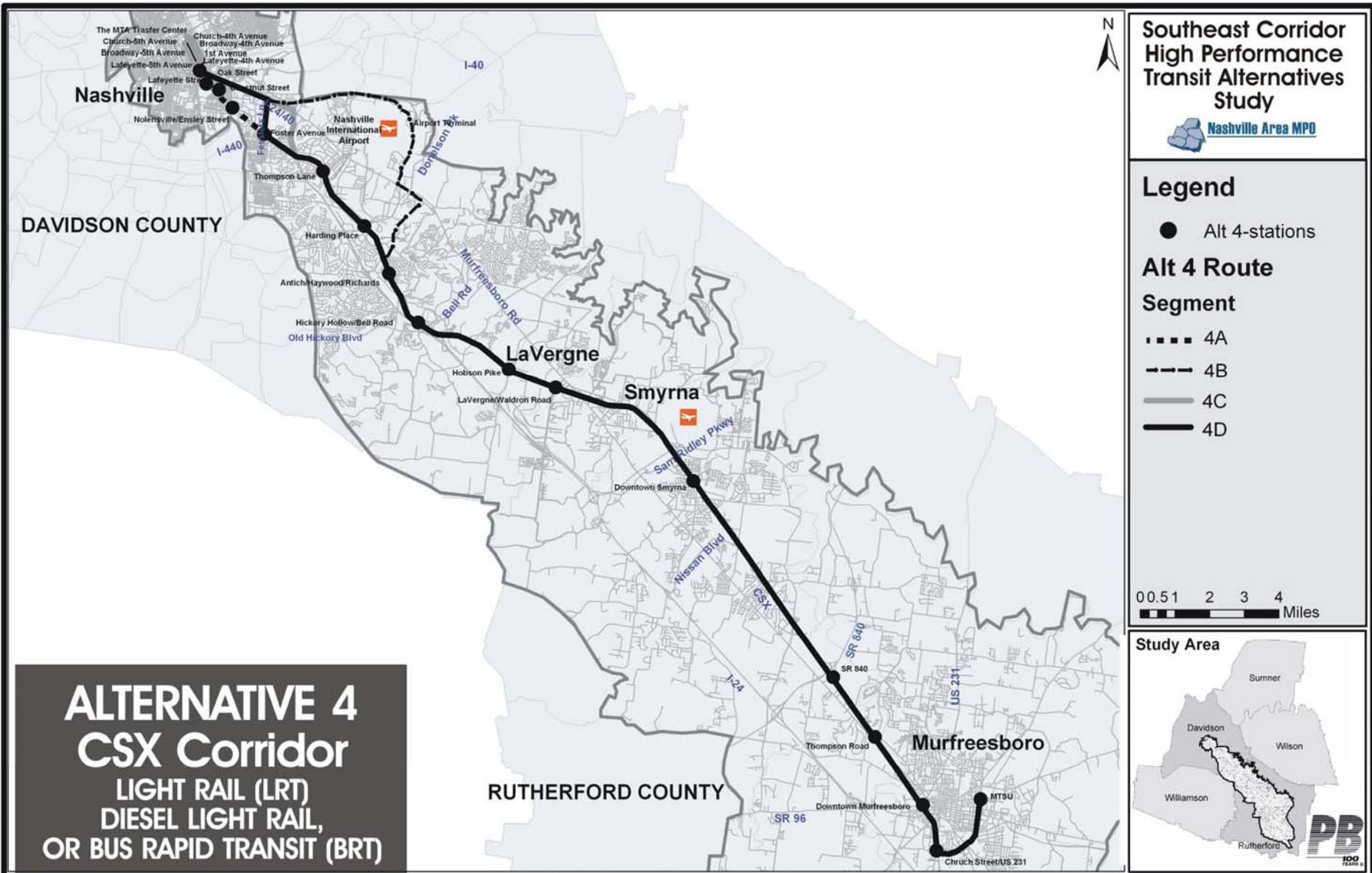
**Southeast Corridor
High Performance
Transit Alternatives
Study**
Nashville Area MPO

Legend

- Alt 3-stations
- Alt 3 Route Segment 3A

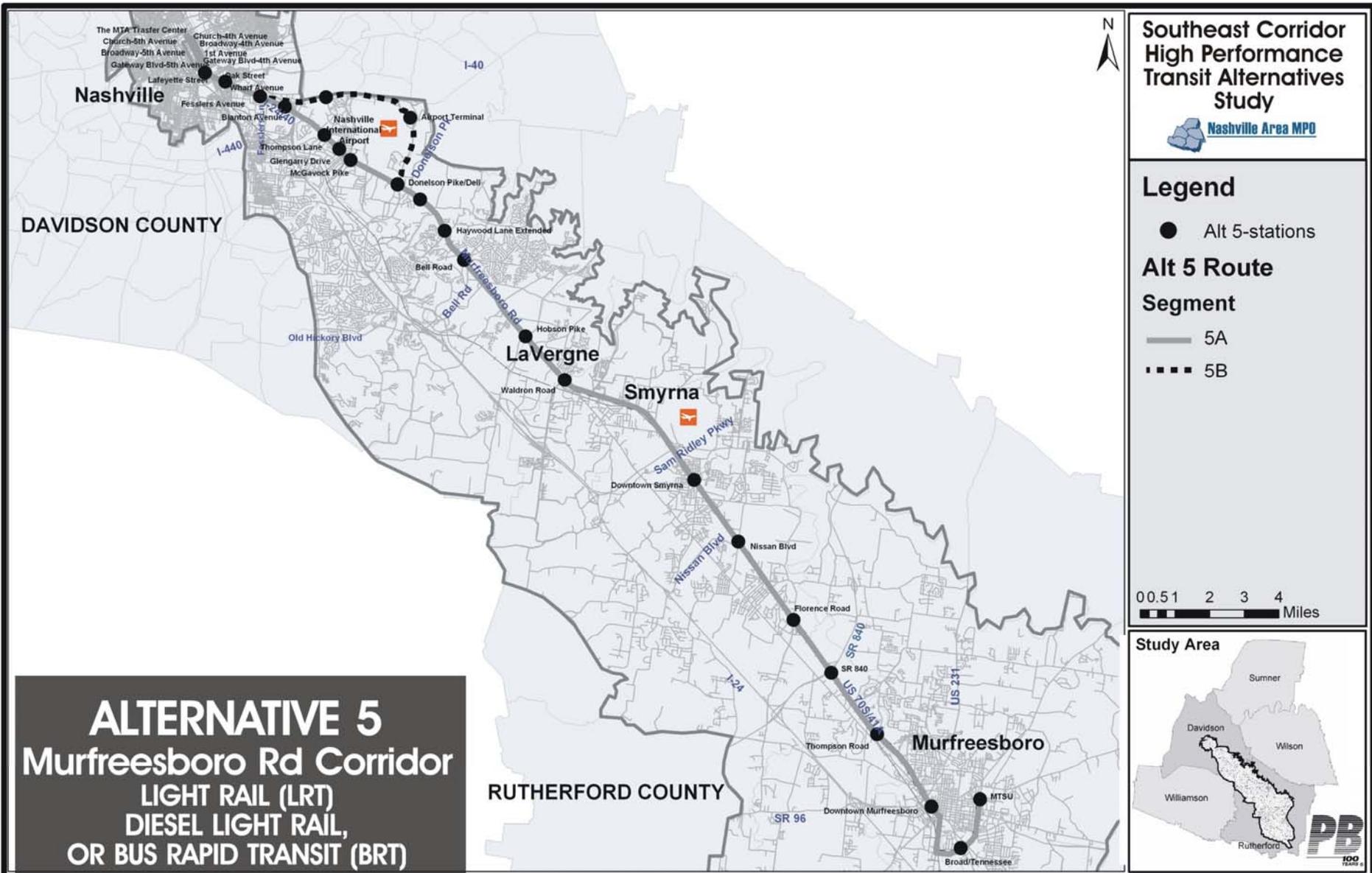


Alternative 4: CSX LRT/BRT



ALTERNATIVE 4
CSX Corridor
LIGHT RAIL (LRT)
DIESEL LIGHT RAIL,
OR BUS RAPID TRANSIT (BRT)

Alternative 5: M'boro Road LRT/BRT



ALTERNATIVE 5
Murfreesboro Rd Corridor
LIGHT RAIL (LRT)
DIESEL LIGHT RAIL,
OR BUS RAPID TRANSIT (BRT)

**Southeast Corridor
 High Performance
 Transit Alternatives
 Study**



Legend

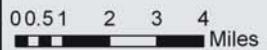
● Alt 5-stations

Alt 5 Route

Segment

— 5A

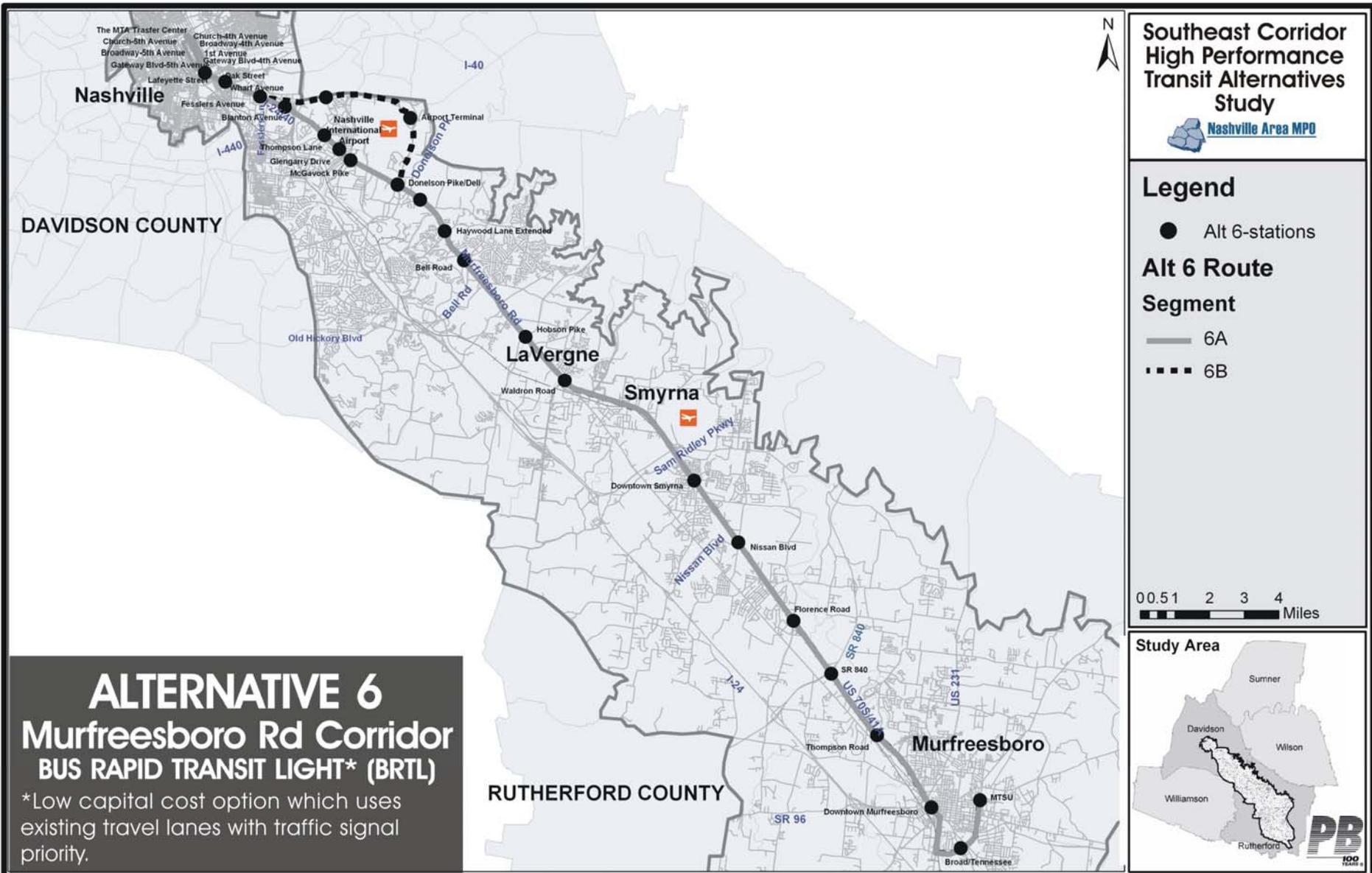
- - - 5B



Study Area



Alternative 6: M'boro Road BRT "Lite"



Southeast Corridor High Performance Transit Alternatives Study
 Nashville Area MPO

Legend

- Alt 6-stations

Alt 6 Route Segment

- 6A
- - - 6B



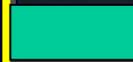
ALTERNATIVE 6
Murfreesboro Rd Corridor
BUS RAPID TRANSIT LIGHT* (BRTL)
 *Low capital cost option which uses existing travel lanes with traffic signal priority.

Phases of Analysis



Purpose & Need, Goals and Objectives

Summer
2004



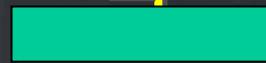
Scoping Meetings
FTA Scope Review

Autumn
2004



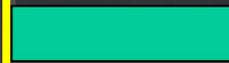
Public Forums

Winter
2004-2005



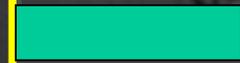
MPO, FTA Review
Community Meetings

Spring
2005



MPO, FTA Review
Community Meetings

Summer
2005

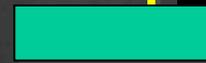


MPO, FTA Review
Community Meetings

Analysis of Final Alternatives

Identification of Preferred Alternative

**Development of Financial Plan,
Project Management Plan**



MPO, FTA
Approval

What's Next?

- ❖ Evaluate Alternatives
 - Analysis
 - Your Comments
- ❖ Evaluation Results: Winter
- ❖ Preferred Alternative Selected: Spring
- ❖ Preferred Alternative in Long-Range Plan
- ❖ Design and Environmental Analysis
- ❖ Best Case Implementation: 5-7 Years





Southeast Corridor High Performance Transit Alternatives Study

For More Information:

www.setransitstudy.com

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