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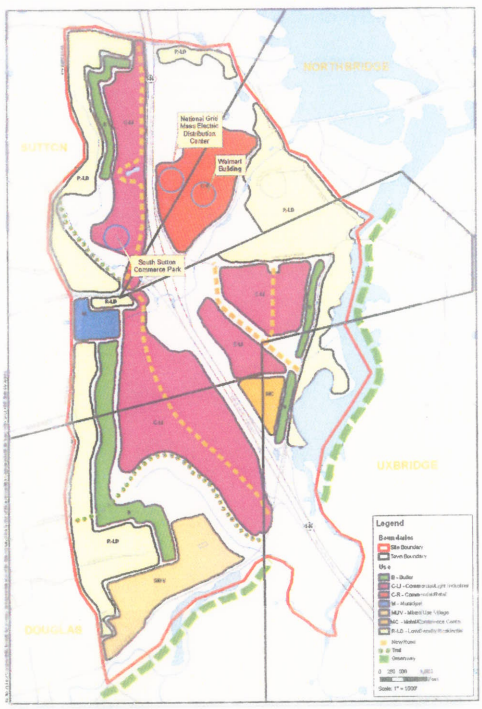
Route 146 Corridor Visioning Study

Phase I Report



BLACKSTONE VALLEY CORRIDOR FOUR-TOWN PLANNING STUDY

DOUGLAS, NORTHBRIDGE, SUTTON AND UXBRIDGE, MA

Submitted to:

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1.0 INTRODUCTION

The Four-Towns Route 146 Corridor Study is the extension of years of cooperation between the Towns of Douglas, Northbridge, Sutton, and Uxbridge to leverage the existing developable land around Route 146 for commercial development that would increase tax revenues in the area. To that extent, the towns recognized that the best way to ensure that development of this 1,700 acre area would occur in a manner that benefits all towns is to establish a single vision that is achievable over time.

This study encompasses Phase I of the project. The four towns hired Daylor Consulting Group, Inc. of Braintree, MA and the Bluestone Planning Group of Cambridge, MA to analyze the development constraints on the land, devise a conceptual plan to show general land uses within the site boundaries, and determine broad development impacts for the site and the four towns. Additional phases of this project will refine this analysis and seek appropriate means to establish an intermunicipal agreement for revenue sharing amongst the four towns.

The Route 146 corridor has experienced a rapid increase in commercial and industrial growth from the north and south, impacting Douglas, Northbridge, Sutton and Uxbridge. The Massachusetts Turnpike Authority has completed the Route 146 interchange and access from the Masspike into Worcester will be improved. It is expected that this improved infrastructure will lead to further growth and development in the Route 146 corridor. In preparation of this anticipated growth, the four towns are working together to plan for appropriate growth in the designated four town area. With the volume of traffic and businesses expected to increase rapidly, the timing is appropriate for the towns to work together to properly plan and guide future development in the area.

2.0 SITE SUITABILITY ANALYSIS

2.1 Existing Conditions

The 1,700-acre site sits along Route 146, a major thoroughfare between Worcester and Providence, and incorporates land from the Towns of Douglas, Northbridge, Sutton, and Uxbridge. The site includes two interchanges from Route 146, at Lackey Dam Road in Uxbridge to the south and Main Street in Northbridge to the north (see *Figure 1A – Aerial Photograph 2001 and, Figure 1B - Aerial Photograph 2005*).

Most of the land is currently zoned for office or light industrial use, with the outer edge consisting of residential zoning (see *Figure 2 – Zoning*). The one exception is the land in Uxbridge, which is primarily zoned for agricultural use. In an attempt to coordinate land development amongst the four towns, an overlay district was proposed at all four Town Meetings in 2005. However, the Towns of Sutton and Northbridge were the only two to pass the measure.

New or proposed development projects in the area include the Super Walmart and the National Grid site in Northbridge, a roadway in the Valley Business Park, continued build out of the Sutton Industrial Park, and a 40B housing development along North Street.

2.2 Development Constraints

Though a large portion of the land is suited for development, the primary constraint is lack of roadway access, especially to the more interior portions of the site. The development pattern reflects this, with residential uses lining the roads at the edge of the site interspersed with a number of industrial and mining operations. Much of the land in the interior is undeveloped. In addition to lack of access is the concern that the existing roadways are not the best suited to accommodate traffic for industrial uses. For example, truck traffic to potential warehousing operations would disrupt the residents on Hough Road and North Street while all traffic to the Douglas Industrial Park is routed through Uxbridge. A vision for the area must be sensitive to the needs of the existing residents and business owners while providing appropriate access to potential new development (see *Figure 3 – Land Use Suitability, Figure 4 – Land Use 1999, and Figure 5 – USGS Topographic Map*).

The availability of public water and sewer infrastructure in the area is also a development constraint. Currently, the area of the site in Northbridge and the southern portion of the site in Douglas are served by public water. In addition, sewer lines and plants are proposed for Sutton and Douglas, which would provide service to the Hough Road/North Street area. However, this leaves a large portion of land that is serviced by neither utility, including most of the land in Sutton and Douglas and all of the land in Uxbridge.

Of course, more finite environmental constraints exist, such as Riverfront Protection Areas, steep slopes, and wetlands. This mainly affects the lands in Uxbridge east of

Lackey Dam Road, along Main Street in Northbridge, and a portion of Sutton west of Route 146.

2.3 Goals and Policy Vision

The four towns recognized the need to coordinate a vision for land use development in this area along Route 146. To that end, each of the towns seeks to foster development that provides tax revenue to the area while maintaining the natural resources of the Blackstone Valley Corridor. This vision should be based on smart growth principles and incorporate mixed use development, but also identify where town cooperation is necessary to create that vision, including for infrastructure improvements, zoning, and revenue sharing.

As noted in previous studies and plans for the area, each of the four towns had its own concerns for the area. While Sutton was particularly focused on maintaining high design standards for new commercial and industrial development, Douglas indicated a preference for bringing in new industrial uses and creating a mixed use village around Gilboa and North Streets. Northbridge is currently facing development of a Super Walmart and the National Grid site, but showed interest in focusing new development at intersections and creating mixed use development overall. Uxbridge indicated a desire to maintain the rural agricultural landscape of their portion of land and protect natural resources.

In order to reach a unified vision, the four towns will need to grapple with the major issues facing development of the land, such as:

- Where is the appropriate location for new access roadways?
- Where should infrastructure be extended to support new development?
- What types of uses are desired, including housing?
- Are the market conditions right for these desired uses?
- What is the appropriate balance between preserving natural resources and generating economic development?
- Will rezoning be required to achieve this new vision?
- How will intermunicipal cooperation be needed to facilitate development of this new vision?

3.0 CONCEPTUAL PLAN

The conceptual plan and site plan vignettes are based on both the scenarios suggested by the public at the visioning workshop on June 1, 2006 and comments received from the committee in November 2006, and take into account existing development constraints (see *Figure 3 – Land Use Suitability, Figure 6 – Conceptual Plan and Appendix B – Site Plan Vignettes*).

The conceptual plan scenario represents the long-term vision for the site. Likewise, the site plan vignettes illustrate a maximized buildout vision. Actual intensity of development will be based upon market demand, more detailed mapped site constraints, and septic and water capacity. Overall, the vignettes attempt to distribute the development benefits and costs equitably between the four towns while also reflecting currently stated local land use policies. They also assume inter-town cooperation, some site assembly or agreements between adjoining property owners, and provision of new roads and infrastructure.

The conceptual plan highlights a number of major features that were mentioned at the public visioning workshop. The plan proposes to preserve the residential uses along the western border of the site (Hough Road / North Street) and in the northeastern portion, roughly between Lackey Dam Road in Sutton and Main Street in Northbridge. To the west of Route 146, the interior portion is reserved for commercial and light industrial use, which could include either warehousing or office parks depending on the desires of the community and the market demands for each. The northern portion of the site, east of Route 146, includes a proposed area for commercial and retail uses. This is an attempt to coordinate land uses with the new Super Walmart in Northbridge. Along the southern boundary of the site, Gilboa Street in Douglas, is a proposed mixed use village, which reflects the community's vision for smart growth development at an appropriate node. Direct access from Route 146 and a location along a busy local road would provide the necessary activity to sustain the mix of uses, which could include retail, commercial, or residential.

The conceptual plan also reflects the community's vision for new access roads through the site. One road is proposed as a service road that parallels Route 146 through Douglas and Sutton, with connections to the Lackey Dam Road exit and a new intersection just west of the Main Street exit.

Preservation of natural resources is a key element of the conceptual plan. The plan includes a greenway along the southern border of the site and allows for the regional bike path along the Mumford River through Douglas and from Whiting Road in Sutton. In addition, the plan allows for buffer areas of undeveloped land between the existing residential uses, specifically along Hough Road, North Street, and Lackey Dam Road, and proposed commercial and light industrial uses.

The land use scenario also balances the need for economic development equitably amongst the four towns. An area of commercial and retail uses east of Route 146 provides continuity of commercial uses along the corridor (see *Alternative 1 vignette East of Route 146*). The mixed use village along Gilboa Street extends north into the gravel pits, allowing for redevelopment of that site (see *Alternative 1 vignette West of Route 146*). At the Lackey Dam Road exit, a motel and conference center is proposed. This is a prime location for the site, with easy access to the highway and a connection to the Blackstone Valley greenway and regional bike trail.

4.0 DEVELOPMENT IMPACTS ANALYSIS

Based on the vision for the Four-Towns Route 146 area and created in conjunction with residents, landowners, town officials, and other interested parties, a development impacts analysis was completed to understand the ramifications of building out these new land uses. While generalizations can be made about certain impacts individually, the reality is that the land uses and intensity of development are interrelated with potential impacts. For example, increasing the percentage of the Mixed-Use Village district that is used for housing versus retail will create comparatively fewer vehicle trips, but require additional gallons of water usage per day. As the towns take this broad vision and assign more specific land uses and development intensities, the actual impacts will become easier to quantify and compare.

4.1 Methodology

The basis of this analysis is the area of land available for development and the intensity of that development. Each impact is analyzed from the perspective of how much of any particular zone is developed and includes three categories:

All Land	Includes all of the land captured by the conceptual plan
Least Constraints	All land minus any absolute development constraints
Most Constraints	All land minus any absolute or partial development constraints or currently developed land

Development constraints are defined as follows:

Absolute Development Constraints	Includes protected open space, wetlands, and land within 100' of a river
Partial Development Constraints	Includes FEMA 100-yr Flood Zones, 100-200' Riverfront Protection Areas, Title V areas, Zone IIs, and Interim Wellhead Protection Areas
Developed Land	Includes all land from the 1999 Land Use data, provided by MassGIS, that is classified as residential, commercial, industrial, or transportation.

All of the sheets are linked, so updating key numbers in one sheet will automatically update calculations in other sheets. The following numbers can be adjusted based on potential buildout scenarios:

Buildout Sheet	• FAR • MUV Retail SF Percentage
Trip Generation Sheet	• Percentage of Buildable Land per Zone*

**Except Apartments in MUV zone, which is linked to the Buildout sheet*

4.1.1 Buildout

The buildout sheet shows the baseline land area used for all of the other calculations of impacts. To get these numbers, GIS was used to analyze the November 2006 revised land use plan (see *Figure 6 – Conceptual Plan*). As shown on the Land Use Suitability Map, most areas that contain development constraints were generally left untouched by the conceptual plan; these areas not included in the conceptual plan zones are not included in the buildout analysis. However, some areas of constraint were included in the boundaries of the conceptual plan zones and factored into this analysis.

Development density was assigned based on the general development patterns in the four towns' area and the parameters of the overlay district adopted by two of the towns. Since the overlay district used Floor Area Ratio (FAR) as the major factor to determine density, with a maximum of .75, this analysis follows that methodology. While open space allowance is also a factor to determine buildable area in the overlay district, this conceptual plan allows for specific buffer areas (labeled B in both the Conceptual Plan and impacts analysis) in addition to a proposed trail system and greenway, so additional areas of open space are not accounted for in the analysis of the conceptual plan's proposed zones.

To determine how increased density would affect development impacts in other sheets, adjust the FAR for the various zones. Additionally, the Mixed Use Village (MUV) zone is comprised of both residential and commercial use. To shift the mix of uses, adjust the percentage of retail square footage, which will automatically update the percentage of area dedicated to housing.

4.1.2 New Residents

This sheet indicates the number of new residents that can be anticipated in the towns based on new housing built. The two districts that will receive new housing are Residential – Low Density (R-LD) and Mixed Use Village. The following assumptions were made to calculate the number of new building lots and, subsequently, the number of new residents.

- Only single-family homes would be built in the R-LD district.
- Single family homes would be built on one-acre lots.
- Only apartment units would be built in the Mixed Use Village district.
- Apartment buildings that contain 2-4 units would be built on half-acre lots and apartment buildings that contain 5-9 units would be built on one-acre lots.
- The breakdown of types of housing, based on either number of bedrooms for single family homes or number of units for apartments, is based on the 2000 Census averages for the four towns.
- The persons per unit multiplier is based on average household size in the four towns.

4.1.3 Water Use

Water use is calculated differently for commercial or residential uses. For commercial uses, water use is based on the buildable square footage of area, from the Buildout sheet. The square footage is divided by 1000 square feet, on average, per person and then multiplied by 75 gallons per day of water usage to derive the total gallons per day needed. For residential development, the calculation is based on the number of new residents brought in, multiplied by 75 gallons per day.

4.1.4 Students

Since only the Mixed Use Village (MUV) and Residential – Low Density (R-LD) zones will include new housing, those are the only zones that will bring new students into the school districts. The multiplier for the area is .57 new students for each buildable lot or new apartment unit.

4.1.5 Trip Generation

The Institute of Traffic Engineers publishes the standard manual for trip generation modeling, titled the ITE Trip Generation Report, currently in its 7th edition. Trip generation numbers are calculated based on multipliers for various specific types of land use, generally based on the gross square footage of new development. For the purposes of this study, general land uses were assigned within the study area, such as low density residential, office, hotel, and retail, but a more specific breakdown was not produced. For instance, different types of retail, such as a supermarket versus a 24-hour convenience store, will generate vastly different numbers of daily trips, in this case approximately 102 trips versus 734. This sheet is provided to give a general understanding of the traffic that could be generated in the area, but should not be taken as an absolute number since many assumptions must be made as to the specific mixture of uses within the area.

To use this sheet, adjust the column for Percentage of Buildable Land per Zone for each use. For instance, if allocating 60% of the Commercial-Light Industrial District (C-LI) to General Office, enter .6 into that column. This will update the Expected Units columns, which are linked to the Buildout sheet to calculate the square footage of land or number of dwelling units developed. Each land use is assigned to only one district, which can be revised pending further discussion. Pay particular attention to the chart below this column which will shows the total percentage of land use allocated for each district. Note that it is possible to not assign a use to 100% of the land in each district, but this will not reflect true buildout as assumed in the other development impact analysis sheets. Once the uses have been allocated for each zoning district, the chart will show the total number of daily trips along with the peak PM number of trips.

4.1.6 Summary

The Summary sheet provides a snapshot overview of the total impacts of development on the area, including acres of buildable land and open space buffer area (B district), total new residents to the area, total number of gallons of water used per day, total new students added to the school district, and the total number of vehicle trips generated. This sheet is linked to the other sheets and is automatically updated when the numbers on each of the individual analysis sheets are adjusted.

4.2 Impacts Analysis

4.2.1 Overview

The analysis of the Conceptual Plan vision shows that the towns will face some serious decisions about development intensity and infrastructure needs, which must also be framed in the context of market conditions. Increased density may create the village feel that the towns seek, but will also bring impacts such as additional water usage and residents to the area.

In terms of deciding which scenario is the most likely for development, it will probably fall somewhere between the "Least Constraints" and "Most Constraints." As the "All Land" scenario includes every acre of land in the conceptual plan area, this scenario represents the highest possible impact to the area if all land is developed. The "Least Constraints" scenario only minuses out the land area that contains absolute development constraints, which still includes the land that contains partial development constraints or currently developed land, and the "Most Constraints" scenario is based on the amount of land that could be developed when all land with constraints is considered off-limits to development. In reality, some areas that contain partial constraints or developed land are likely to be developed or redeveloped, but the scope of land that will be impacted can only be determined on a case-by-case basis.

4.2.2 Scenario Analysis

The base scenario, as described in the methodology above, takes into account current development trends, existing zoning requirements, and proposed uses. The tables below show the most probable development impacts based on the following assumptions:

- FAR is .75 for C-R, M, MC, and MUV Districts
- FAR is .5 for C-LI District
- FAR is .3 for R-LD District
- No development is allowed in the Buffer area
- The MUV District has a mix of 60% retail use and 40% housing
- Single family homes and larger apartment buildings (5 to 9 units) are built on 1-acre lots; Smaller apartment buildings (2 to 4 units) are built on ½-acre lots

- The mix of housing types is based on the overall mix in the four towns according to 2000 Census data

Table 4-1: Development Impacts Summary

	All Land	Least Constraints	Most Constraints
Buildable Land (Acres)	396.50	393.28	293.75
Buffer Area	73.47	72.75	46.92
New Residents	256	251	127
Water Use (GPD)	925,360	922,050	767,890
New Students	61	59	30
Expected Daily Trips	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE

Table 4-2: Buildout Analysis

Zone	Town	All Land	Least Constraints	Most Constraints		
B	Douglas	1,446,318.32	1,446,318.32	864,034.38		
	Northbridge	0.00	0.00	0.00		
Buffer	Sutton	1,412,088.88	1,412,088.88	1,060,681.64		
	Uxbridge	341,828.39	310,456.48	119,040.77		
	TOTAL SF	**3,200,235.59**	**3,168,863.68**	**2,043,756.79**		
	TOTAL ACRES	**73.47**	**72.75**	**46.92**		
C-LI	Douglas	2,423,878.78	2,423,878.78	2,414,339.14	**FAR**	**0.5**
	Northbridge	54,395.55	33,558.62	0.00		
Commercial/	Sutton	4,501,483.87	4,483,911.76	3,954,799.33		
Light Industrial	Uxbridge	143,085.89	143,085.89	100,392.73		
	TOTAL SF	**7,122,844.08**	**7,084,435.05**	**6,469,531.20**		
	TOTAL ACRES	**163.52**	**162.64**	**148.52**		
C-R	Douglas	0.00	0.00	0.00	**FAR**	**0.75**
	Northbridge	1,844,933.71	1,844,933.71	1,477,128.31		
Commercial/	Sutton	728,358.05	728,358.05	709,337.57		
Retail	Uxbridge	0.00	0.00	0.00		
	TOTAL SF	**2,573,291.75**	**2,573,291.75**	**2,186,465.89**		
	TOTAL ACRES	**59.07**	**59.07**	**50.19**		
M	Douglas	0.00	0.00	0.00	**FAR**	**0.75**
	Northbridge	0.00	0.00	0.00		
Municipal	Sutton	500,396.59	500,396.59	145,116.87		
	Uxbridge	0.00	0.00	0.00		
	TOTAL SF	**500,396.59**	**500,396.59**	**145,116.87**		
	TOTAL ACRES	**11.49**	**11.49**	**3.33**		
MC	Douglas	207,029.79	207,029.79	205,507.37	**FAR**	**0.75**
	Northbridge	0.00	0.00	0.00		
Motel/Conference	Sutton	0.00	0.00	0.00		
Center	Uxbridge	321,694.96	321,694.96	179,600.06		
	TOTAL SF	**528,724.75**	**528,724.75**	**385,107.43**		
	TOTAL ACRES	**12.14**	**12.14**	**8.84**		
MUV	Douglas	2,260,767.27	2,260,767.27	1,542,608.79	**FAR**	**0.75**
	Northbridge	0.00	0.00	0.00		
Mixed Use	Sutton	0.00	0.00	0.00	**Retail SF**	**60.00%**
Village	Uxbridge	0.00	0.00	0.00	**Housing SF**	**40.00%**
	TOTAL SF	**2,260,767.27**	**2,260,767.27**	**1,542,608.79**		
	TOTAL ACRES	**51.90**	**51.90**	**35.41**		
R-LD	Douglas	21.22	21.22	8.76	**FAR**	**0.3**
	Northbridge	21.38	19.89	8.40		
Residential	Sutton	49.57	48.84	29.07		
Low Density	Uxbridge	6.21	6.09	1.22		
	TOTAL BUILDABLE LOTS	**98.39**	**96.05**	**47.45**		

Table 4-3: New Residents

	Number of Units	Persons per Unit	Total New Residents
All Land			
Single Family-Detached (R-LD District)			
2-BR (1 Acre Lots)	21.48	2.5	54
3-BR (1 Acre Lots)	48.93	2.8	137
4-BR (1 Acre Lots)	16.77	3	50
Apartment (MUV District)			
2-4 Units (1/2 Acre Lots)	6.92	2	14
5-9 Units (1 Acre Lots)	1.04	1.5	2
Total	**95**		**256**
Least Constraints			
Single Family-Detached (R-LD District)			
2-BR (1 Acre Lots)	20.97	2.5	52
3-BR (1 Acre Lots)	47.77	2.8	134
4-BR (1 Acre Lots)	16.37	3	49
Apartment (MUV District)			
2-4 Units (1/2 Acre Lots)	6.92	2	14
5-9 Units (1 Acre Lots)	1.04	1.5	2
Total	**93**		**251**
Most Constraints			
Single Family-Detached (R-LD District)			
2-BR (1 Acre Lots)	10.36	2.5	26
3-BR (1 Acre Lots)	23.60	2.8	66
4-BR (1 Acre Lots)	8.09	3	24
Apartment (MUV District)			
2-4 Units (1/2 Acre Lots)	4.72	2	9
5-9 Units (1 Acre Lots)	0.71	1.5	1
Total	**47**		**127**

Table 4-4: Water Use (Gallons per Day)

	All Land			Least Constraints			Most Constraints		
Zone	Buildable SF (Comm)	New Population (Res)	Water Use (GPD)	Buildable SF (Comm)	New Population (Res)	Water Use (GPD)	Buildable SF (Comm)	New Population (Res)	Water Use (GPD)
C-LI	7,122,844	--	534,213	7,084,435	--	531,333	6,469,531	--	485,215
C-R	2,573,292	--	192,997	2,573,292	--	192,997	2,186,466	--	163,985
M	500,397	--	37,530	500,397	--	37,530	145,117	--	10,884
MC	528,725	--	39,654	528,725	--	39,654	385,107	--	28,883
MUV (Retail)	1,356,460	--	101,735	1,356,460	--	101,735	925,565	--	69,417
MUV (Housing)	--	15	1,155	--	15	1,155	--	11	788
R-LD	--	241	18,076	--	235	17,647	--	116	8,718
Total			**925,360**			**922,050**			**767,890**

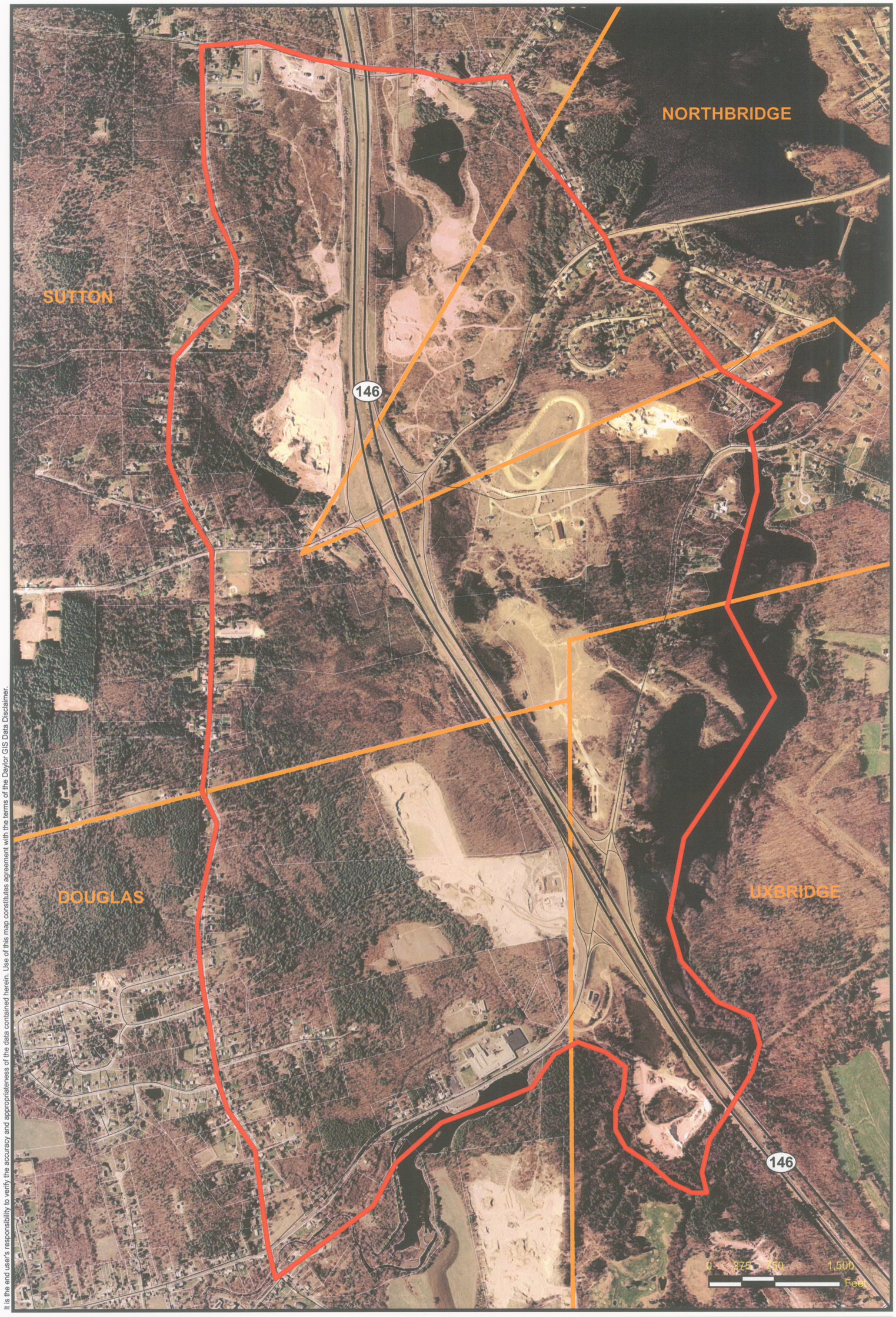
Table 4-5: New Students

	All Land		Least Constraints		Most Constraints	
Zone	Buildable Lots	New Students	Buildable Lots	New Students	Buildable Lots	New Students
MUV (Housing)	8	5	8	5	5	3
R-LD	98	56	96	55	47	27
Total		**61**		**59**		**30**

Table 4-6: Vehicle Trip Generation

NOT AVAILABLE

APPENDIX A: FIGURES



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Aerial Photograph (2001)

4-Town Corridor Study

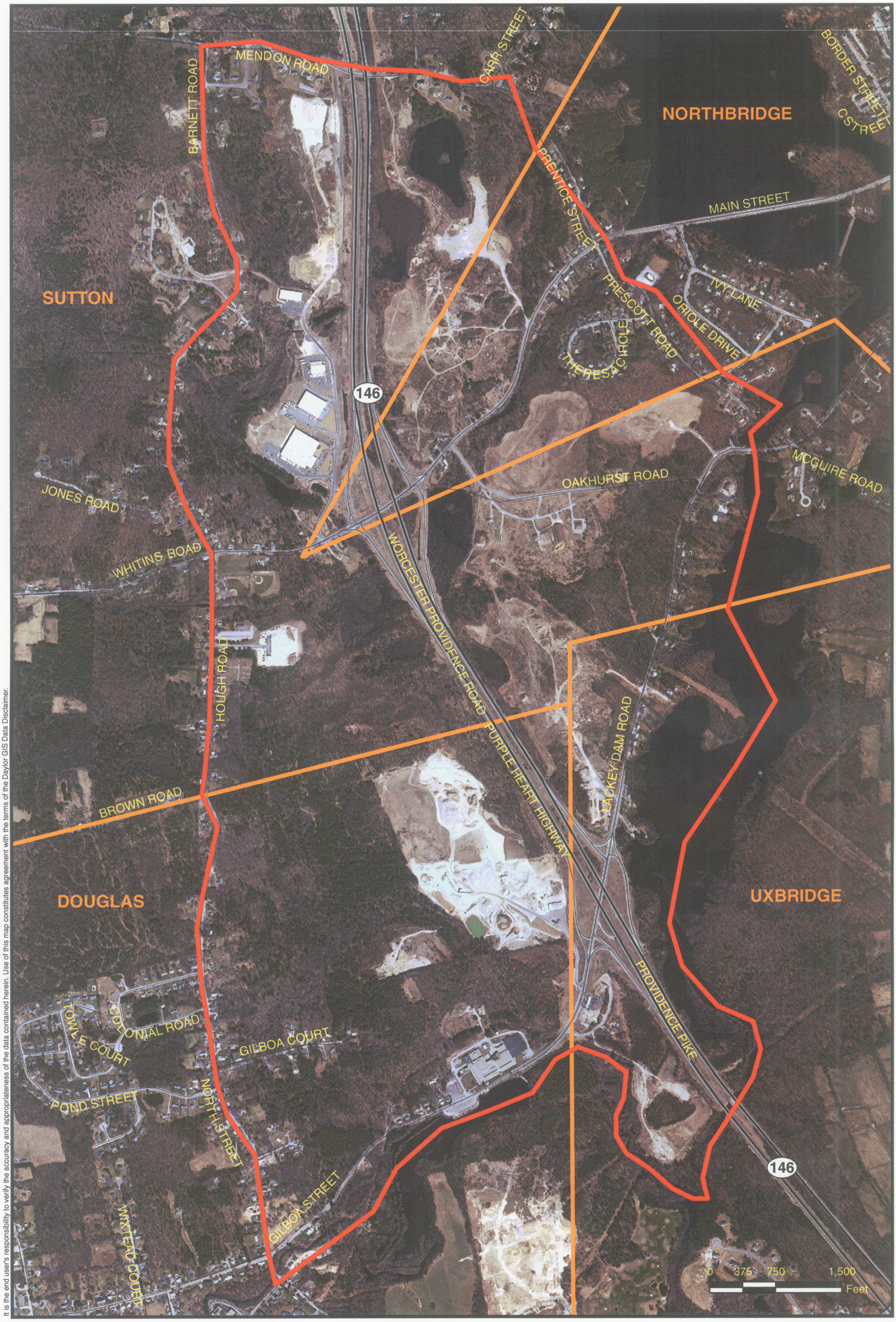
Scale 1" = 1,000 ft.

Source: MassGIS, Towns of Sutton and Douglas

Figure 1A

Created by: ELJ, 5/22/06

2588 Aerial.mxd



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Aerial Photograph (2005)

4-Town Corridor Study

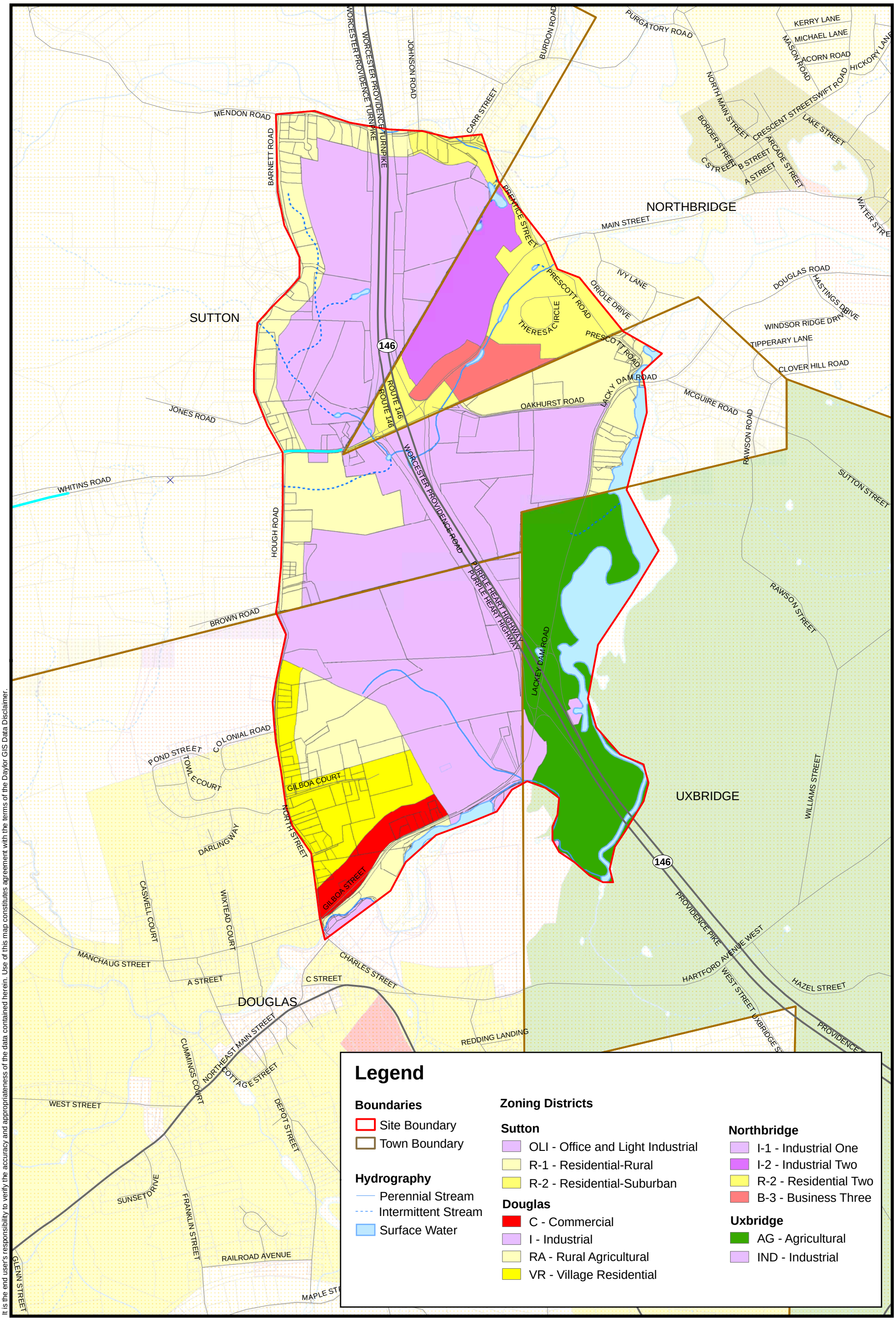
Scale 1" = 1,000 ft.

Source: MassGIS, Towns of Sutton and Douglas

Figure 1B

Created by: ELJ, 5/22/06

2588 Aerial.mxd



Legend

Boundaries
- Site Boundary
- Town Boundary

Hydrography
- Perennial Stream
- Intermittent Stream
- Surface Water

Zoning Districts

Sutton
- OLI - Office and Light Industrial
- R-1 - Residential-Rural
- R-2 - Residential-Suburban

Douglas
- C - Commercial
- I - Industrial
- RA - Rural Agricultural
- VR - Village Residential

Northbridge
- I-1 - Industrial One
- I-2 - Industrial Two
- R-2 - Residential Two
- B-3 - Business Three

Uxbridge
- AG - Agricultural
- IND - Industrial

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Zoning
4-Town Corridor Study

Scale 1" = 1,500 ft.

Source: MassGIS, Towns of Sutton and Douglas

Figure 2

Created by: ELJ, 3/2/06

2588 Zoning.mxd

Absolute Constraints contain:
- Protected Open Space
- Wetlands
- 100' Riverfront Protection Area

Partial Constraints contain:
- FEMA 100-yr Flood Zone
- 100-200' Riverfront Protection Areas
- Title V
- Zone IIs
- Interim Wellhead Protection Areas

Mapped Resources include:
- NHESP Estimated Habitat
- NHESP Priority Habitat
- BioMap Core Habitat
- BioMap Supporting Habitat

PURGATORY ROAD
WORCESTER PROVIDENCE TURNPIKE
NORTHBRIDGE
SUTTON
DOUGLA
146
WHITINS ROAD
LACKEY DAM ROAD
LACKY DAM ROAD
PROVIDENCE TPKE
UXBRIDGE
GILBOA STREET
DOUGLAS
DAVIS ST
ST MAIN STREET

Legend

Development Constraints
- Developed Land
- Absolute Development Constraints
- Partial Development Constraints

Development Resources
- Excellent
- Good
- Fair
- Poor
- Not Suitable

Boundaries
- Site Boundary
- Town Boundary

Hydrography
- Perennial Stream
- Intermittent Stream
- Surface Water

Transmission Lines
- Powerline

750 0 750
Feet

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Land Use Suitability Map
4-Town Corridor Study

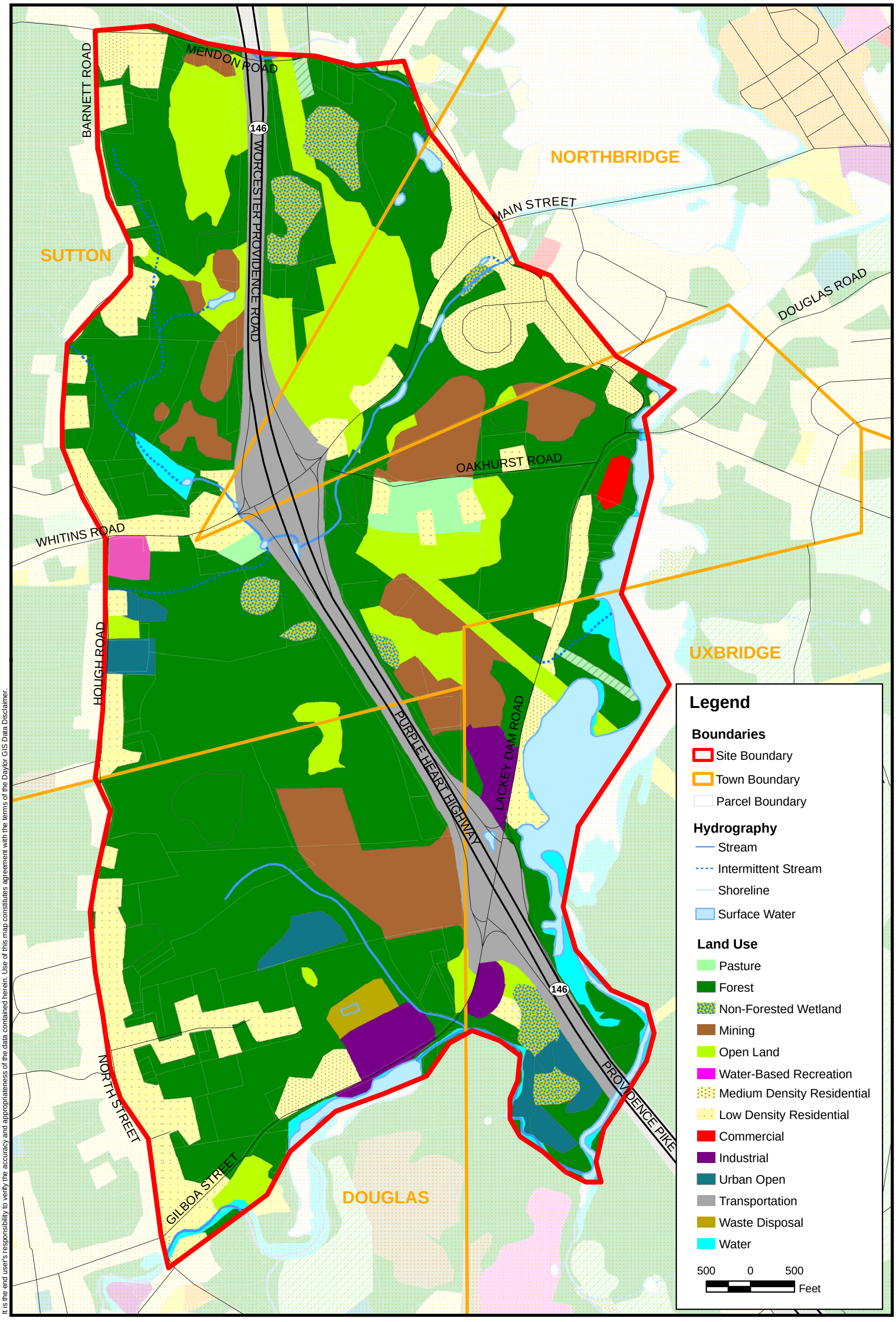
Scale 1" = 1,500 ft.

Source: MassGIS, Towns of Sutton and Douglas

Figure 3

Created by: ELJ, 3/2/06

2588 LU Suitability.mxd



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Land Use (1999)

4-Town Corridor Study

Scale 1" = 1,000 ft.

Source: MassGIS, Towns of Sutton and Douglas

Figure 4

Created by: ELJ, 8/16/07

2588 Land Use.mxd

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USGS Topographic Map

4-Town Corridor Study

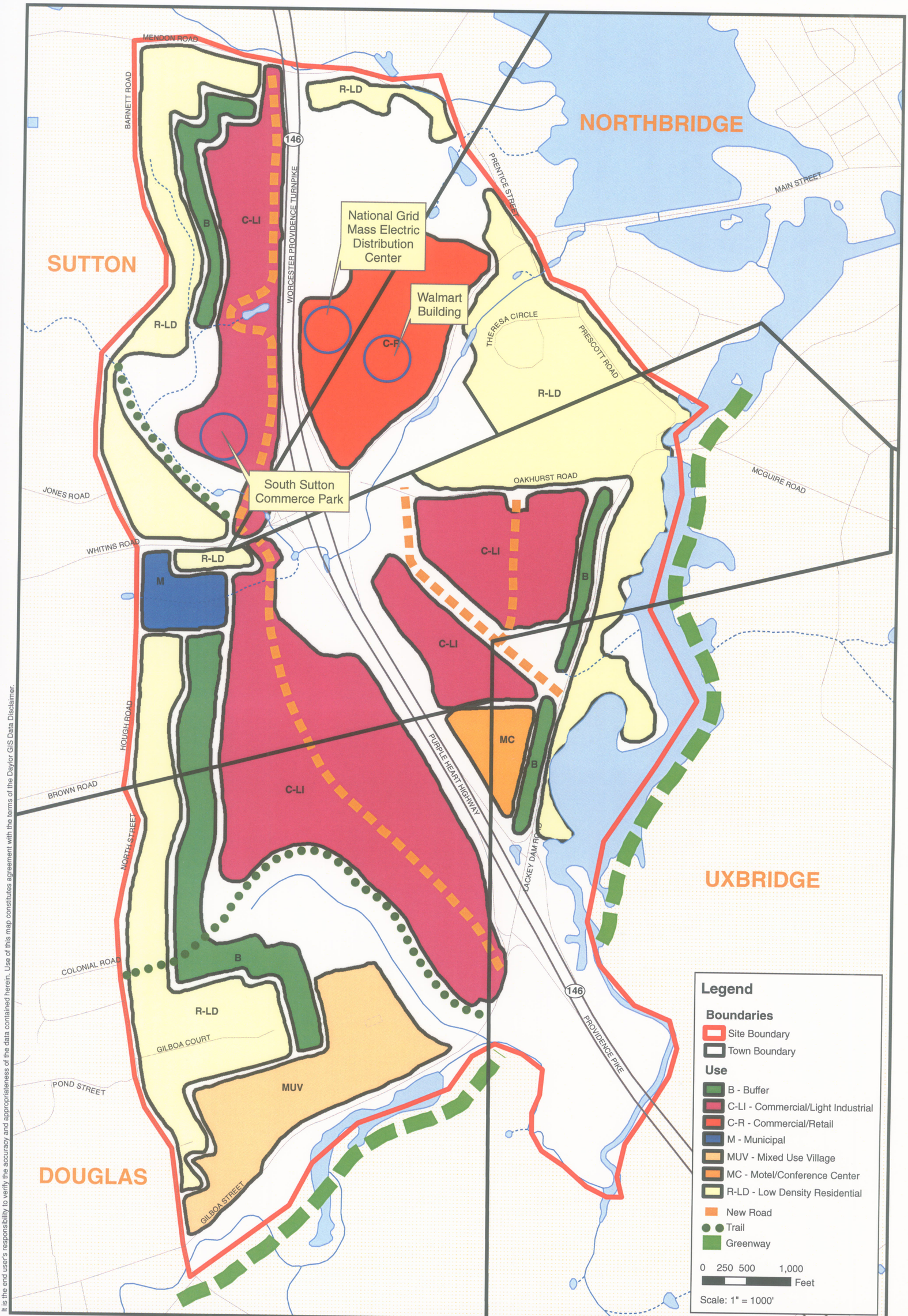
Scale 1" = 1,000 ft.

Source: MassGIS, USGS, Towns of Sutton and Douglas

Figure 5

Created by: ELJ, 5/22/06

2588 USGS.mxd



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Conceptual Plan
4-Town Corridor Study

Scale 1" = 1,000 ft.

Source: MassGIS, Towns of Sutton and Douglas

Figure 6

Created by: ELJ, 8/16/07

2588 Buildout.mxd

APPENDIX B: SITE PLAN VIGNETTES

Alternative 1 / East of Route 146

Alternative 2 / East of Route 146

NORTHBRIDGE

Main St.

Whiting Rd.

Municipal

Business / Industrial Park

SUTTON

Route 146

New Service Rd.

Lackey Dam Rd.

UXBRIDGE

DOUGLAS

Business / Industrial Park

Municipal

200'

Mixed Use Village

Gilboa St.

North St.

Alternative 1 / West of Route 146

NORTHBRIDGE

Main St.

Whiting Rd.

Municipal

Business / Industrial Park

SUTTON

Route 146

New Service Rd.

Lackey Dam Rd.

UXBRIDGE

DOUGLAS

Business / Industrial Park

Hotel Conference Center

Municipal

200'

Mixed Use Village

Gilboa St.

North St.

Alternative 2 / West of Route 146