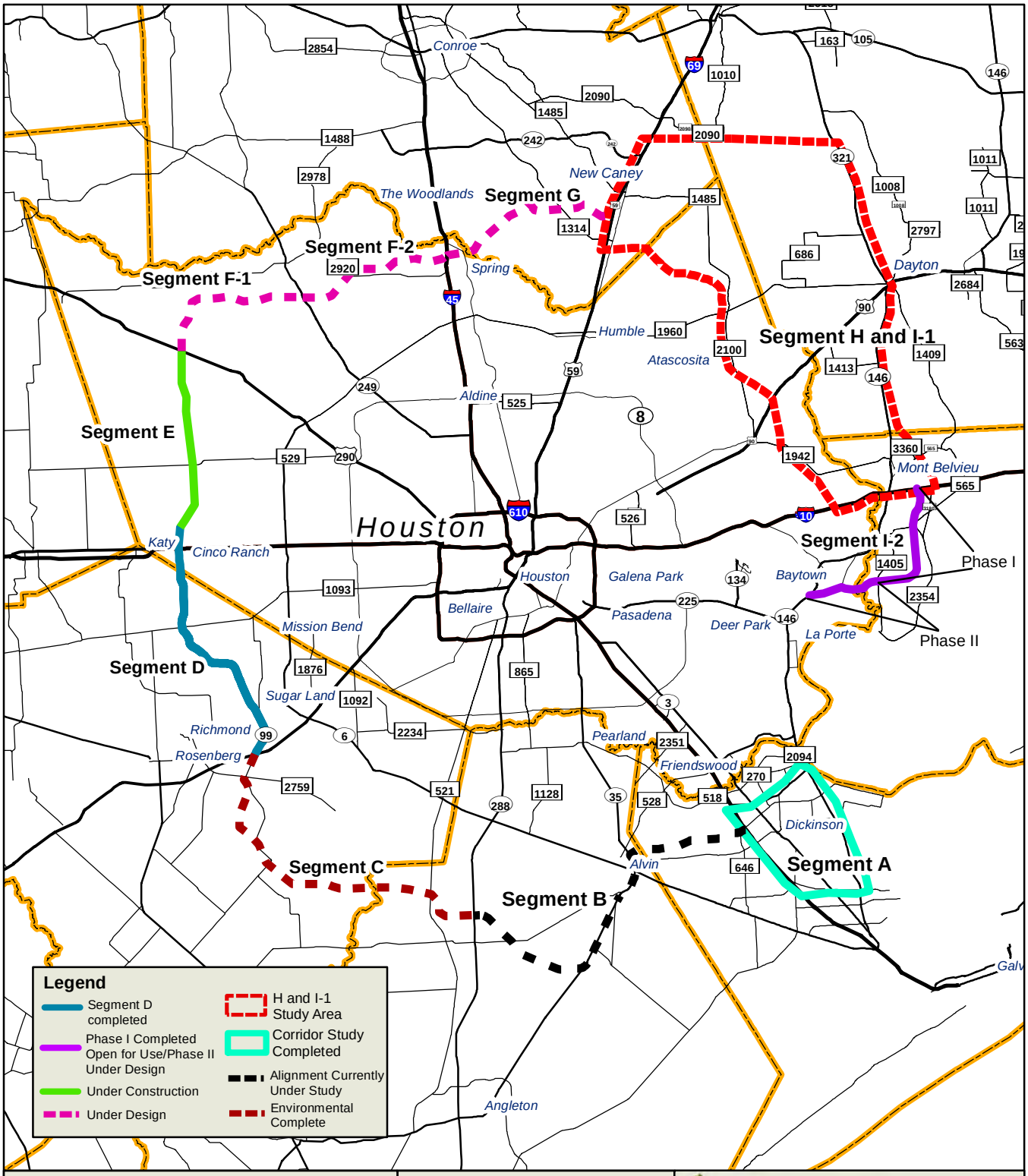
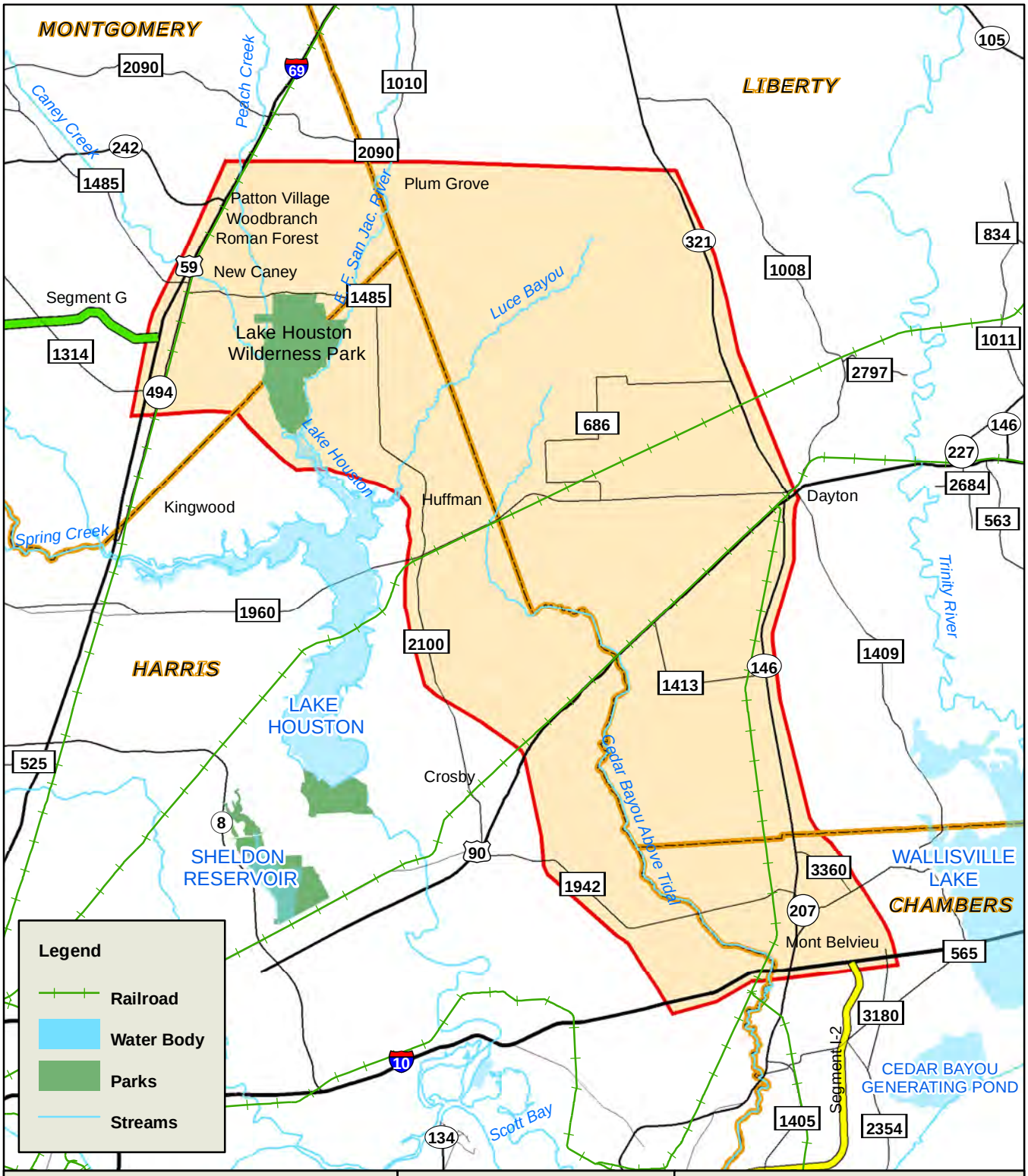


SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 1-1
Project Location and Status

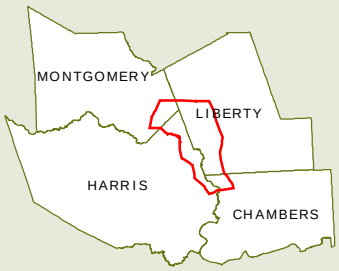
Source: Grand Parkway Association, 2012



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

0 2.5 5 10 Miles

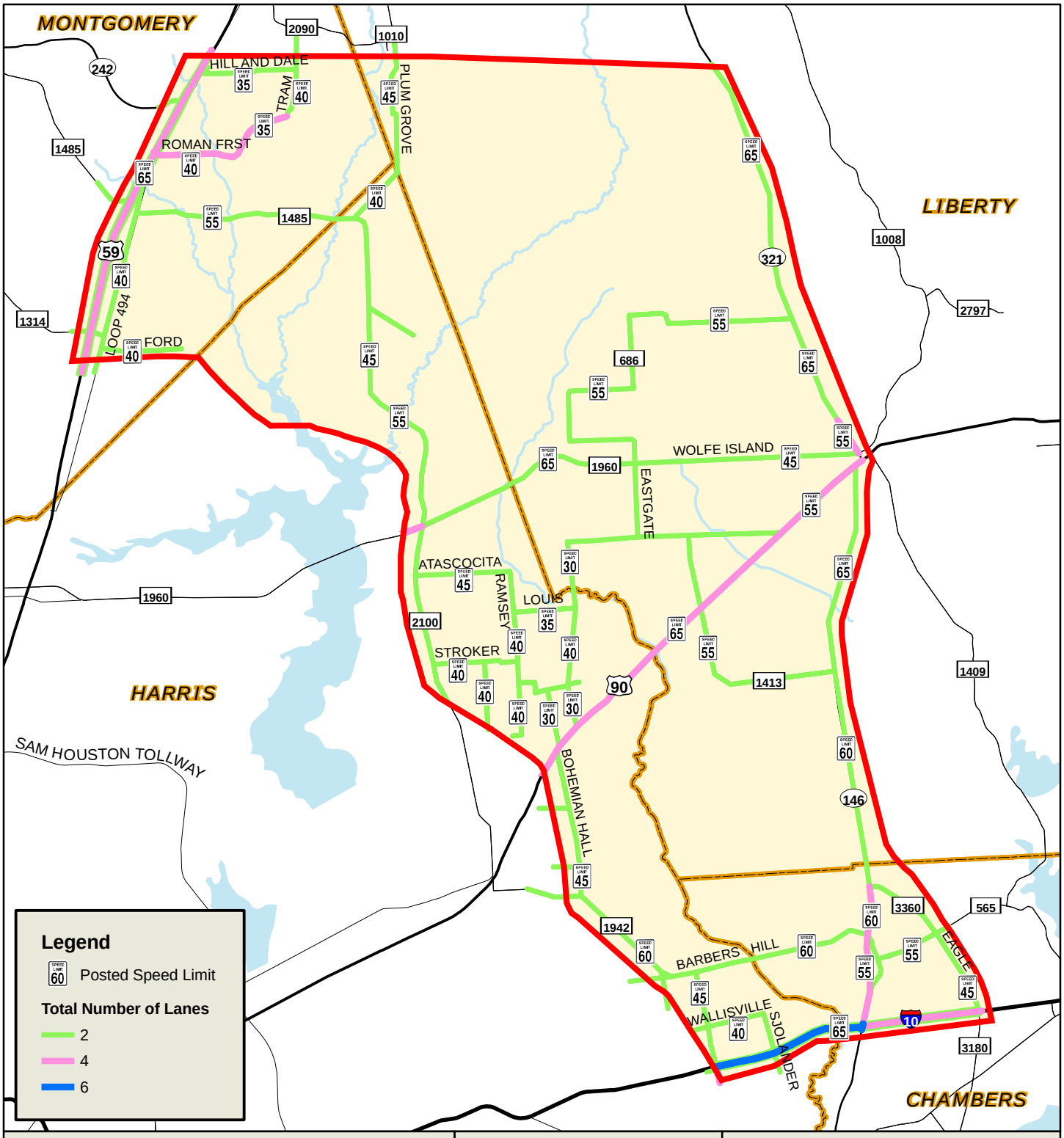


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 1-2
Preliminary Study Area Map

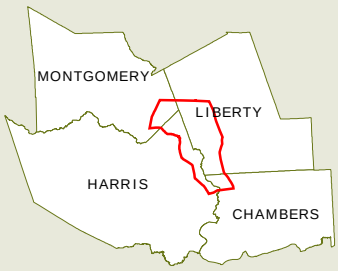
Source: HNTB, 2007



Interstate Highway
US Highway
State Highway
FM Road
Study Area
County Boundary

N

0 2.5 5 10 Miles

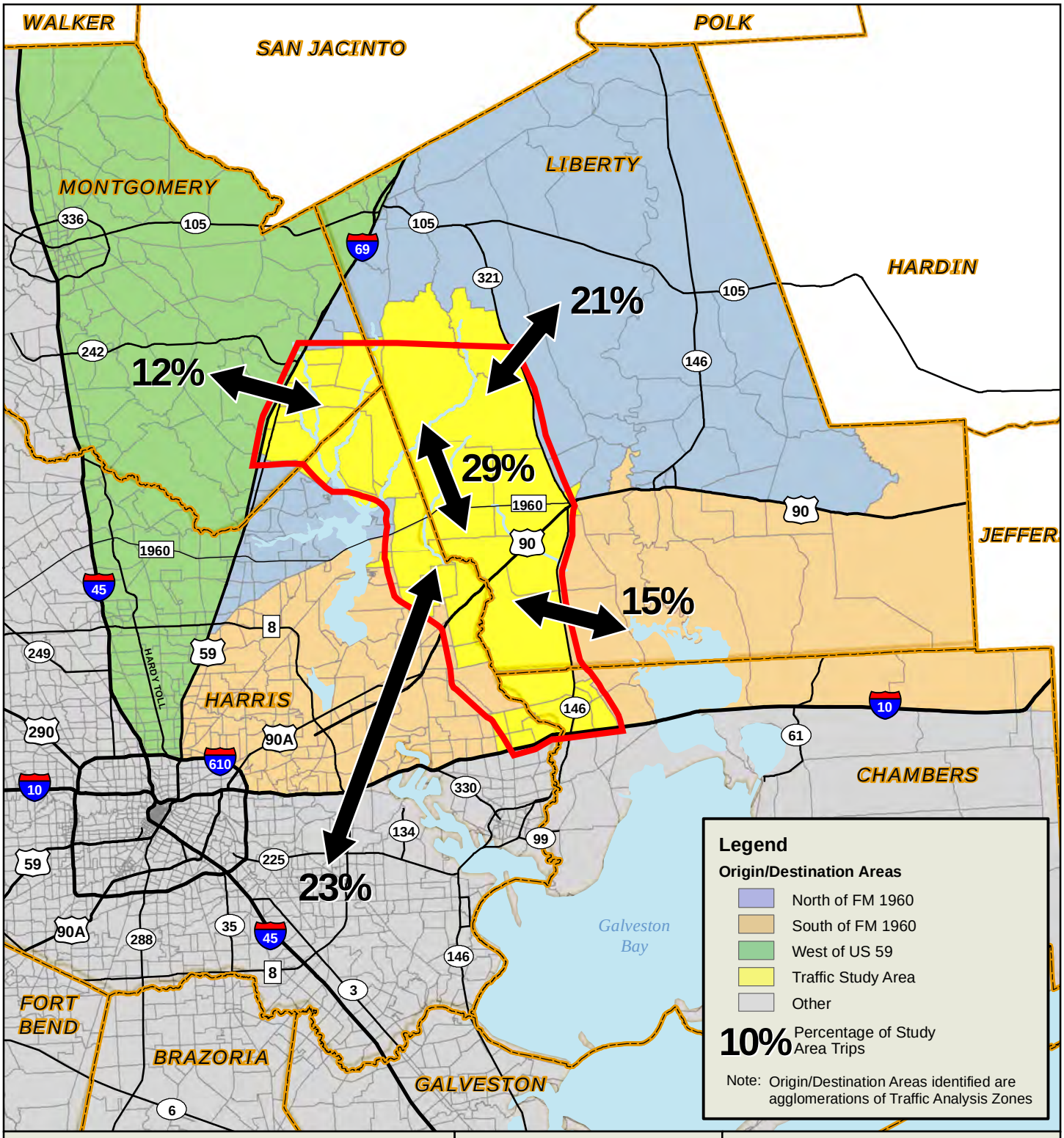


THE GRAND PARKWAY

SH 99: US 59 (N) to IH 10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 1-3
Roadway Characteristics

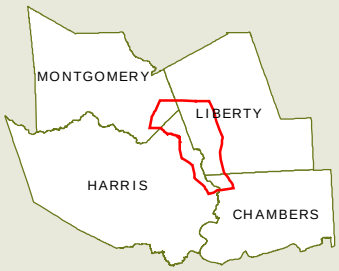
Source: Wilbur Smith Associates Field Inventory, 2006



Interstate Highway
US Highway
State Highway
FM Road
Study Area
County Boundary

N

0 6 12 24 Miles

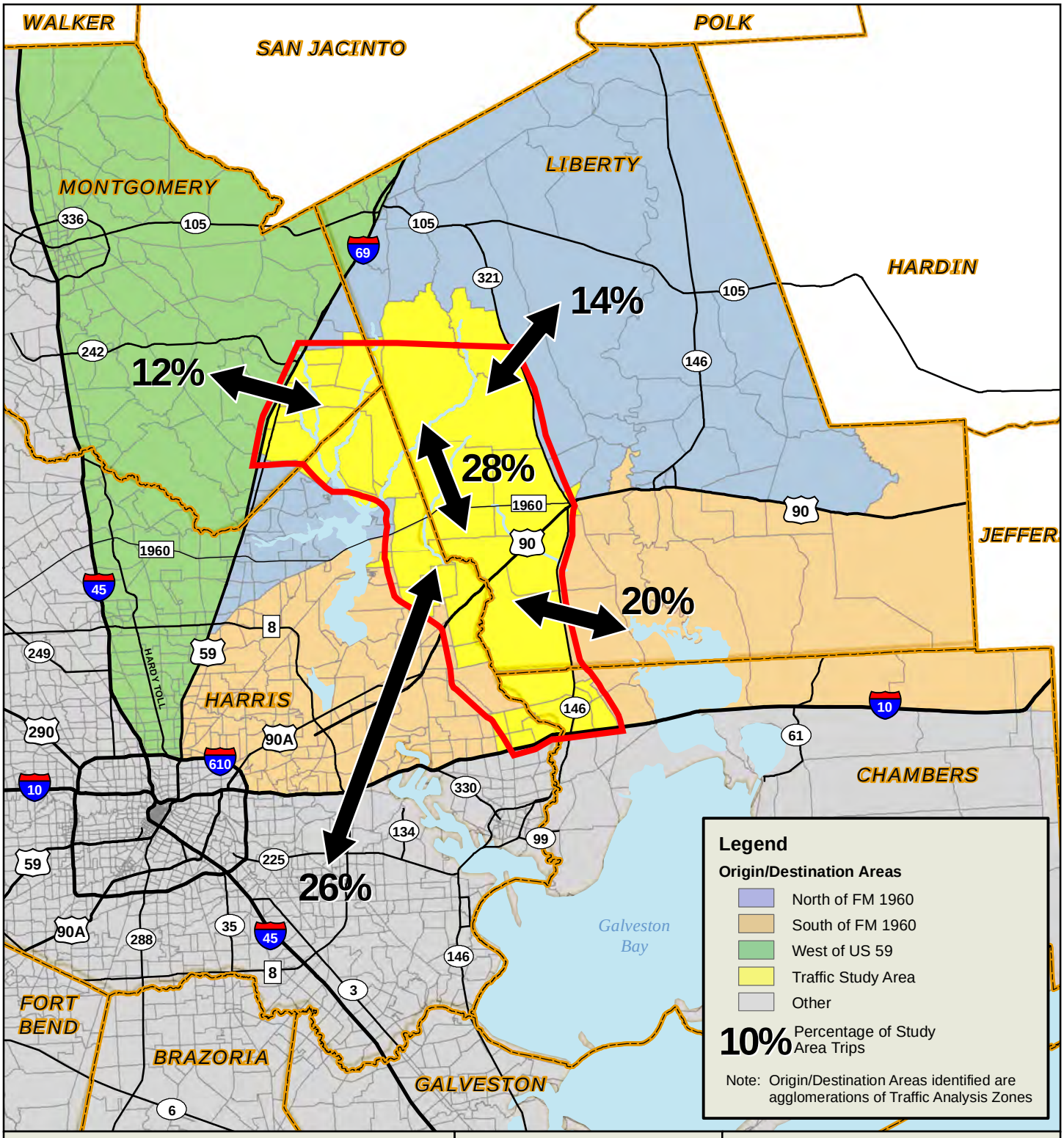


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H & I-1

EXHIBIT: 1-4
Trip Origins/Destinations
Year 2011

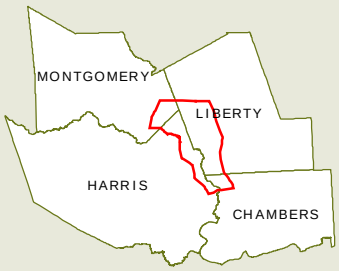
Source: H-GAC, 2012



Interstate Highway
US Highway
State Highway
FM Road
Study Area
County Boundary

N

0 6 12 24 Miles

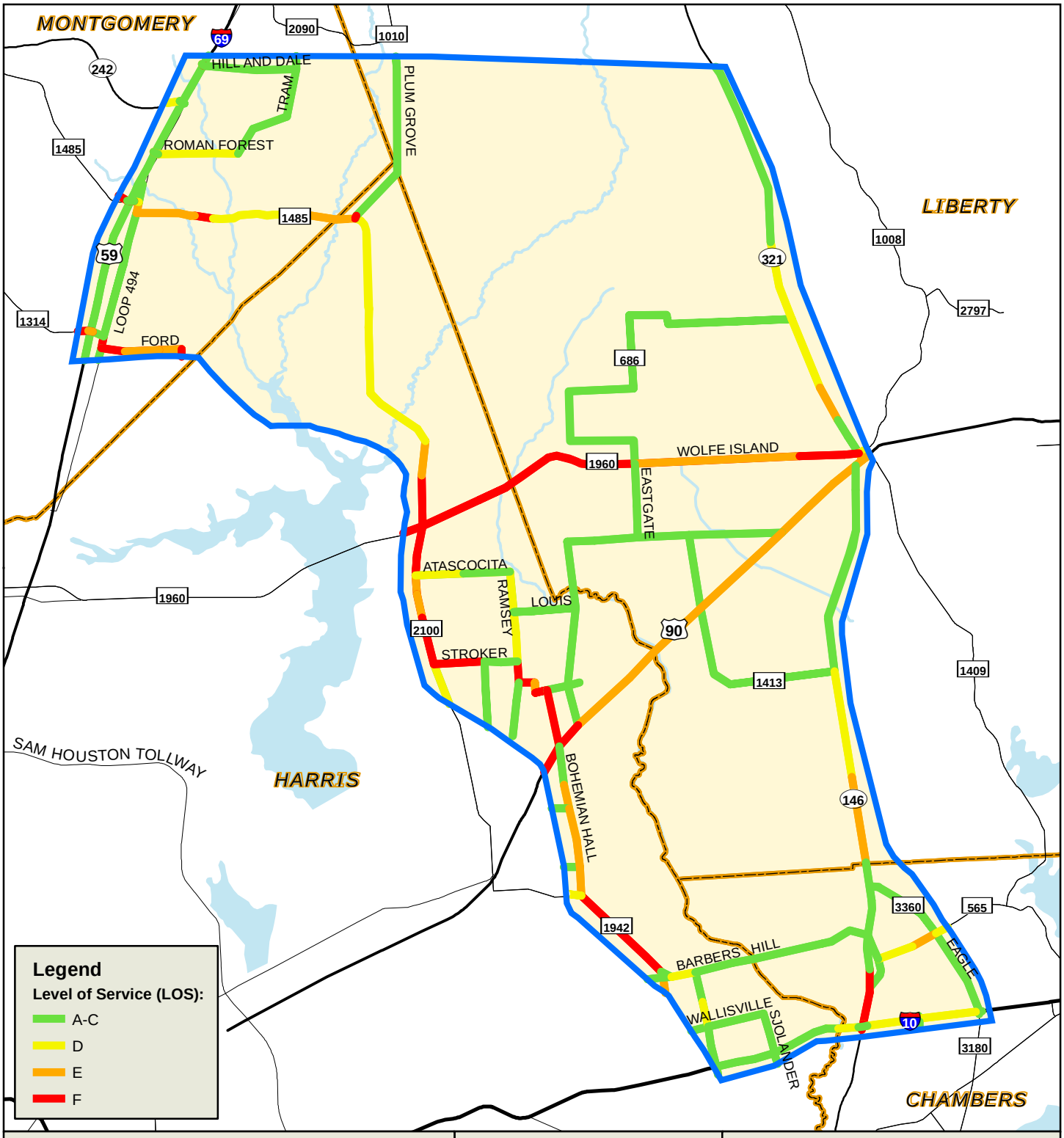


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H & I-1

EXHIBIT: 1-5
Trip Origins/Destination
Year 2039 - No-Build

Source: H-GAC, 2012



Interstate Highway
US Highway
State Highway
FM Road
Study Area
County Boundary

N

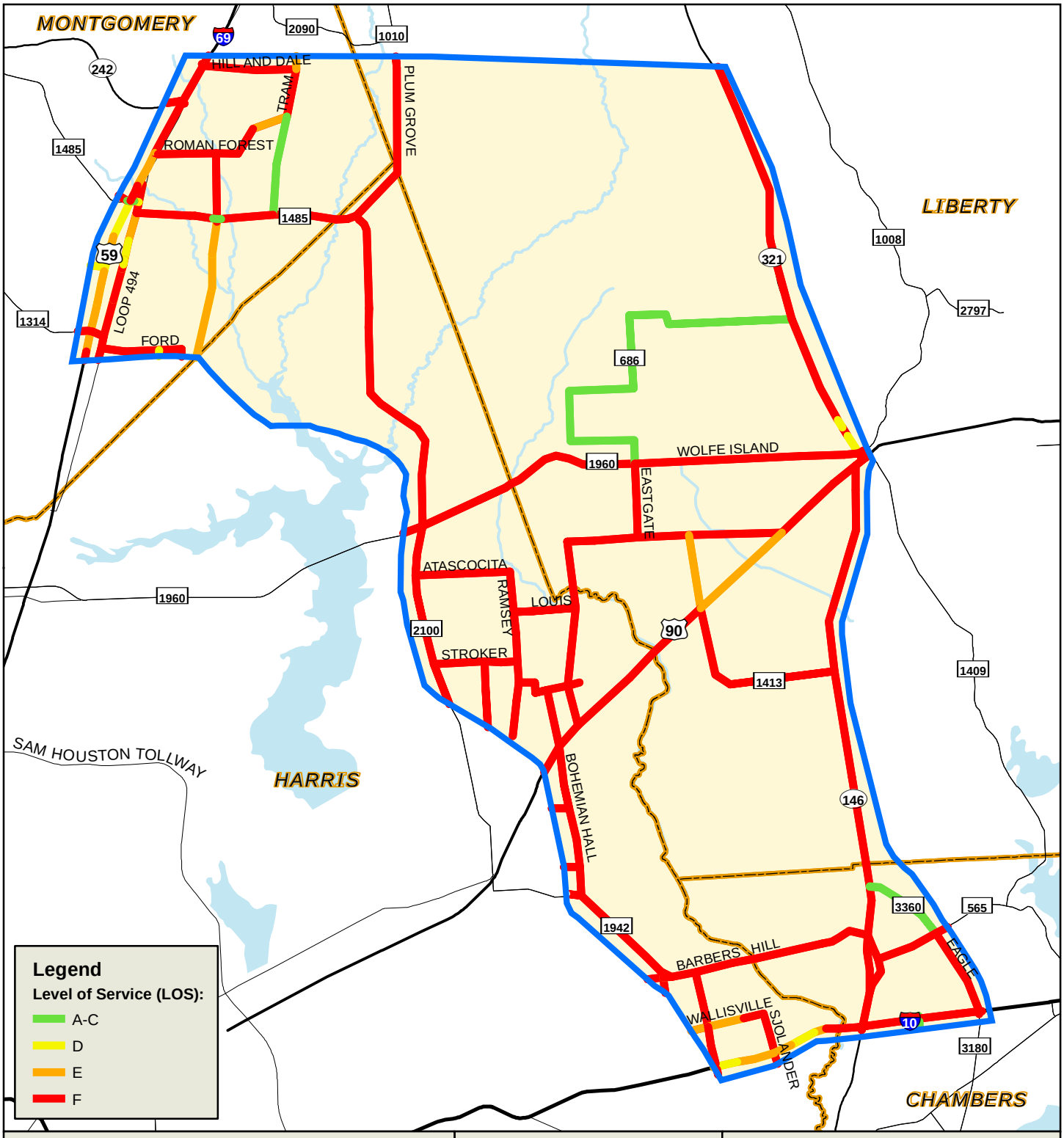
0 2.5 5 10 Miles

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 E
Grand Parkway
Segments H & I-1

EXHIBIT: 1-6
Level Of Service (LOS)
Existing 2011

Source: CDM Smith, 2012



Interstate Highway
US Highway
State Highway
FM Road
Study Area
County Boundary

N

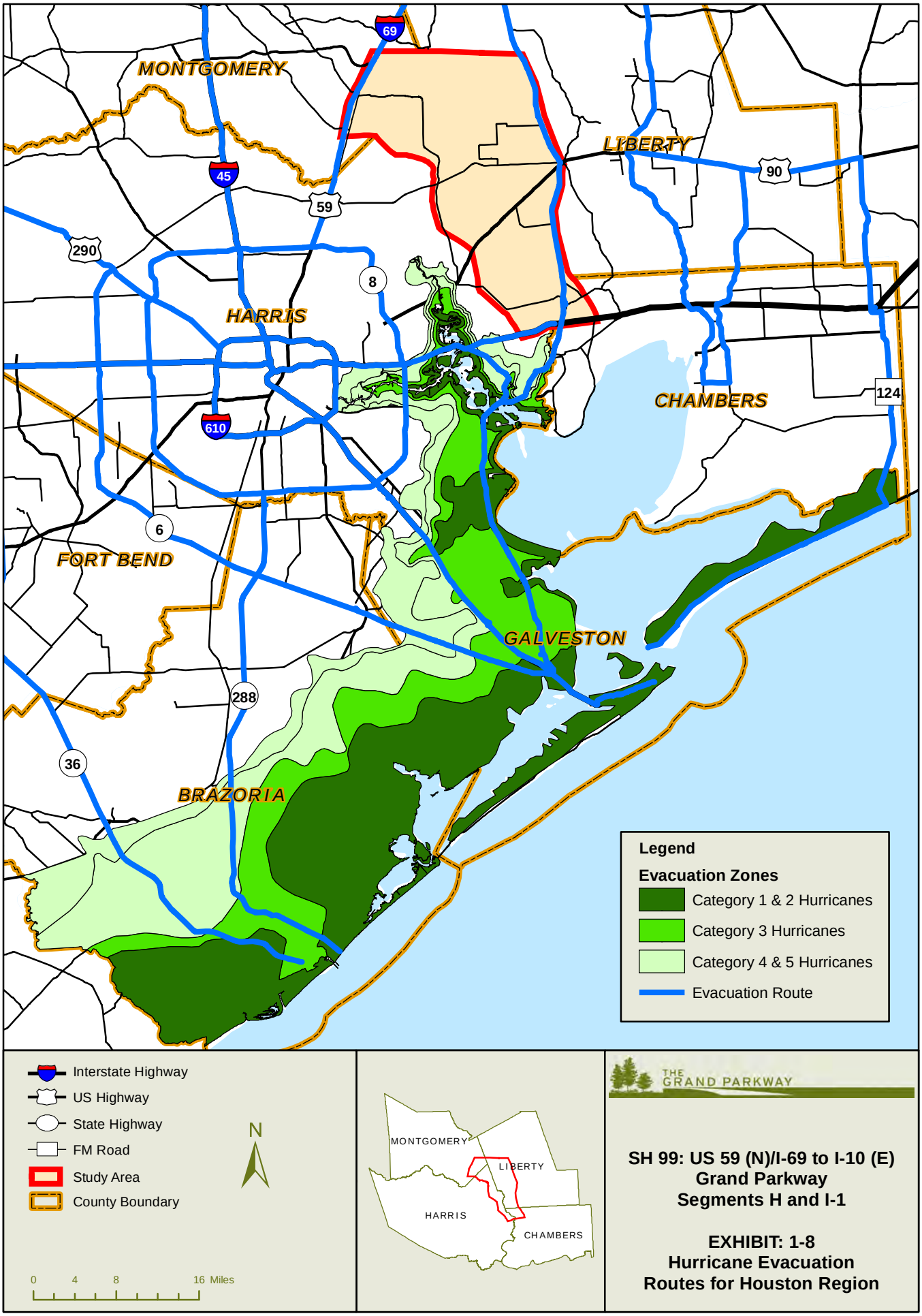
0 2.5 5 10 Miles

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 E
Grand Parkway
Segments H & I-1

EXHIBIT: 1-7
Level of Service (LOS)
Year 2039 - No-Build

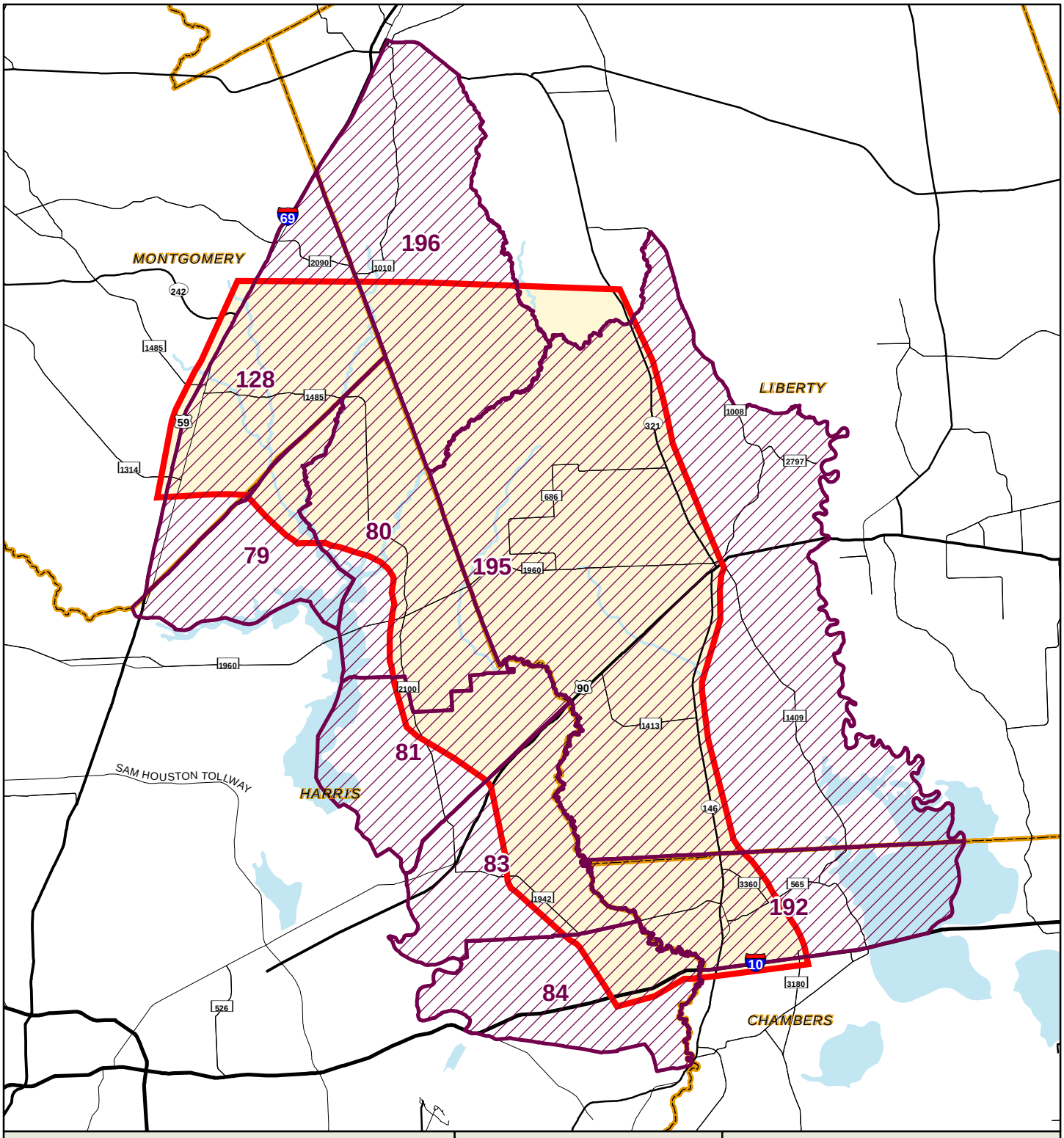
Source: CDM Smith, 2012



SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 1-8
Hurricane Evacuation Routes for Houston Region

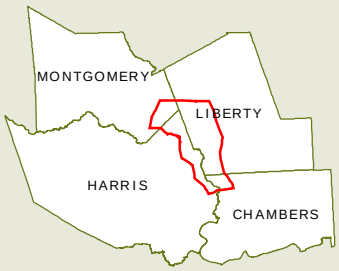
Source: H-GAC, 2012



Interstate Highway
US Highway
State Highway
FM Road
H-GAC Regional Analysis Zone
Study Area
County Boundary

N

0 2.5 5 10 Miles

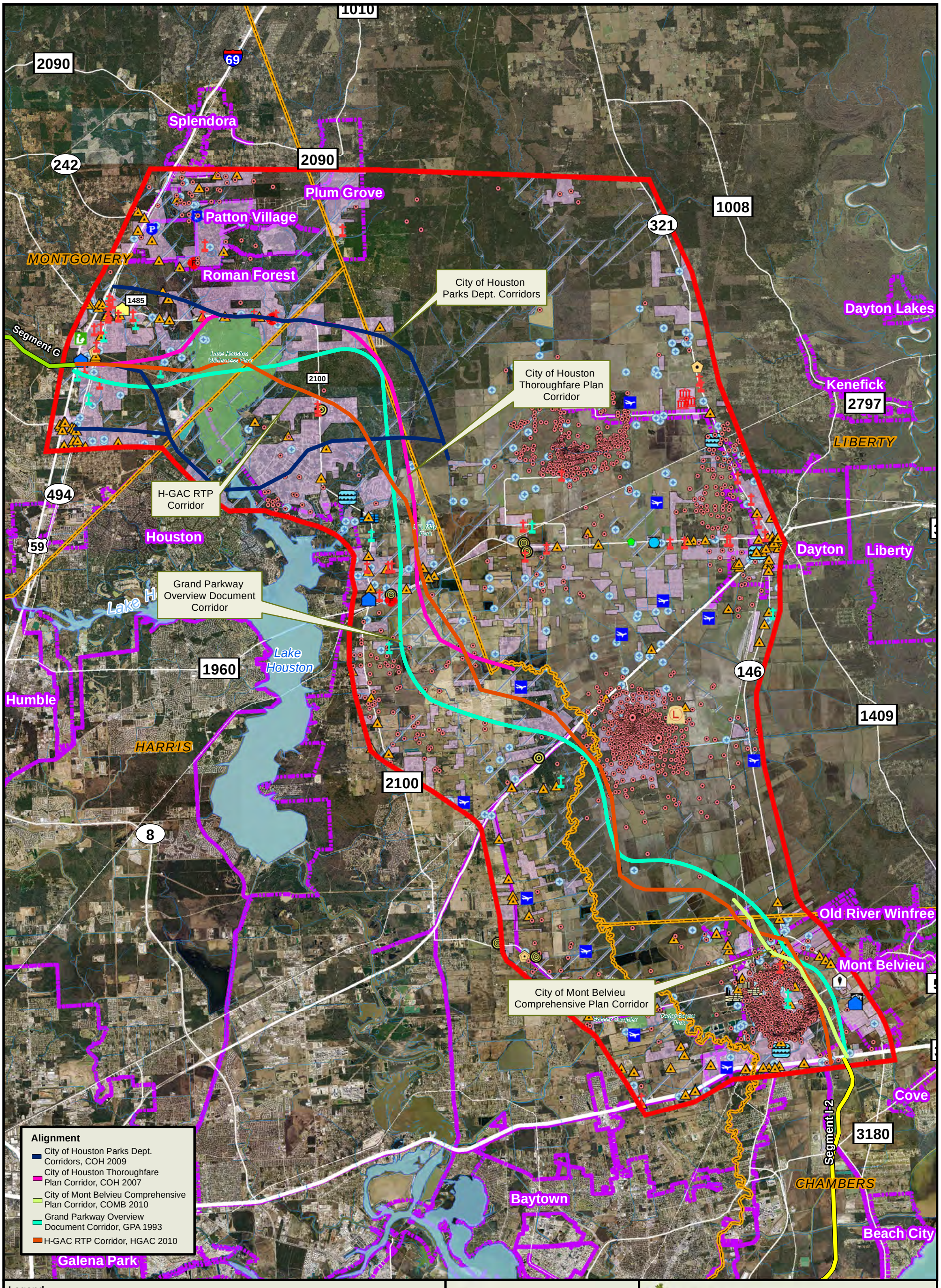


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H & I-1

EXHIBIT 1-9
H-GAC Regional Analysis Zones Within Study Area

Source: H-GAC, 2012



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- City
- County
- River
- Water Body
- Segment G
- Segment I-2
- Developed Area
- Park
- 100-year floodplain
- Mature Pine Forests
- Cellular Tower
- Electric Substation
- Hazmat
- Oil Well
- Water Well
- Railroad

Public Facility

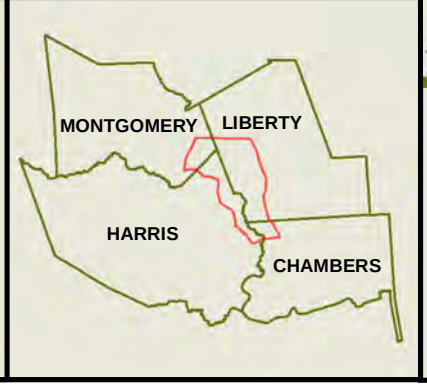
- Courthouse
- Fire Station
- Library
- Montgomery Co. Pct. 4 Office
- Museum
- Police Station
- Post Office
- TDCJ Prison
- Wastewater Plant
- Landfill

Facility (Type)

- Cell Tower
- Petroleum Plant
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery

N

0 0.475 0.95 1.9 Miles

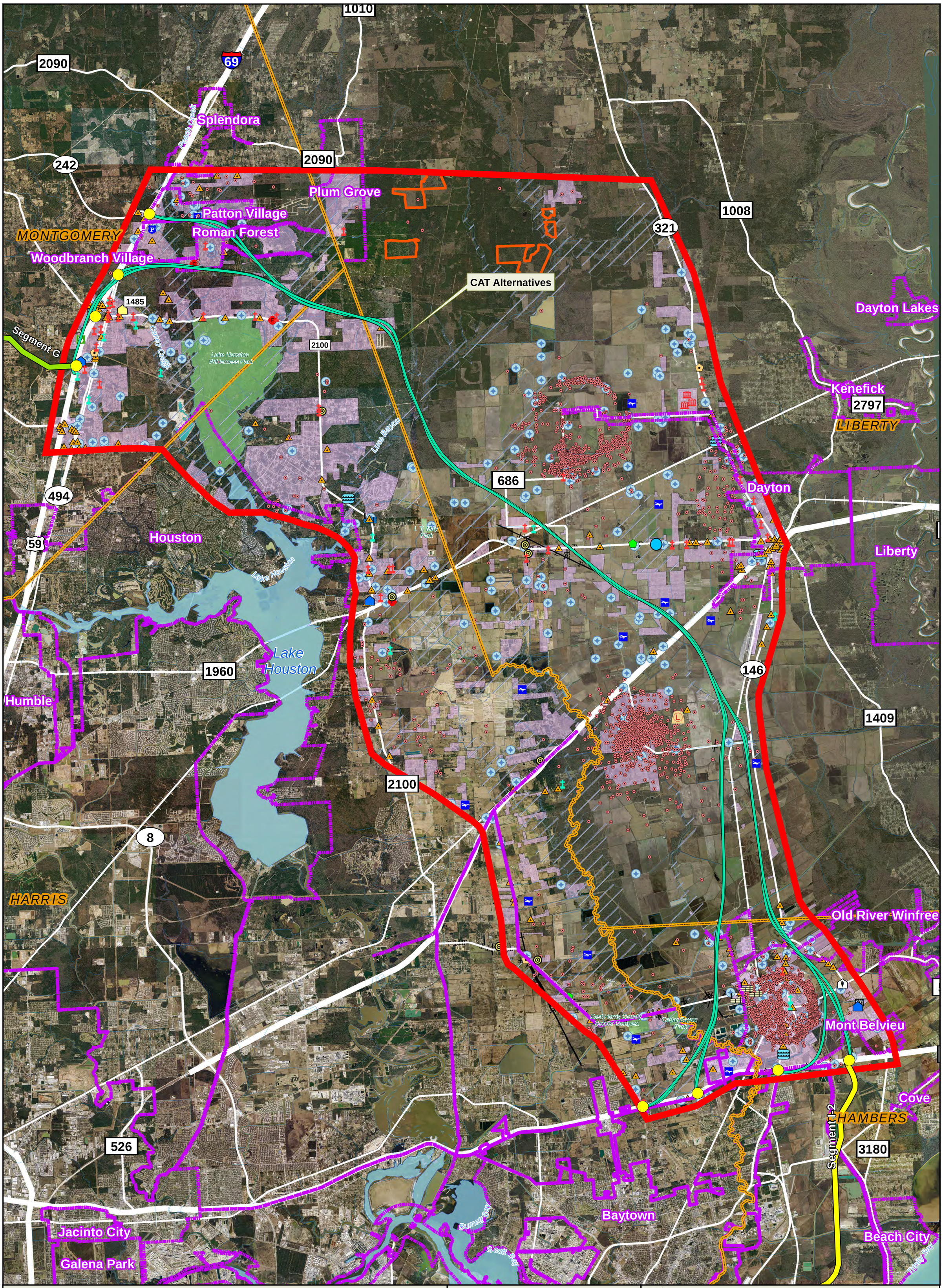


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-1
Previously Mapped and Publically Available Alternatives

Source: H-GAC 2010, Grand Parkway Association 1993, City of Houston 2009 & 2010, City of Mont Belvieu, 2010



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- Gas
- Electric
- River
- Water Body
- Segment G
- Segment I-2
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Facility (Type)

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- Petroleum Plant
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery
- Wastewater Plant
- Landfill
- CAT Alternatives
- CAT End Points

N

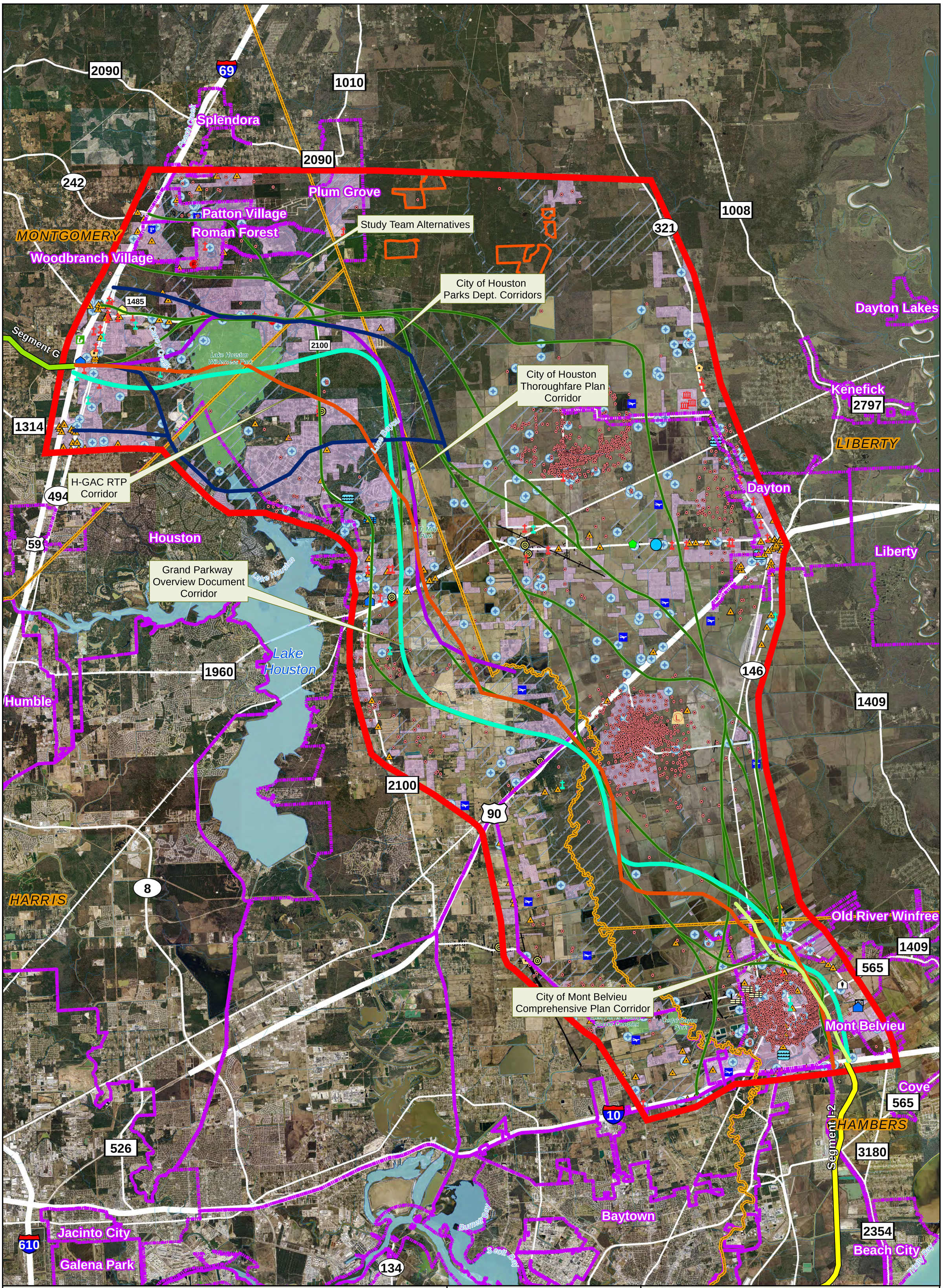
0 0.475 0.95 1.9 Miles

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-2
Corridor Analysis Tool (CAT) Alternatives

Source: H-GAC 2008, Study Team 2006



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- Gas
- Electric
- River
- Water Body
- Segment G
- Segment I-2
- City
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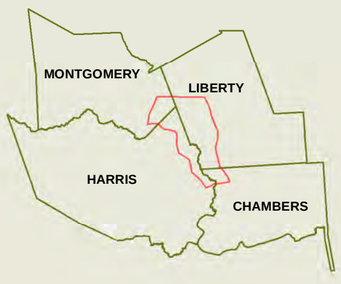
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery
- Wastewater Plant
- Landfill

Alignment

- City of Houston Parks Dept. Corridors, COH 2009
- City of Houston Thoroughfare Plan Corridor, COH 2007
- City of Mont Belvieu Comprehensive Plan Corridor, COMB 2010
- Grand Parkway Overview Document Corridor, GPA 1993
- H-GAC RTP Corridor, HGAC 2010
- Study Team Alternatives, 2007

N

0 0.475 0.95 1.9 Miles

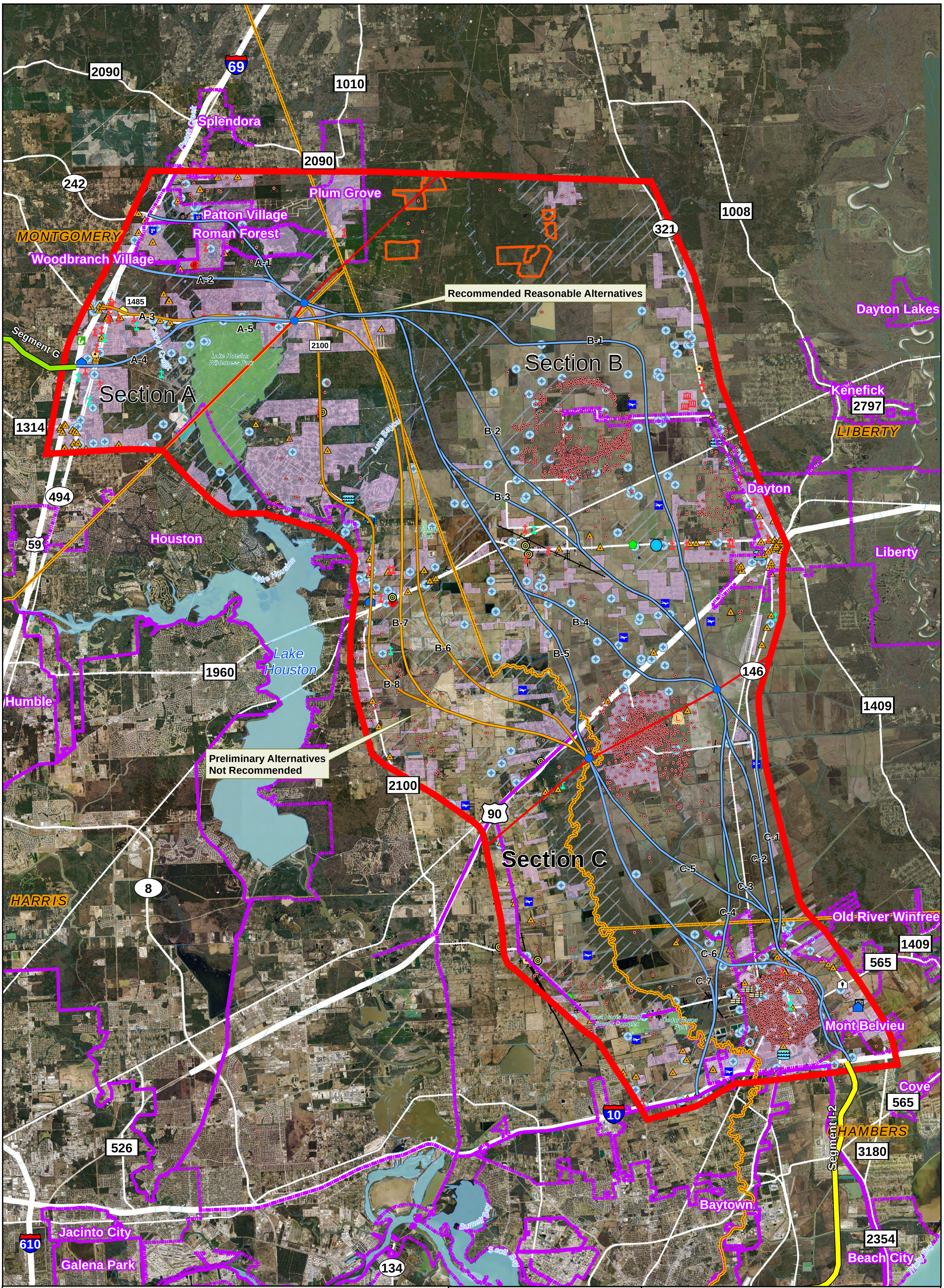


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-3
Study Team Universe
Of Alternative

Source: H-GAC 2010, Grand Parkway Association 1993, City of Houston 2009 & 2010, City of Mont Belvieu 2010, Study Team 2007



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- Gas
- Electric
- River
- Water Body
- Segment G
- Segment I-2
- City
- County
- Developed Area
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- Mature Pine Forests (RCW)
- Cellular Tower
- Electric Substation
- Hazmat
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- Post Office
- TDCJ Prison

Facility (Type)

- Cell Tower
- Petroleum Plant
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery
- Wastewater Plant
- Landfill

Alignment

- Recommended Reasonable Alternatives, Study Team 2007
- Preliminary Alternatives Not Recommended, Study Team 2007

N

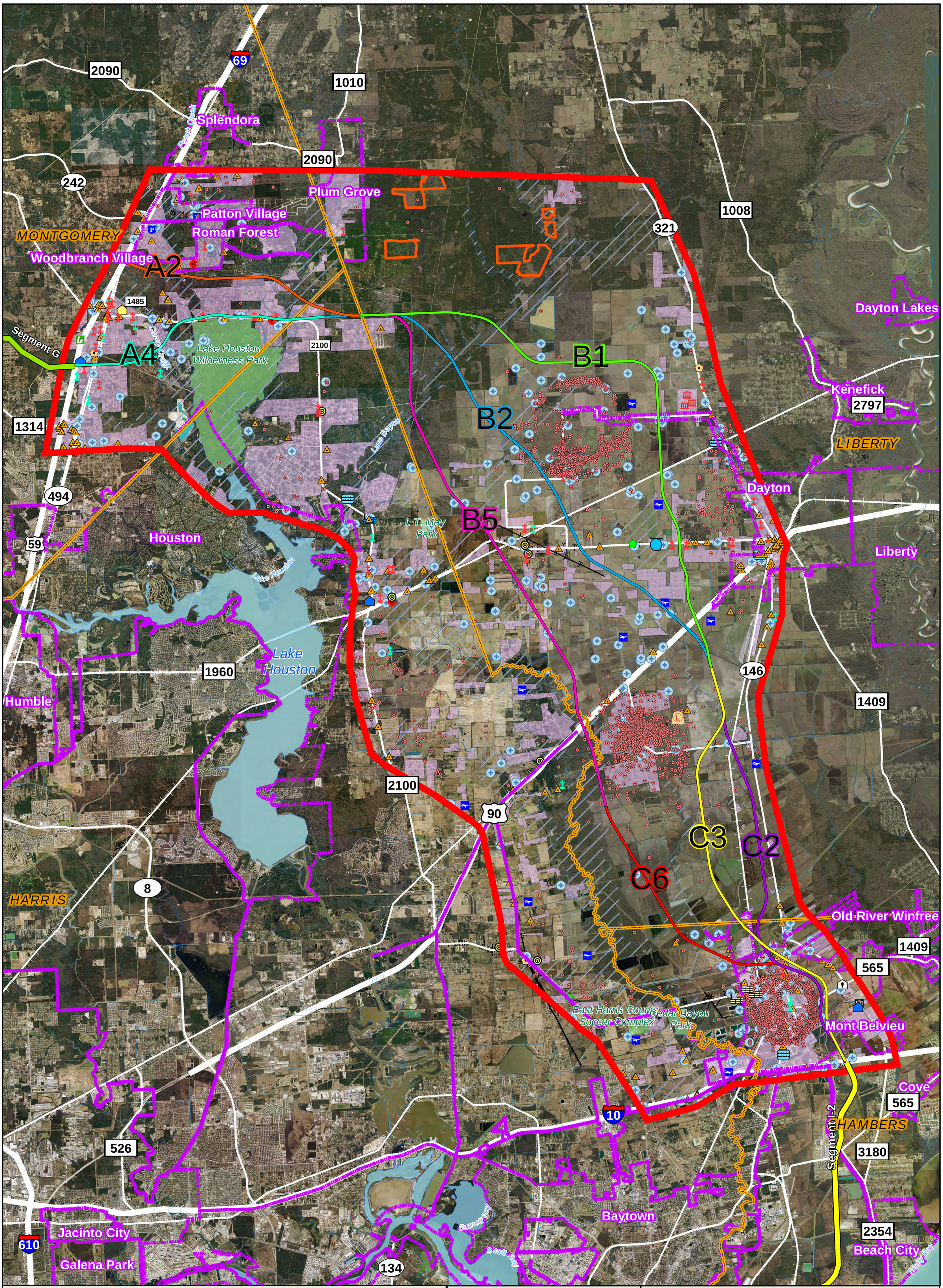
0 0.5 1 2 Miles

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-4
Preliminary Alternatives With Recommended Reasonable Alternatives

Source: H-GAC 2008, HNTB 2007



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- Gas
- Electric
- River
- Water Body
- Segment G
- Segment I-2
- City
- County
- Developed Area
- Park
- 100-year floodplain
- Mature Pine Forests (RCW)
- Cellular Tower
- Electric Substation
- Hazmat
- Oil Well
- Water Well
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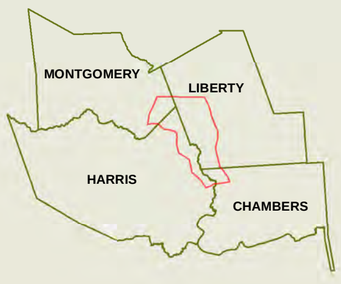
- Petroleum Plant
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery
- Wastewater Plant
- Landfill

Alignment

- A-2
- A-4
- B-1
- B-2
- B-5
- C-2
- C-3
- C-6

N

0 0.475 0.95 1.9 Miles

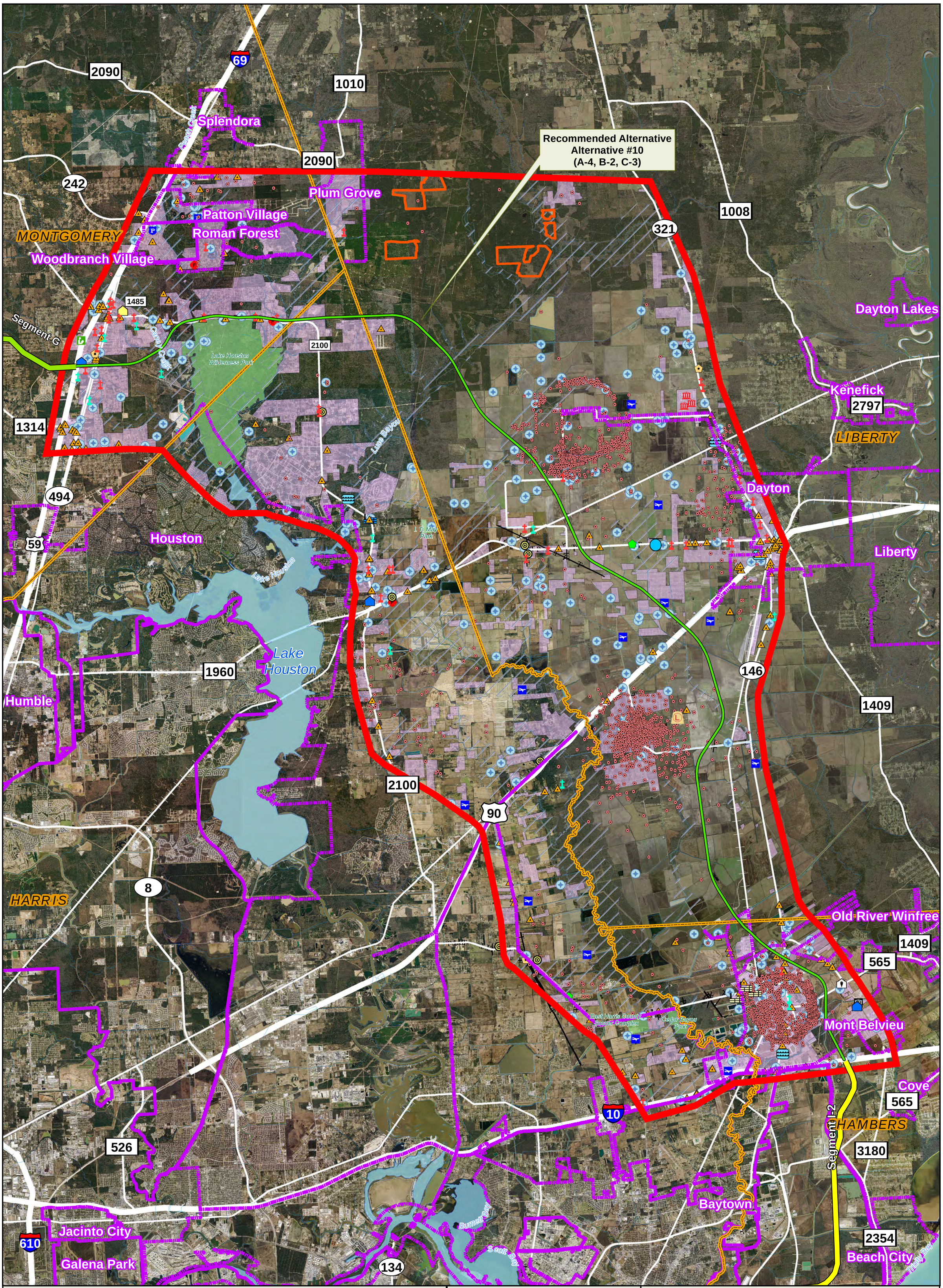


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-5
Reasonable Alternatives

Source: Study Team 2007



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- Gas
- Electric
- River
- Water Body
- Segment G
- Segment I-2
- City
- County
- Developed Area
- Park
- 100-year floodplain
- Mature Pine Forests (RCW)
- Cellular Tower
- Electric Substation
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- Courthouse
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- Museum
- Police Station
- Post Office
- TDCJ Prison

Facility (Type)

- Cell Tower
- Petroleum Plant
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery
- Wastewater Plant
- Landfill

Alignment

- Recommended Alternative #10

N

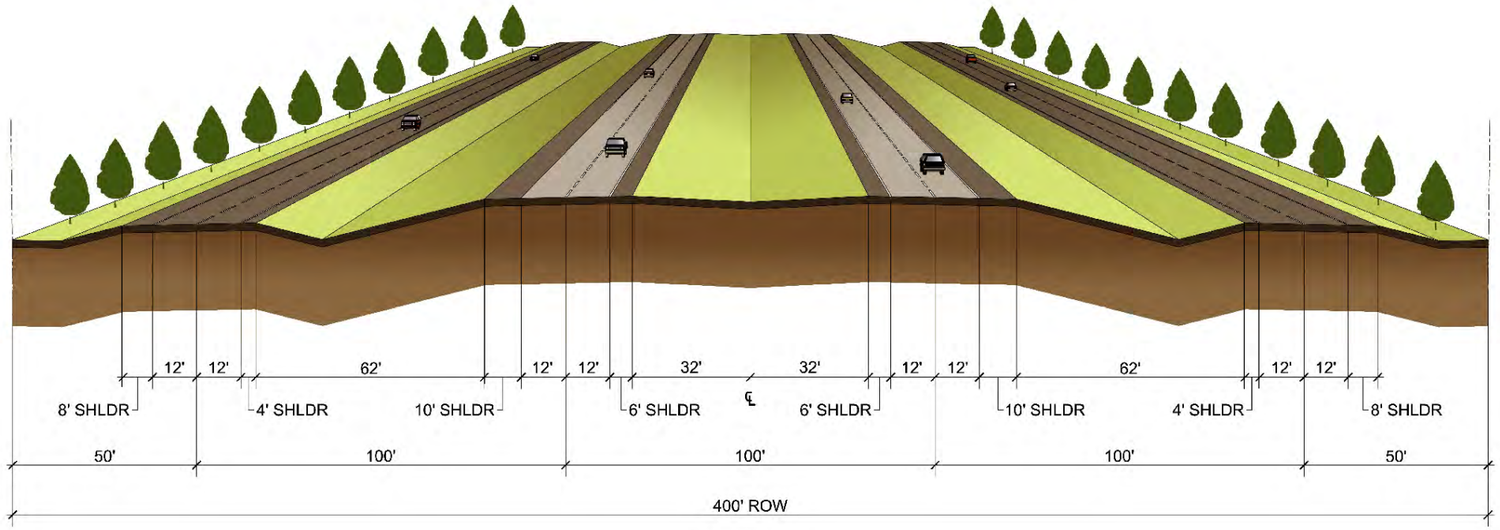
0 0.475 0.95 1.9 Miles

THE GRAND PARKWAY

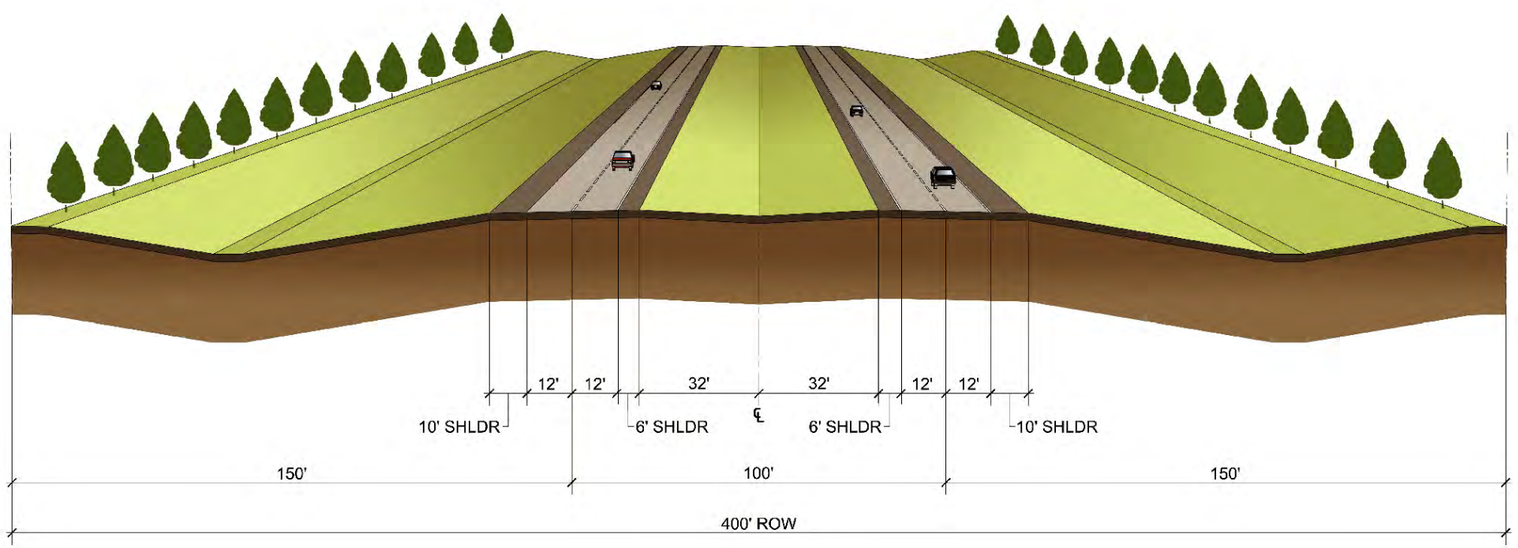
SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-6
Recommended Alternative 10

Source: Study Team, 2011



With Frontage Roads
Note: Frontage Roads at Certain Locations



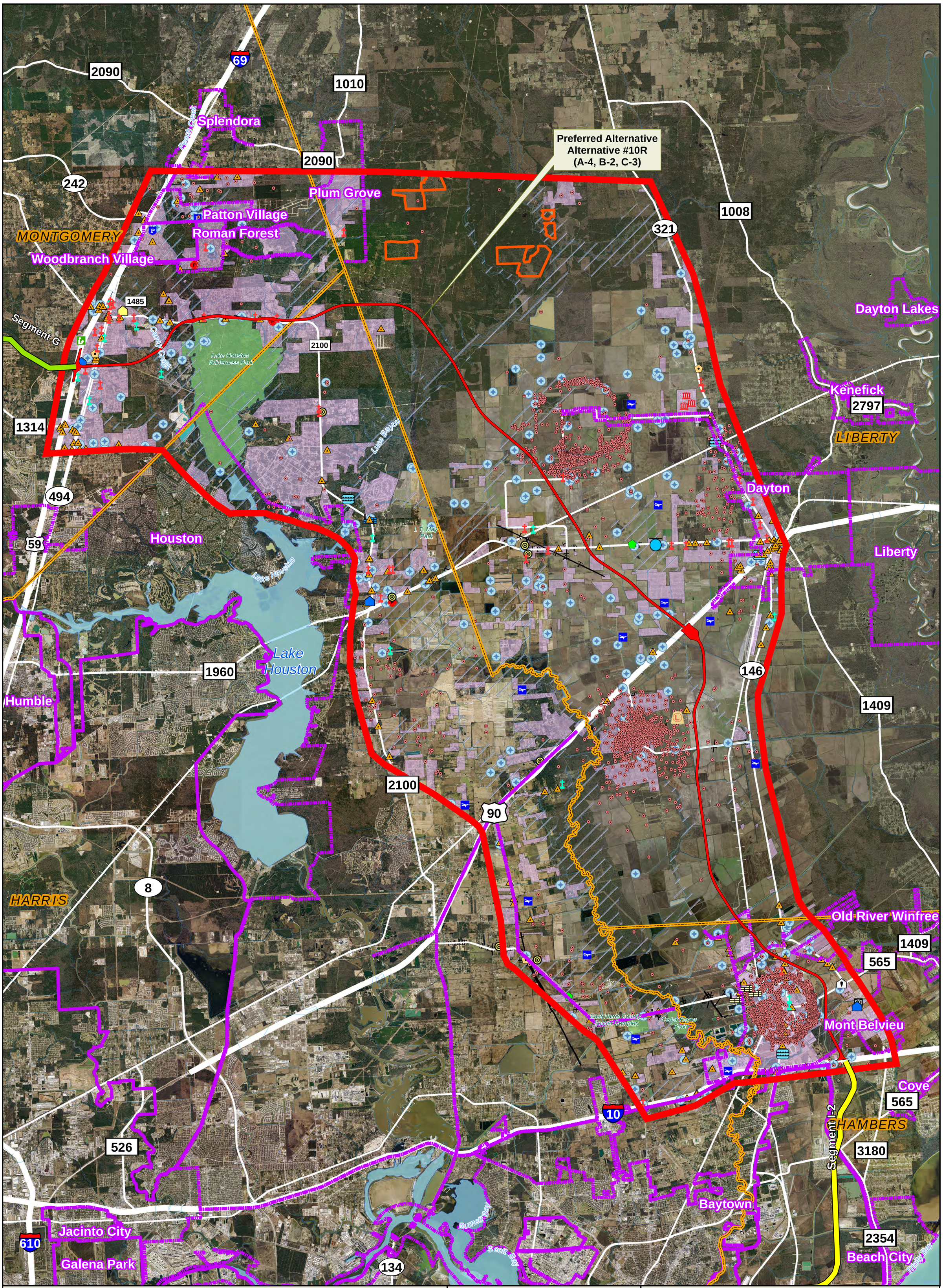
Without Frontage Roads

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-7
Proposed Typical Section

Source Data: Study Team, 2007



Legend

- Segments H and I-1
- Interstate Highway
- US Highway
- State Highway
- State Highway
- Gas
- Electric
- River
- Water Body
- Segment G
- Segment I-2
- City
- County
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- Post Office
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Facility (Type)

- Cell Tower
- Petroleum Plant
- Propane Storage
- Remote Terminal
- Substation
- Airport
- School
- Cemetary
- Church
- Luce Bayou PUD Water Plant
- Refinery
- Wastewater Plant
- Landfill

Alignment

- Preffered Alternative

N

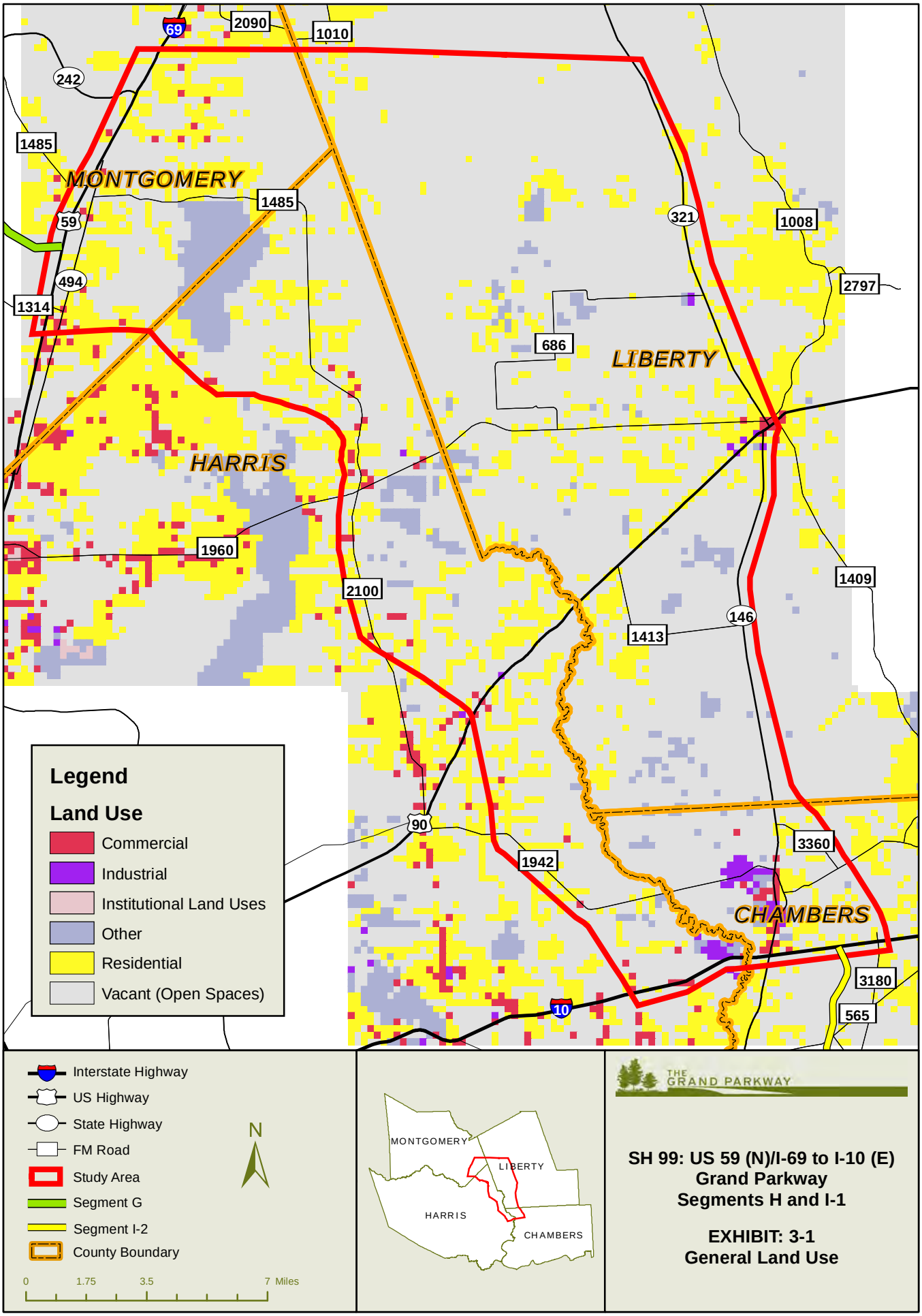
0 0.5 1 2 Miles

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 2-8
Preferred Alternative 10R

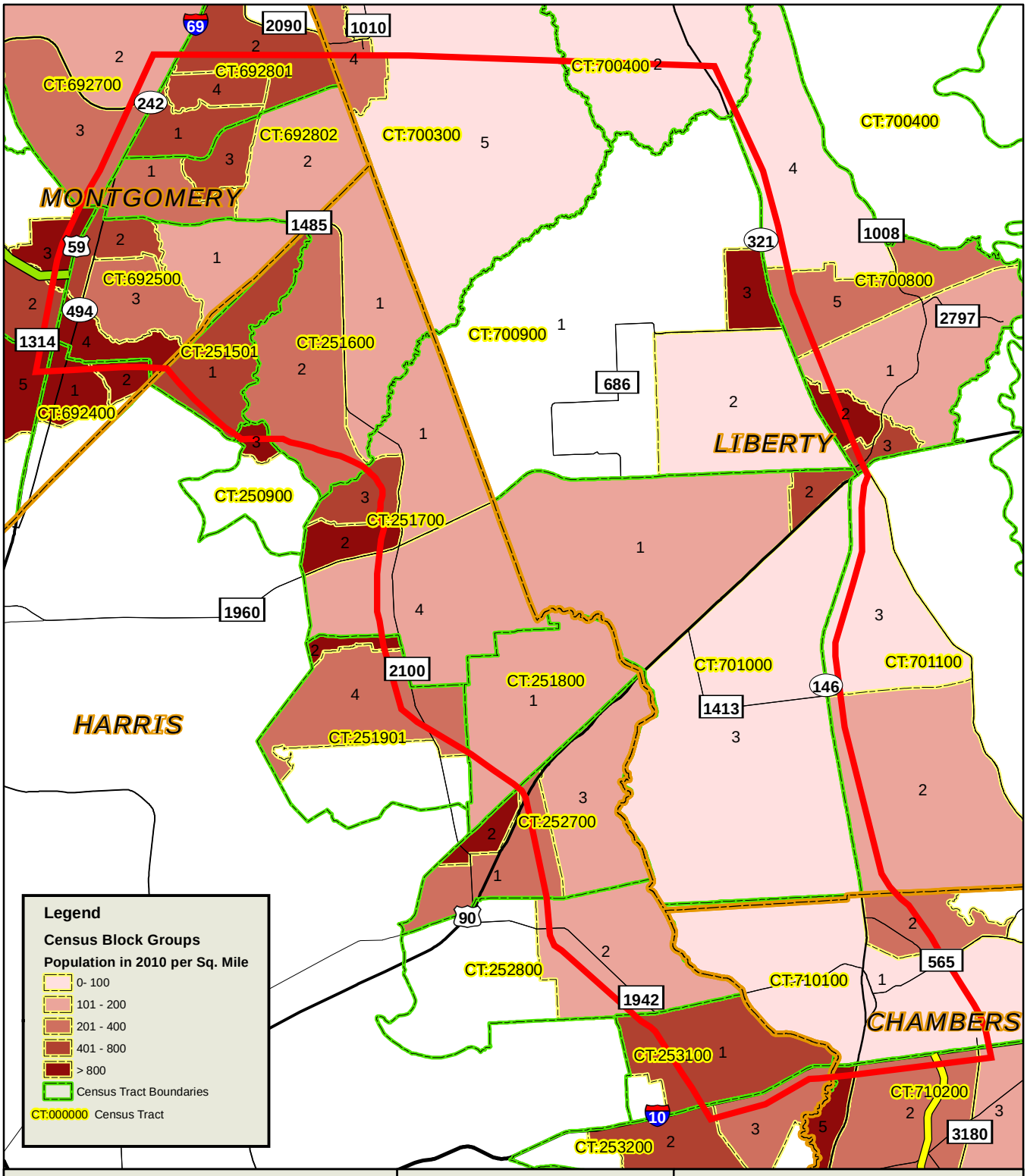
Source: Study Team, 2012



SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-1
General Land Use

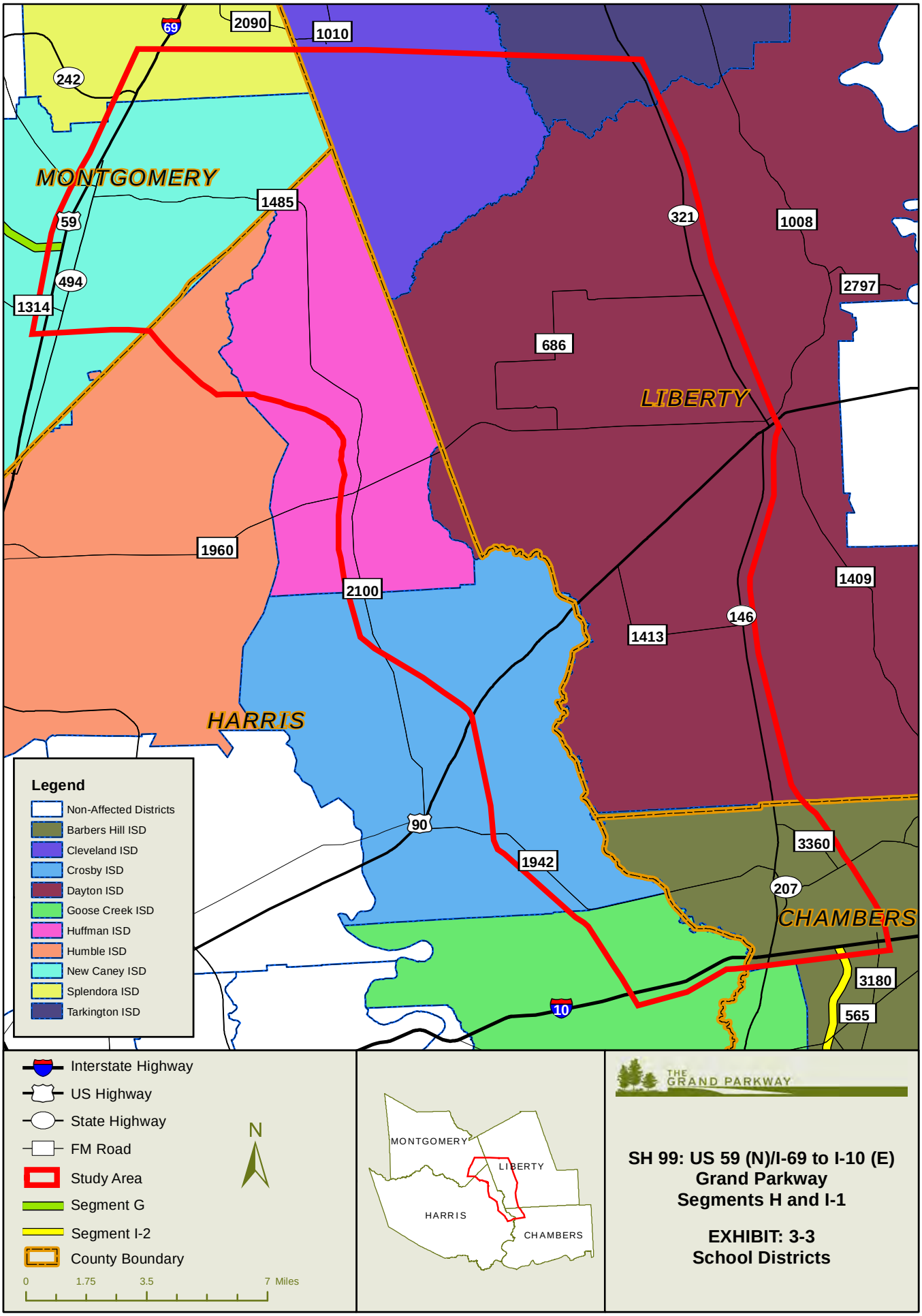
Source: H-GAC, 2006



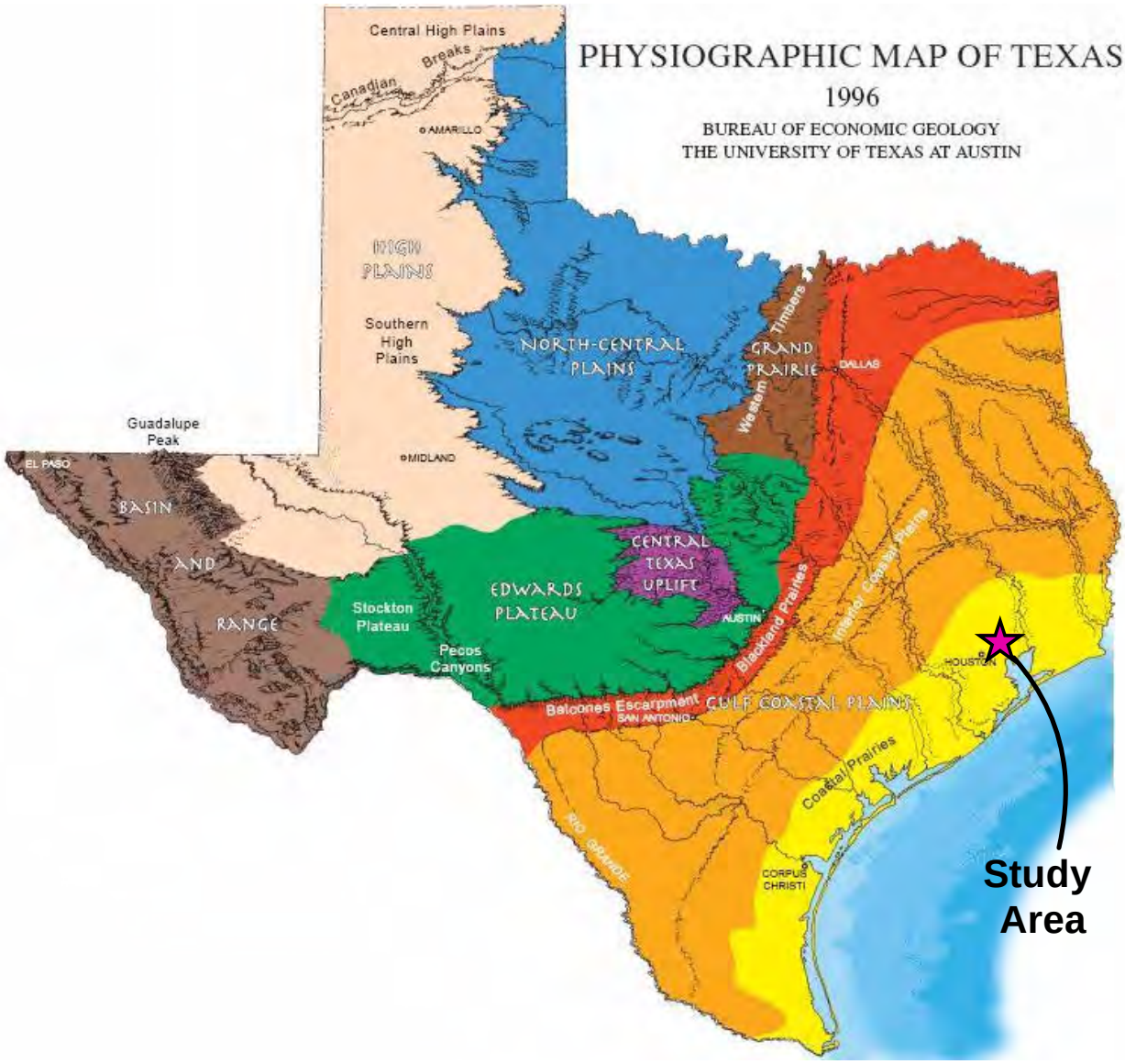
SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-2
Census Tracts and Block Groups Within the Study Area

Source: USCB, 2010 Census

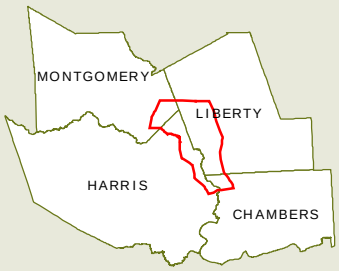


Source: H-GAC, 2006



N

Not To Scale

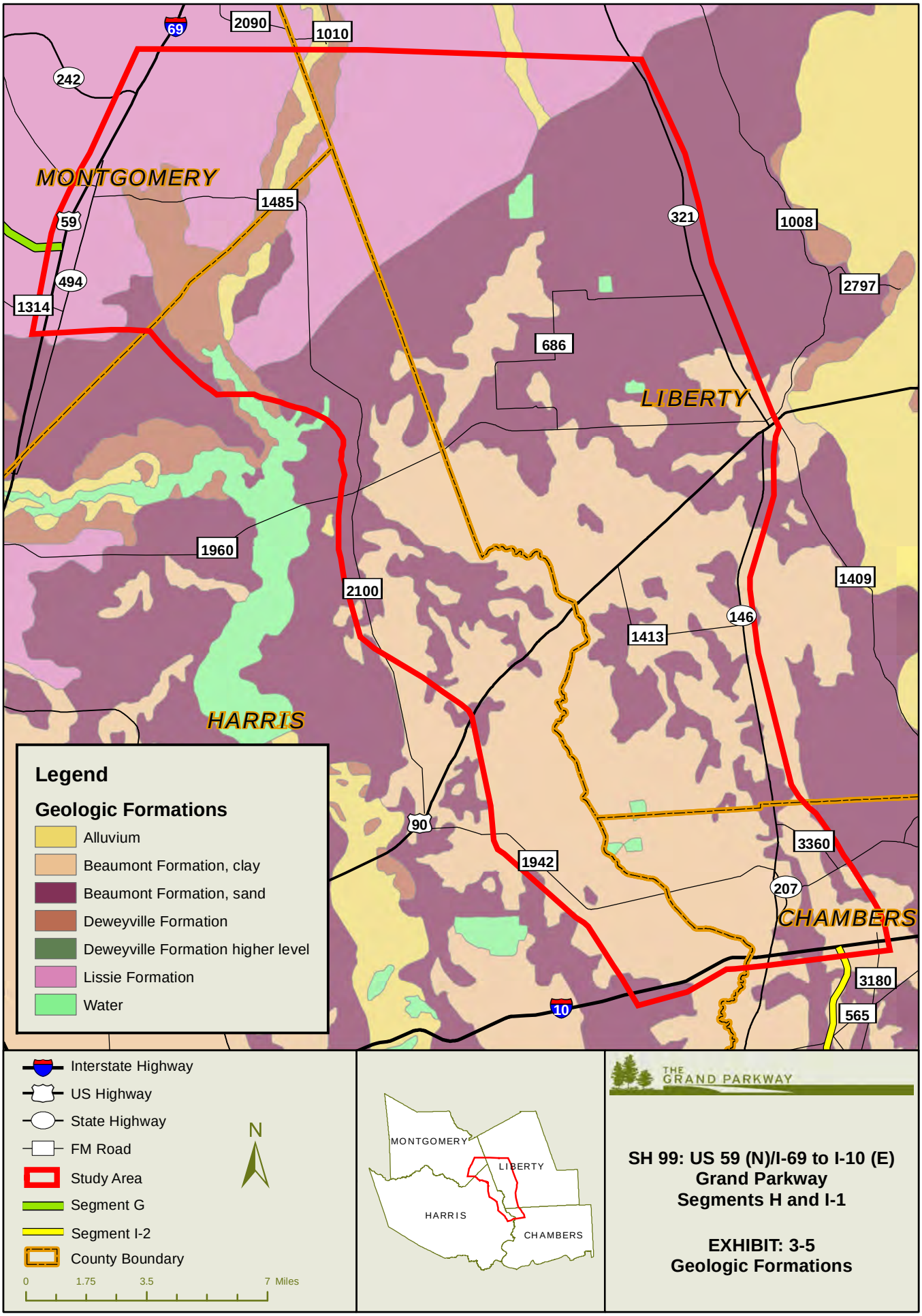


THE GRAND PARKWAY

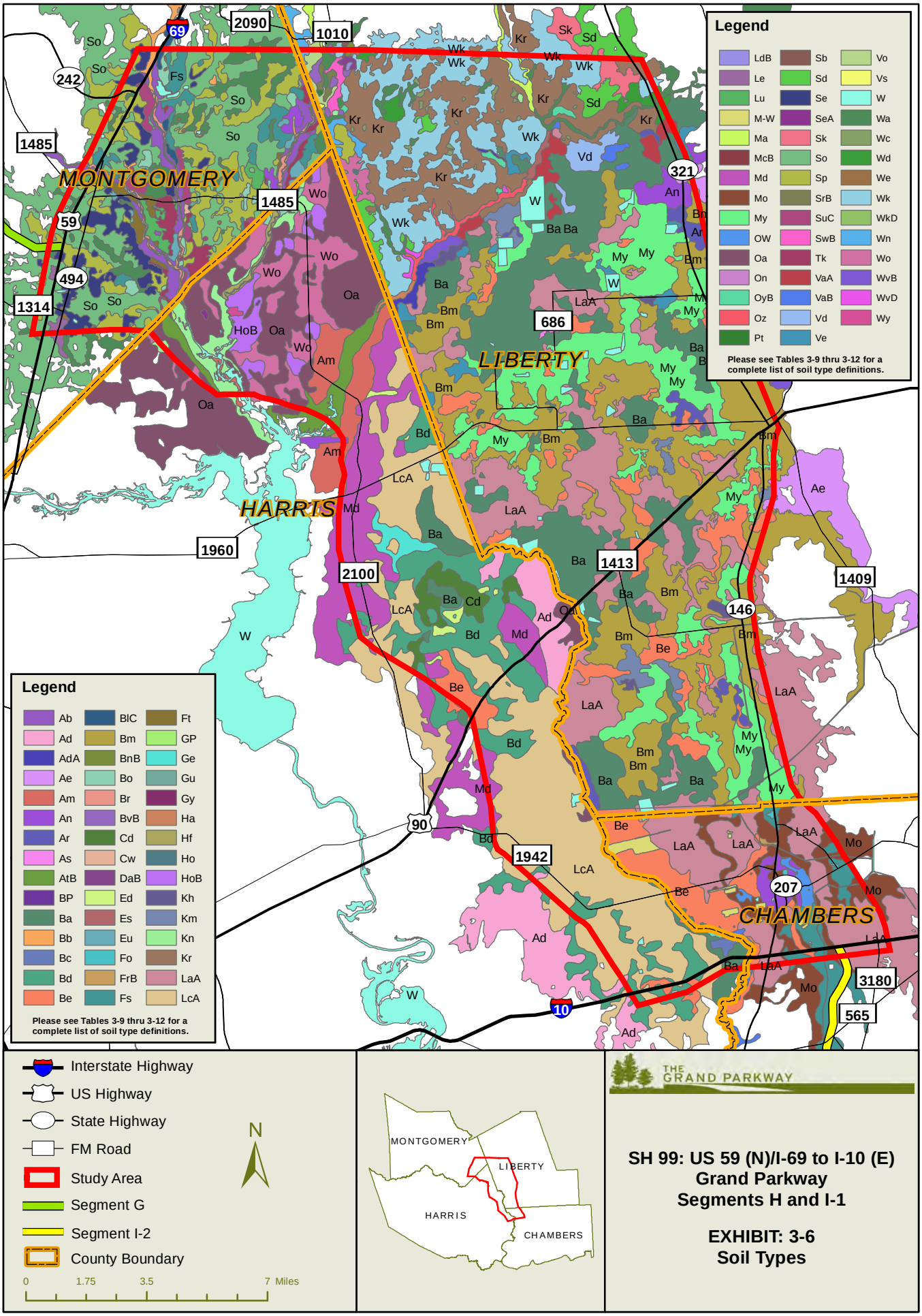
SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-4
Physiographic Provinces of Texas

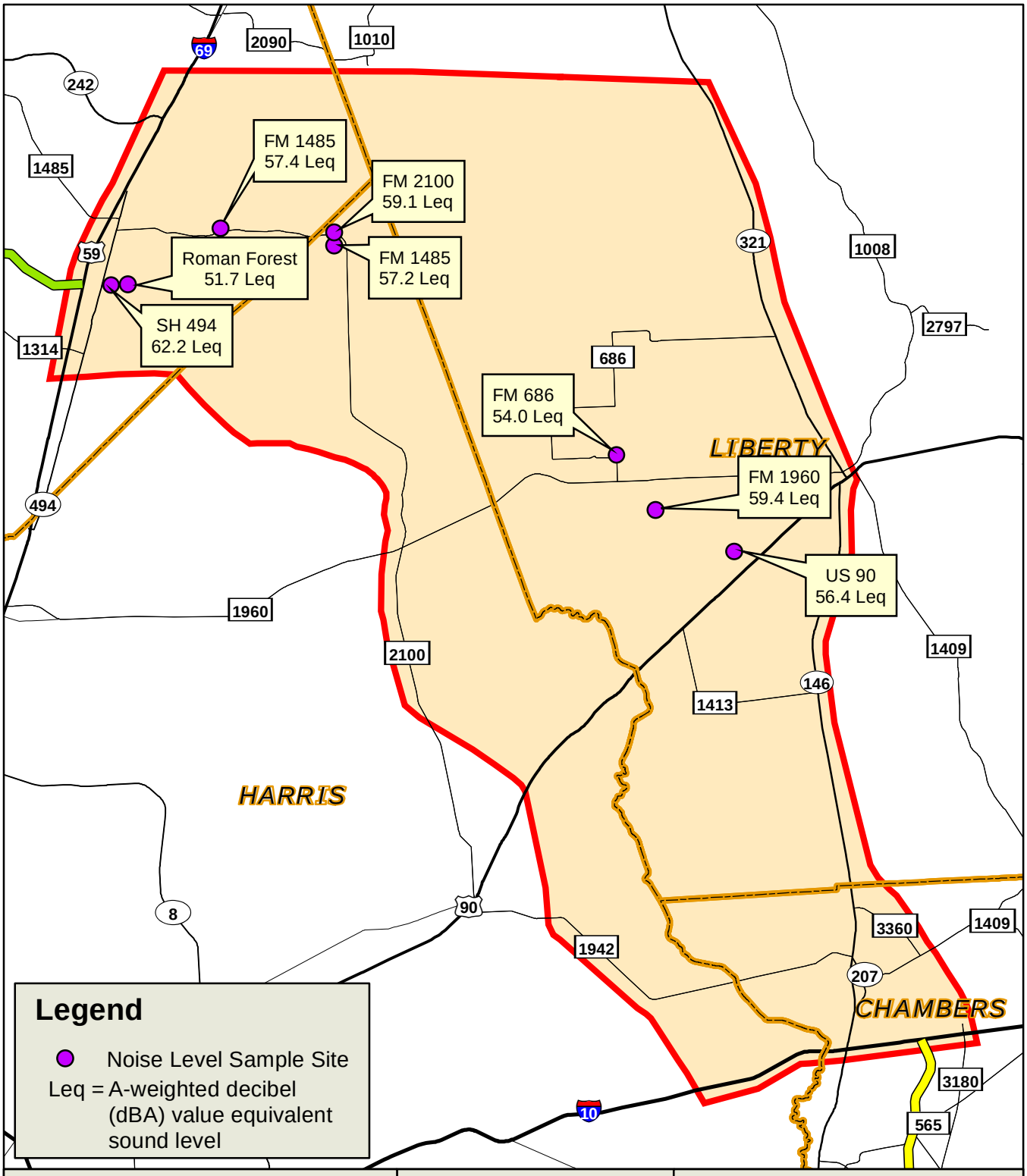
Source: Bureau of Economic Geology, UT at Austin, 1996



Source: USGS, 1992



Source: NRCS, 1972, 1976, 1996



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

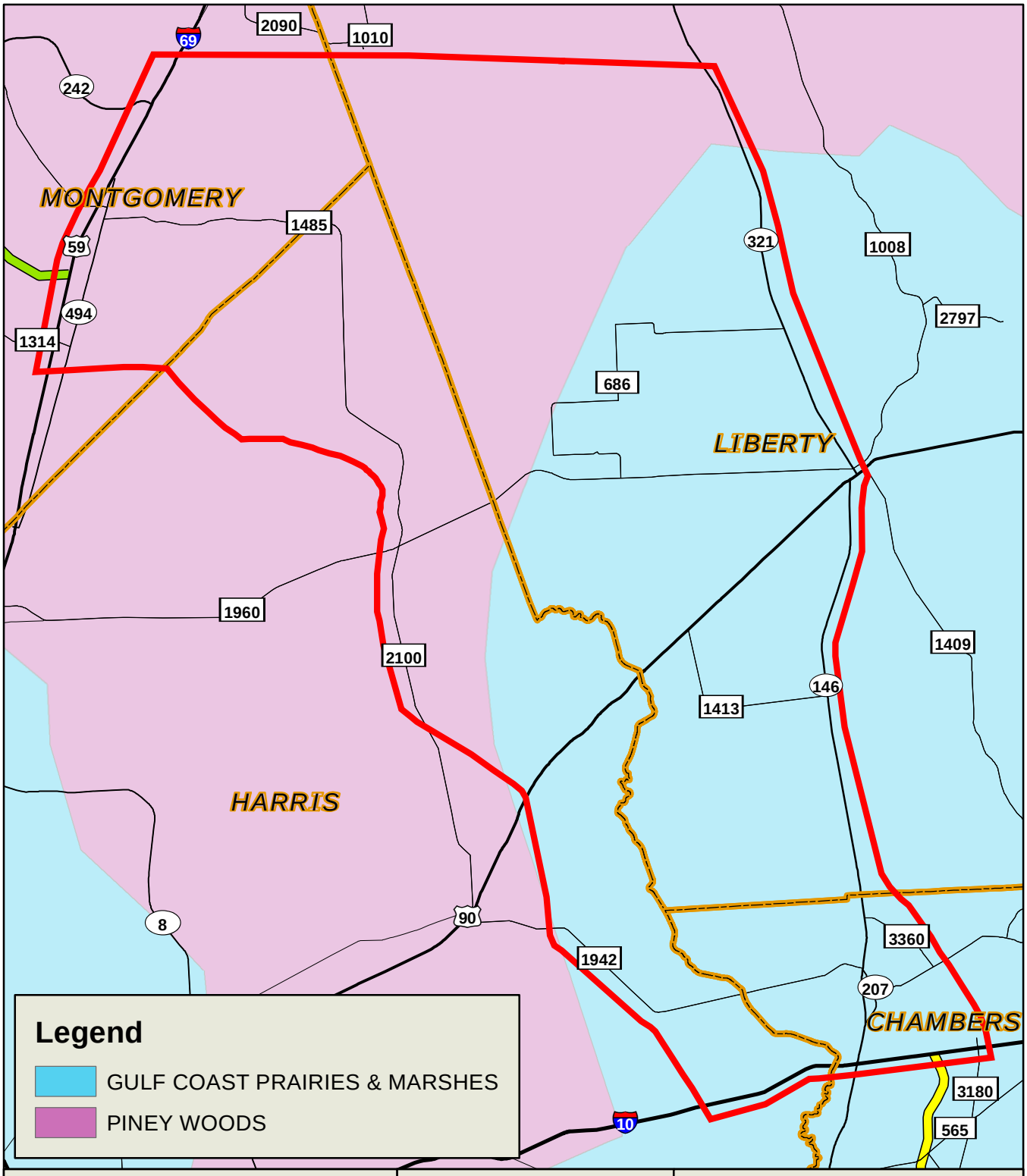
0 2 4 8 Miles

THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-7
Ambient Noise Levels

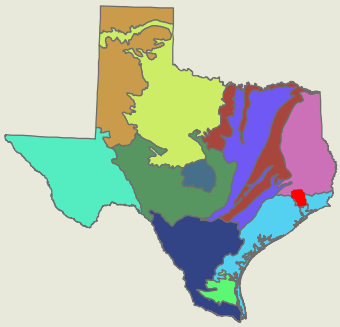
Source: HNTB, 2013



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

0 1.75 3.5 7 Miles

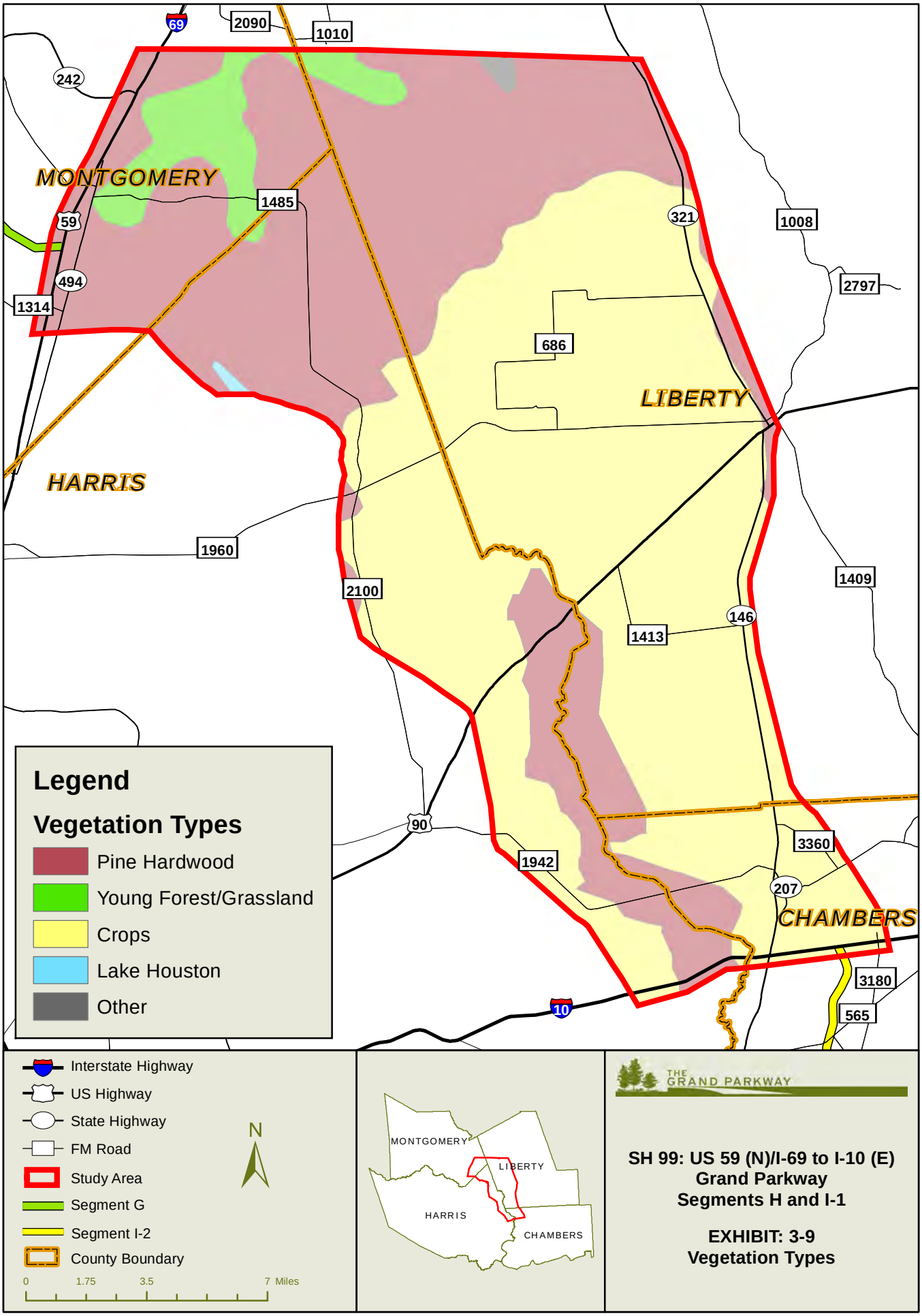


THE GRAND PARKWAY

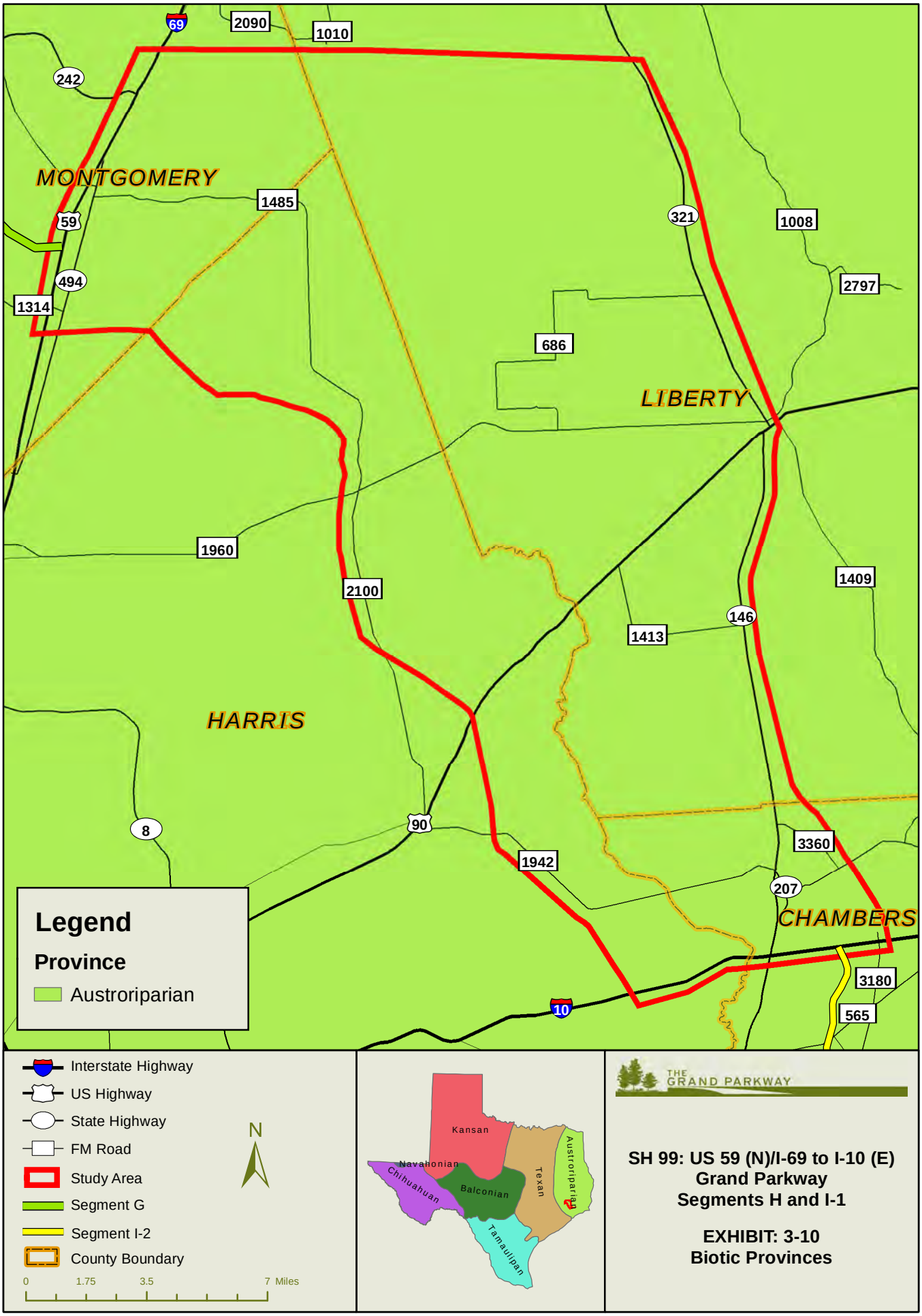
SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-8
Natural Regions of Texas

Source: TPWD, 1978



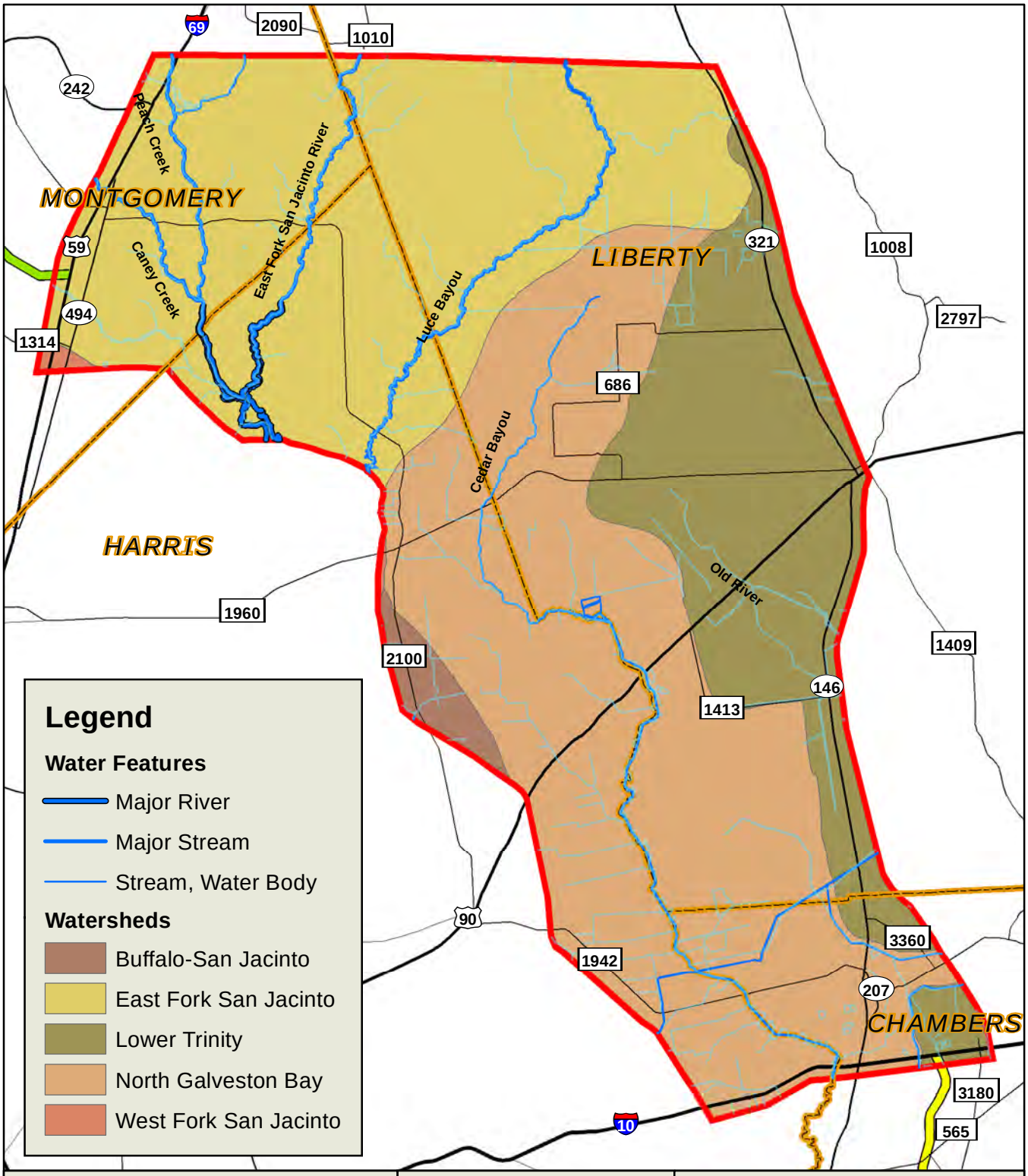
Source: TPWD, 1984



SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-10
Biotic Provinces

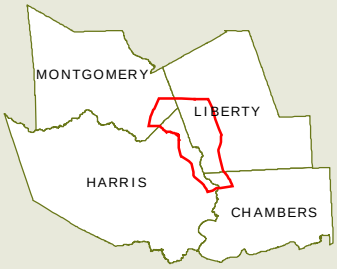
Source: Blair, 1950



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

0 1.75 3.5 7 Miles

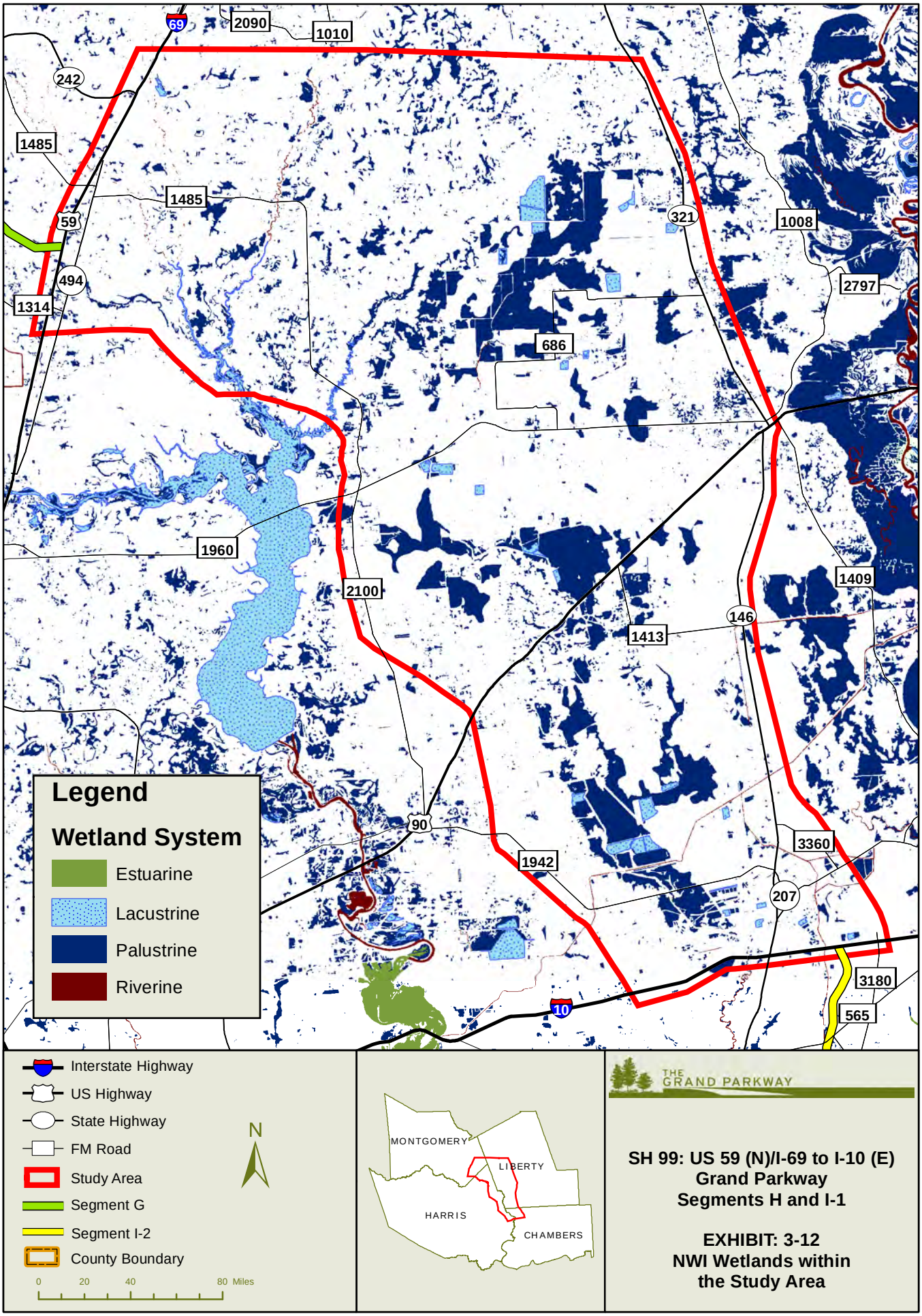


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-11
Regional Watersheds

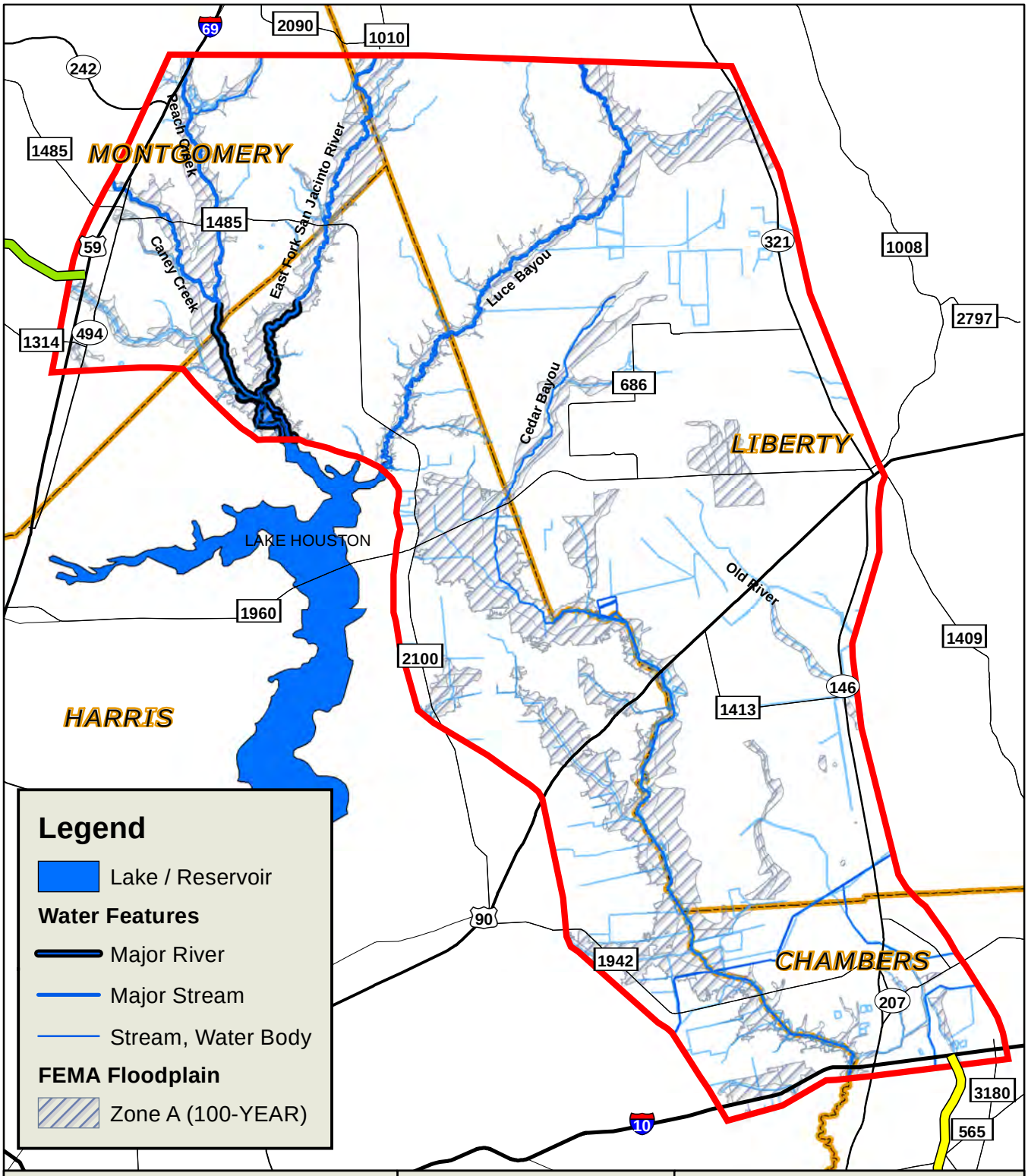
Source: USGS, 2006



SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-12
NWI Wetlands within the Study Area

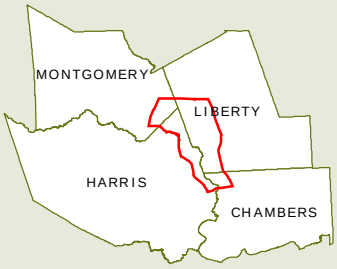
Source: National Wetlands Inventory, US Fish and Wildlife Service, 2004



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

0 1.75 3.5 7 Miles

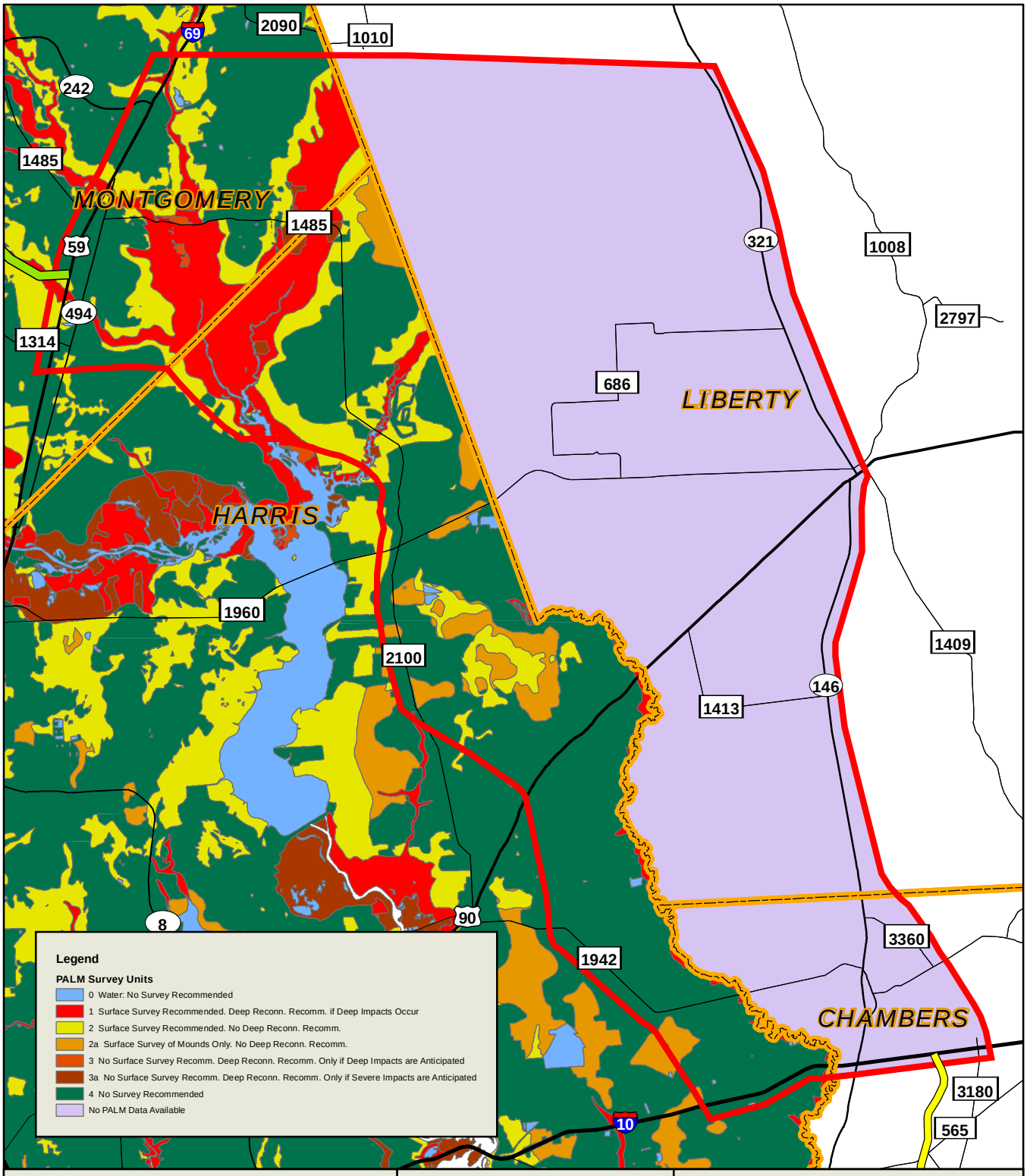


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-13
Creeks and Floodplains

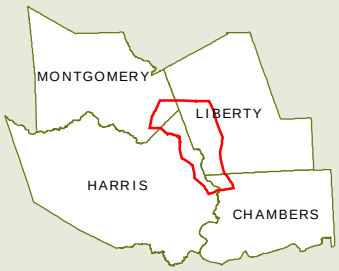
Source: FEMA, 1995, 1996, 1998, 2006



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

0 1.75 3.5 7 Miles

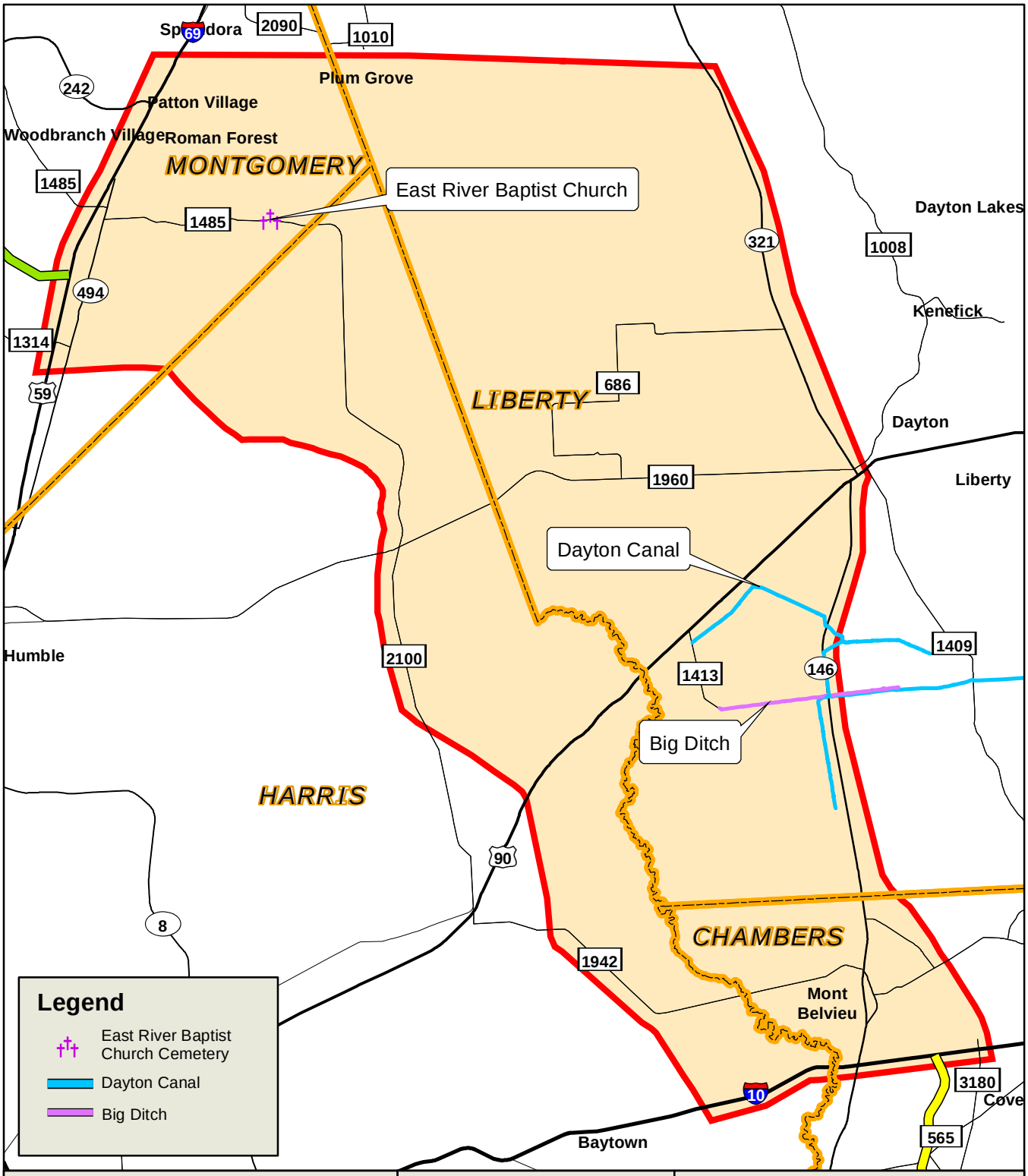


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-14
Houston-PALM

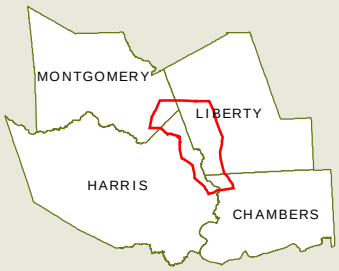
Source: TXDOT 2001



Interstate Highway
US Highway
State Highway
FM Road
Study Area
Segment G
Segment I-2
County Boundary

N

0 1.75 3.5 7 Miles

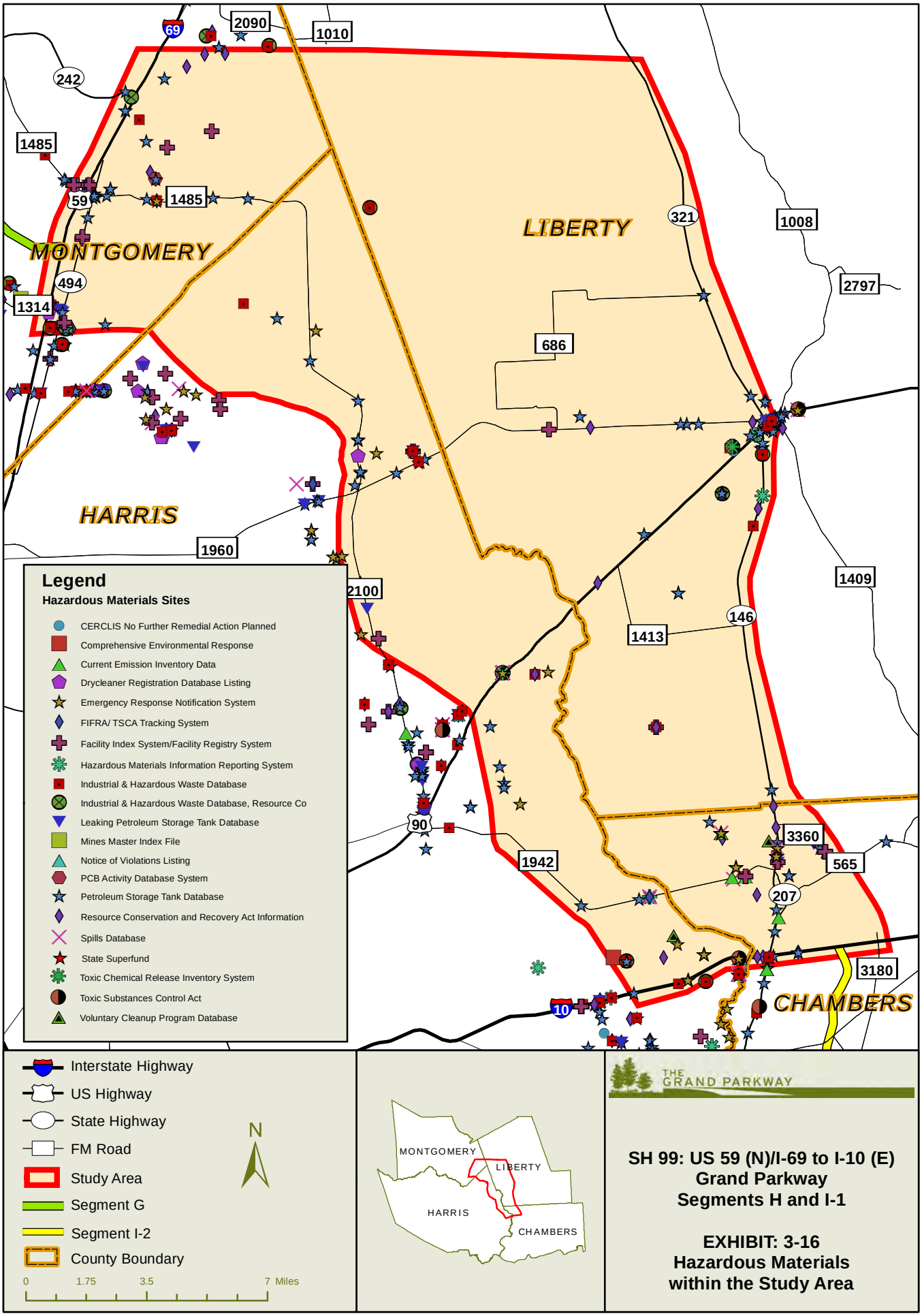


THE GRAND PARKWAY

SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-15
Previously Recorded Historic Resources within the APE and SSA

Source: THC, 2006



SH 99: US 59 (N)/I-69 to I-10 (E)
Grand Parkway
Segments H and I-1

EXHIBIT: 3-16
Hazardous Materials within the Study Area

Source: Database of Hazardous Materials Sites, Environmental Data Resources, Inc., 2006