Cache Valley South Corridor Development Plan

31 August 2011

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Table of Contents

Tables and Figures

Tables

Figures

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Executive Summary

The South Corridor of US-89/91 in Cache Valley is a place of special beauty with a genuine “sense of place”. It is also the site of a busy highway that provides an important link with places and markets beyond. As the valley has grown and evolved, highway traffic has increased, threatening the qualities that make the corridor desirable.

Three communities are located along the corridor – Wellsville, Nibley and Logan. Key facilities such as the South Campus of Utah State University and the American West Heritage Center are also located within the corridor. In-between are streams, creeks, natural features, homesteads and fields, and a few roadside businesses. While the South Corridor is of obvious importance to the people and places closest to it, the corridor is a critical component of the valley as a whole.

The purpose of the Cache Valley South Corridor Development Plan is to provide a framework for the physical development of private and public land within the South Corridor area. The plan is intended to guide future growth and development in the corridor for years to come.

The primary objectives of the Cache Valley South Corridor Development Plan include:

- Creating a transportation system which produces an efficient flow of goods, services, and travelers while sustaining business and industry;
- Providing opportunities for the full participation of all government entities within the corridor to manage future growth along the corridor; and
- Directing new growth in a manner that is consistent with the principles of the Envision Cache Valley process and which identifies future land uses, roadways, and vehicular access points.

The Cache Valley South Corridor Development Plan envisions a corridor where development is concentrated at key nodes, and open space buffers are established to help maintain the open, rural feel of the corridor. The **Preferred Land Use Plan** represents a consensus planning direction and a comprehensive development vision for the corridor. Other key ideas include the following:

- Widening of the US-89/91 right-of-way to incorporate all traffic lanes, medians, shoulders, turn lanes, storm water drains, trails, safety buffers, and other facilities as part of the highway.
- Limiting development to “clustered nodes” at existing and future intersections. Each node should be designed in a comprehensive manner, merging the development goals of each community with the integrated corridor vision.
- Establishing a multi-purpose trail along both sides of the highway. Additional design efforts and coordination with UDOT and other project partners is necessary to ensure that these facilities meet roadway and safety design standards.
- Establishing 300’ and 500’ open space buffers along both sides of the highway, depending on the proximity to the clustered nodes.
- Prohibiting new residential uses within the open space buffers, helping eliminate the need for sound walls, berms and other obtrusive buffering techniques.
- Encouraging residential, commercial, mixed-use and industrial uses within the existing cities of Wellsville, Nibley and Logan to the greatest degree possible.
- Prohibiting strip development along the highway.
- Encouraging better property maintenance and upkeep.
- Prohibiting commercial advertising signs along the highway.
- Adjusting of land earmarked for commercial uses to match realistic market projections.

The Plan concludes with a series of **Implementation Tools** to help guide future growth and development in the corridor. These include land use, landscape, streetscape and architecture guidelines, in addition to transportation, traffic, economic and financing tools and opportunities. Since implementation will ultimately be directed by the three municipalities and Cache County, the tone of this section is descriptive rather than prescriptive, providing a level of generalization and flexibility necessary to meet the specific needs of each.

1 Introduction

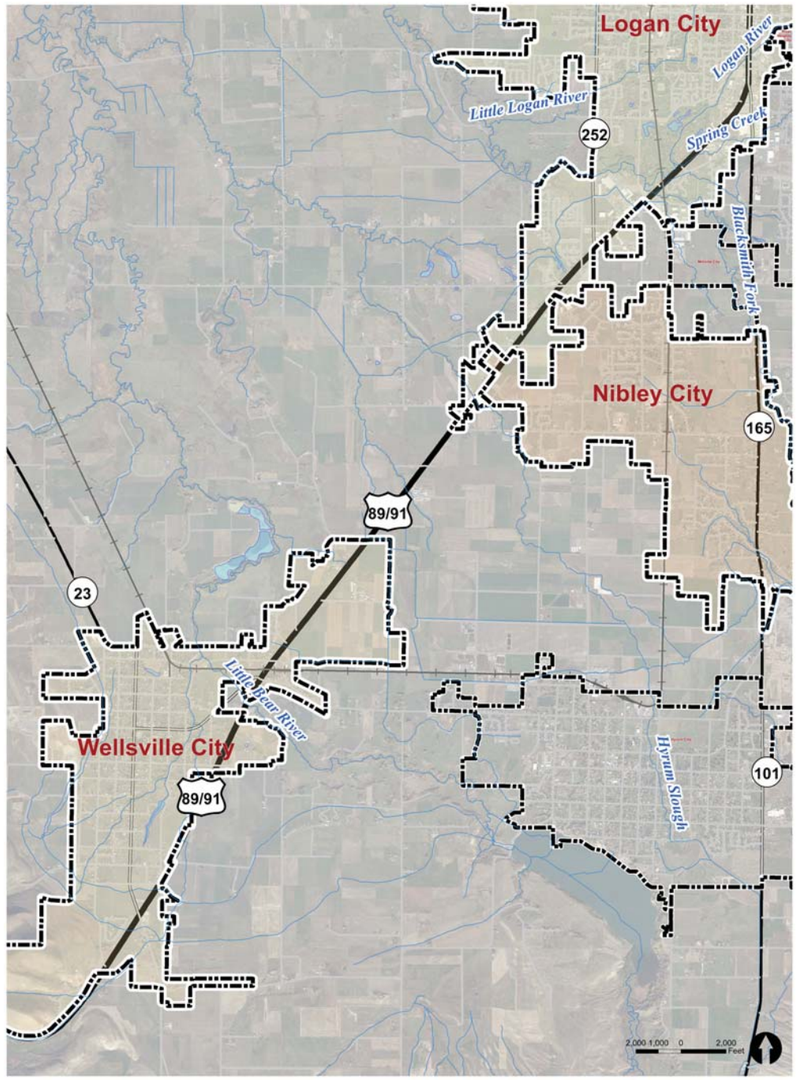


Figure 1-1 Project Context Map

Background and Setting

As one travels north on U.S. Highway 89/91 through Wellsville Canyon and begins to descend into Cache Valley, it is clear why a plan for the South Corridor is required. This is a very special place with unique patterns, viewsheds and qualities that typify the Cache Valley experience.

The agricultural fields, individual homes and pastures dominate the closest views, while residential neighborhoods, stands of trees, homesteads and towns punctuate the middle views. These are interspersed by wide swaths of open land and fields, which trace the sinuous flow of small streams, rivers and canals. The beautiful peaks of the Bear River Mountains enclose the eastern edge of the valley, while to the west the shoulders of the Wellsville Mountains provide a soft transition to the steep peaks above.

The nearly ten-mile long corridor is a place of special beauty with a genuine “sense of place”. It provides a glimpse of the rich agricultural heritage and a clear view of a rural landscape that continues to make Cache Valley such a desirable place to live, work, and visit.

But the South Corridor is much more than that. It is the site of US 89/91 – a busy highway and an important connection with the world beyond. The highway is critical to the valley economy, helping to ensure the area remains a thriving and desirable place. As the valley has grown and evolved in recent years, traffic on the highway has also increased. This is a trend that will undoubtedly continue in the future, threatening the qualities that make the South Corridor so desirable.

As illustrated in Figure 1-1, three communities are located along the corridor - Wellsville to the south, Nibley in the middle, and Logan furthest north. In-between is a range of unincorporated county land, which includes the South Campus of Utah State University, the American West Heritage Center, a range of large and small farms, numerous open spaces and fields, the Little Bear River and smaller streams, individual homes and homesteads, and a few roadside businesses.

While the South Corridor is of obvious importance to the people and places closest to it, the decisions that affect it have impacts on the rest of the valley as well.

Purpose of the Plan

The purpose of the Cache Valley South Corridor Development Plan is to formulate a framework for the physical development of private and public land within the South Corridor area. The plan is intended to guide future growth and development in the corridor for years to come.

One of the key functions of this plan is to strike a balance between growing traffic and highway expansion, and the preservation of those qualities that make the corridor unique. Another role is the establishment of a common vision that can be implemented over time. With careful planning it is possible to avoid the pitfalls of “wall-to-wall” development that has taken place along the highway further to the north, and preserve the characteristics that make Cache Valley special.

The primary objectives of the Cache Valley South Corridor Development Plan include:

- Creating a transportation system, on and adjacent to the corridor, which produces an efficient flow of goods, services, and travelers while sustaining business and industry in Cache Valley for many years to come;
- Providing an opportunity for the full participation of all government entities within the plan area in the consistent management of future growth along the southern corridor; and
- Directing new growth that is consistent with the principles of the Envision Cache Valley process and which specifies future land uses, future roadways, and vehicular access points.

This plan is a cooperative effort of the South Corridor Planning Group (SCPG), which is composed of Cache County, Logan City, Nibley City, Wellsville City, Utah State University (USU), Utah Department of Transportation (UDOT), and a range of Cache Valley business and community interests.

The plan builds upon the numerous studies and processes that have taken place previously. Chief among these are *Envision Cache Valley*; the general plans, zoning and related planning information provided by the Cities of Wellsville, Nibley and Logan; the Cache County General Plan and related zoning information; mapping and digital data provided by corridor communities, Cache County, Cache Metropolitan Planning Organization (CMPO), and Bear River Association of Governments (BRAG); *Cache Valley 2030 – the Future Explored*; *Little Bear Watershed Study*; Census 2010 and the Governor's Office of Planning and Budget (GOPB) demographic data; and information and ideas provided by members of the public and elected officials as part of the community involvement process.

Existing Conditions and Analysis

The Cache Valley South Corridor planning process began with an investigation of existing conditions. The following is summary of some of the most critical findings - both natural and man-made - that impact development and growth in the corridor.

Corridor Limits

As illustrated in Figure 1-2, a one-mile corridor boundary was established on each side of US-89/91 to define the preliminary study area. It was eventually determined that some aspects of the plan (views, visual qualities and natural systems, for example) extend well beyond this boundary, requiring a broader interpretation of the corridor as necessary.

Prime Farmland

Rich soils and flat topography result in landscape dominated by prime farmlands. A key function of the plan is to maintain the rich agricultural heritage of the area while dealing with the inevitable rise in highway traffic and corresponding development pressure in the corridor.

Floodplains/Wetlands/Depth to Ground Water

Figure 1-3 illustrates the dynamic hydrologic conditions found in the corridor and beyond. Water generally flows in a southwest to northwest direction along defined streams and associated wetlands. The land becomes increasingly wet along these routes, limiting their use for development purposes on the west side of the highway in particular. Flooding is common along these zones during spring runoff period. The depth to groundwater is less than ten feet throughout the corridor, limiting growth and development options.

Existing Land Use

The dominant land use is agricultural. As depicted in Figure 1-4, residential uses are clustered in four communities (Wellsville, Nibley, Logan and nearby Hyrum), with residential farms and farmsteads scattered throughout the agricultural areas, particularly on the west side of the highway. Farms and farmsteads tend to be located along county roads in close proximity to utility lines. The "grid and block" pattern that dominates central Wellsville and Hyrum contrasts with the sinuous road layouts in Logan and Nibley, illustrating distinct eras of development and community planning.

Commercial uses are concentrated along the southern extents of Logan City adjacent to the highway corridor, and to a much smaller degree in Hyrum, Nibley and Wellsville. The USU South Farm Complex (which includes the South Farm, George B. Caine Dairy and the American West Heritage Center) dominates the central portion of the site, straddling both sides of the highway. Significant tracts of vacant land are located along the outer edges of Wellsville and Nibley, and to a lesser degree, Logan.

Existing Zoning

Figure 1-5 illustrates the zoning patterns of the three corridor cities. Residential zones dominate each, although the patterns and distribution varies significantly. For example, residential density is highest in the central portion of Wellsville, with low-density residential zones abutting the highway. Wellsville commercial zoning is dominated by a large swath of undeveloped land on the east side of the highway that encompasses the Caine Dairy and adjacent lands.

The density of residential zoning in Nibley generally increases from east to west, with limited residential uses directly abutting the highway. Strips of commercially-zoned land are located on both sides of the highway between 2600 and 3200 West.

Residential zones in the southern portions of Logan are set back from the highway and buffered by commercial, park and similar uses. The Gateway Zone straddles both sides of the highway in the southern extents of the community, and has largely been developed and built-out.

Future Land Use

Figure 1-6 illustrates the future development vision of the three communities. It also indicates the proposed annexation boundaries of the three communities, which conflict in several locations.

The land use visions of Wellsville, Nibley and Logan agree on the need to protect sensitive open spaces, sensitive lands and the bulk of the prime farm land. Wellsville envisions residential development on both sides of the highway beyond a 200' buffer zone. A large commercial development is envisioned in Wellsville on the west side of the highway south of the USU South Campus Complex.

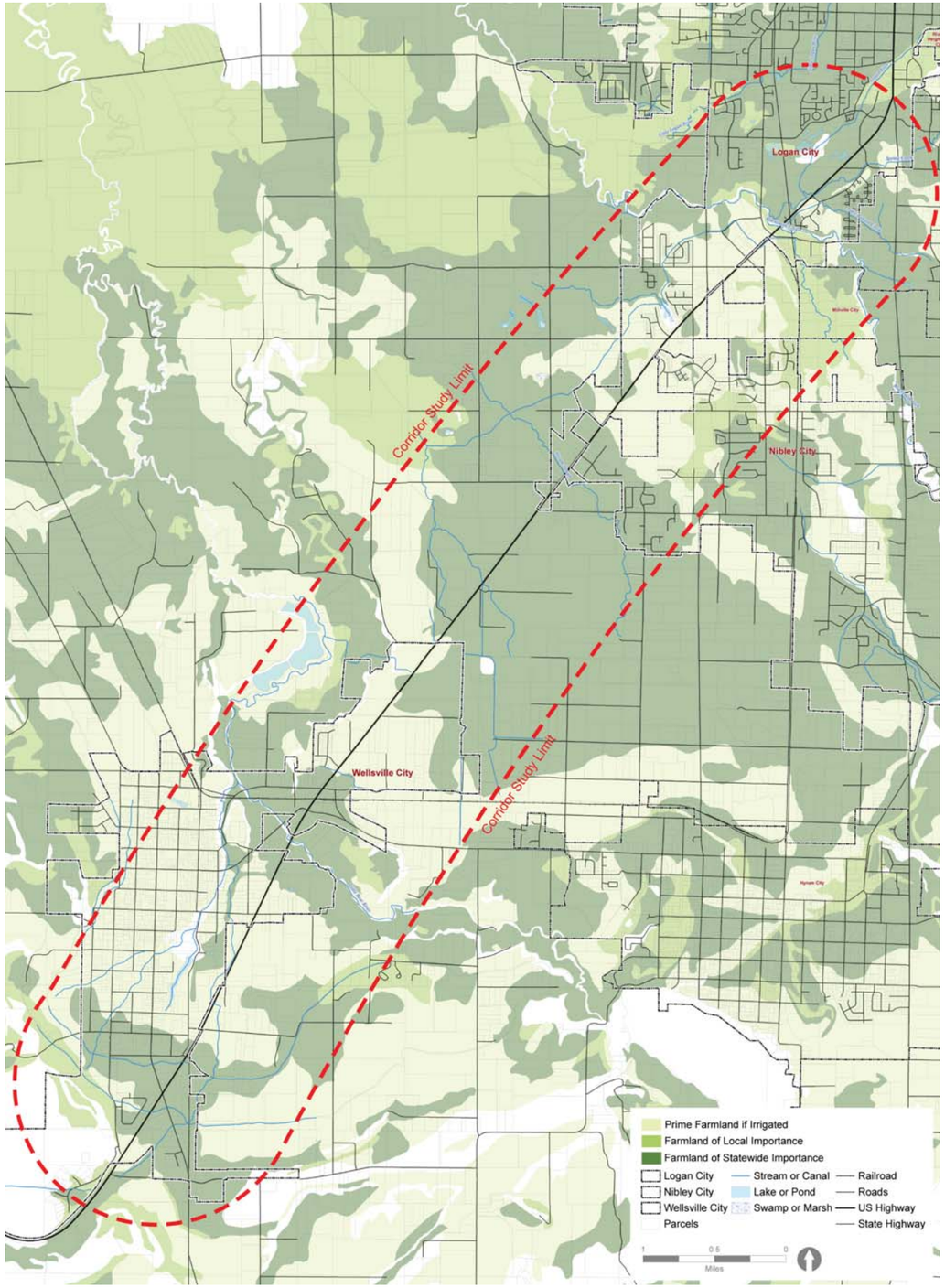


Figure 1-2 Corridor Limits/Prime Farmland

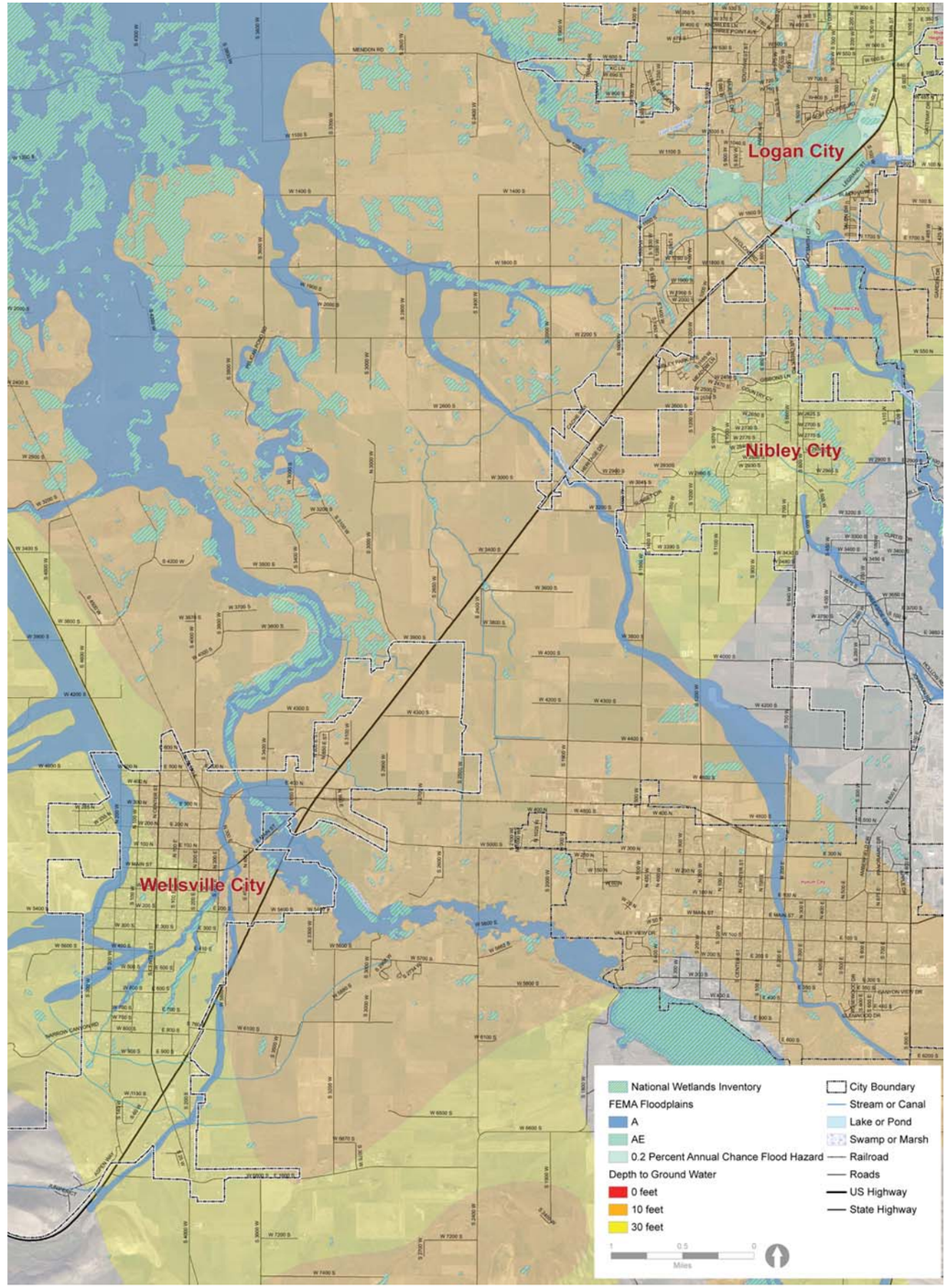


Figure 1-3 Floodplains/Wetlands/Depth to Groundwater

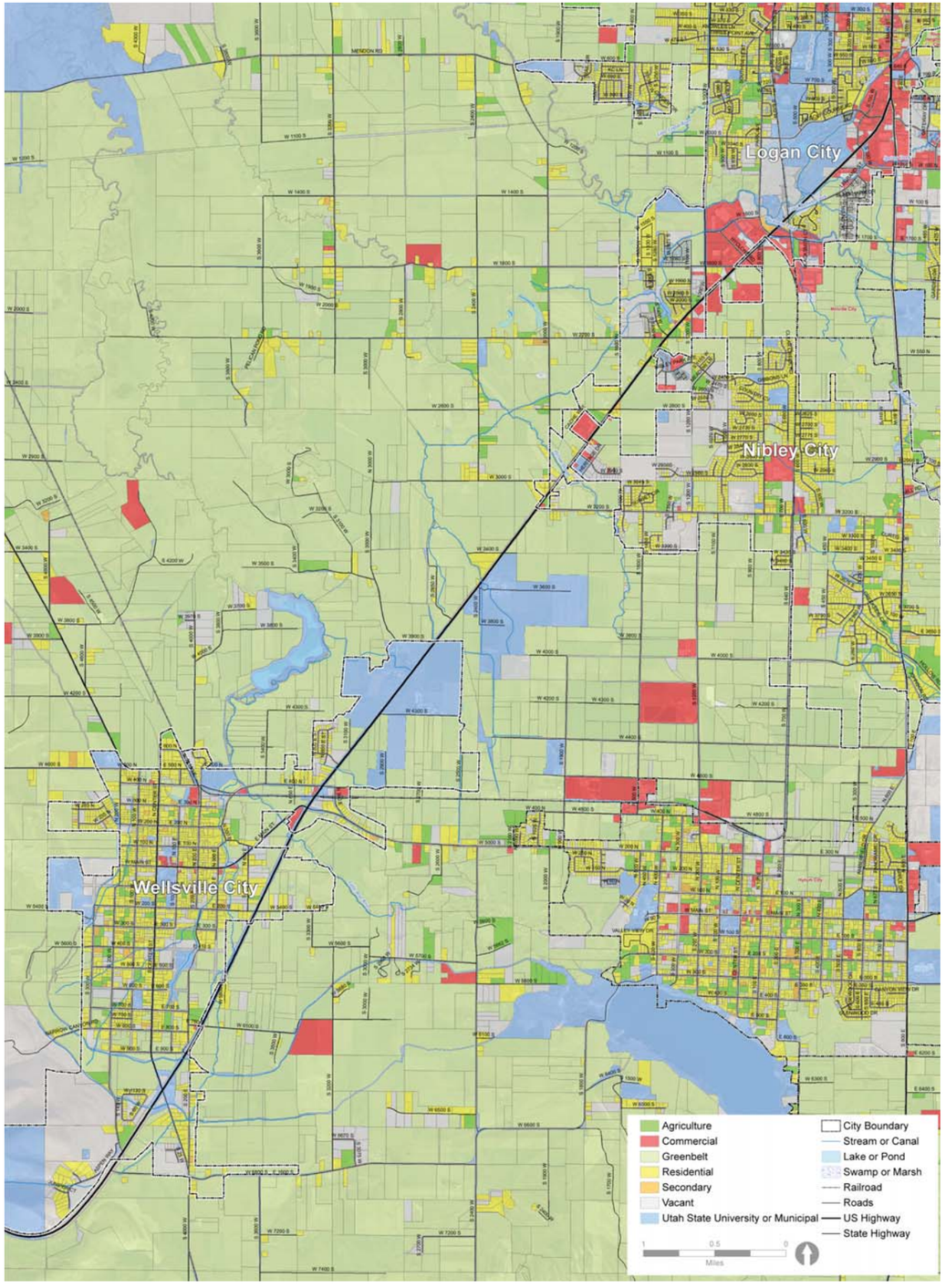


Figure 1-4 Existing Land Use

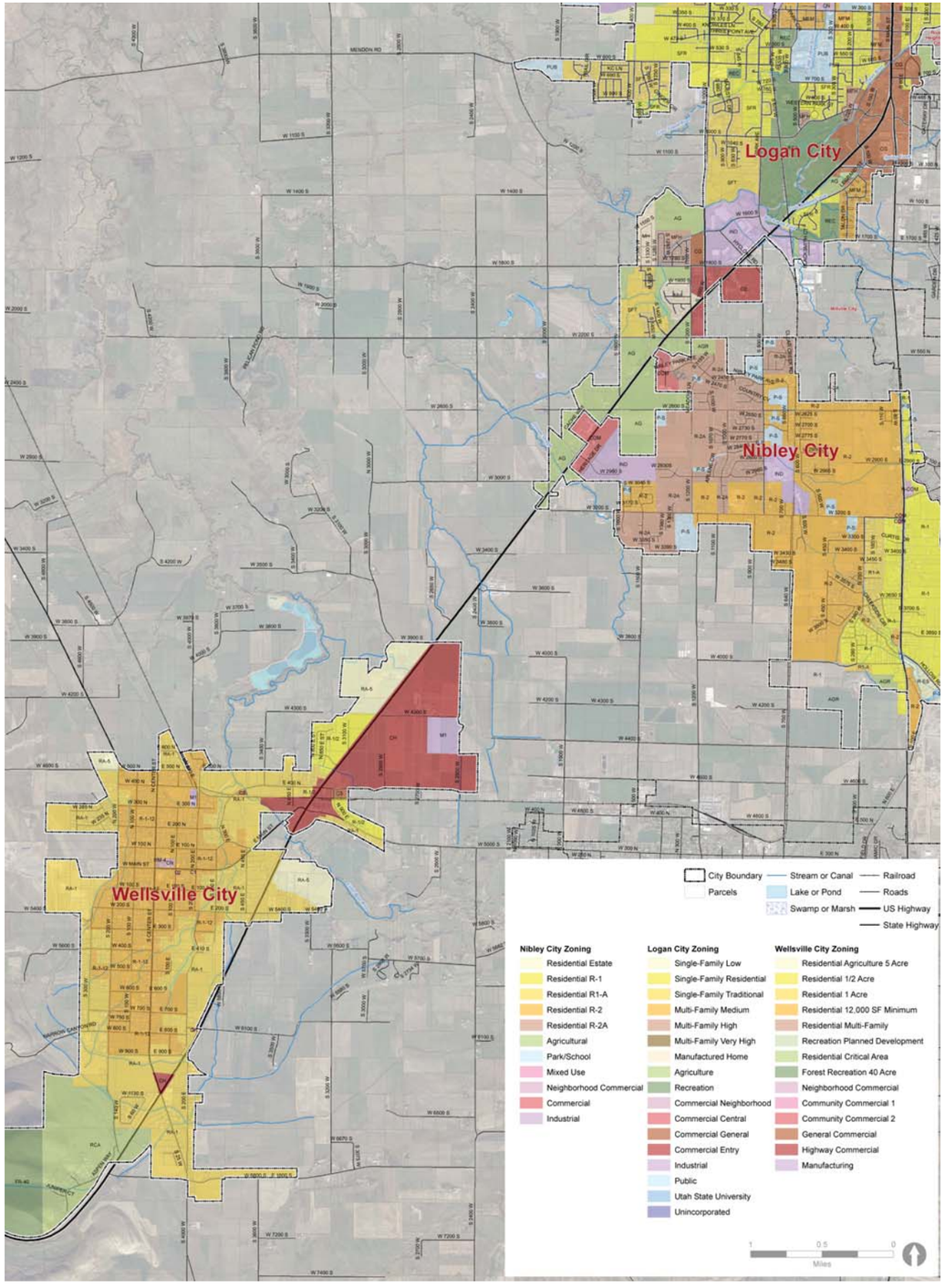


Figure 1-5 Existing Zoning

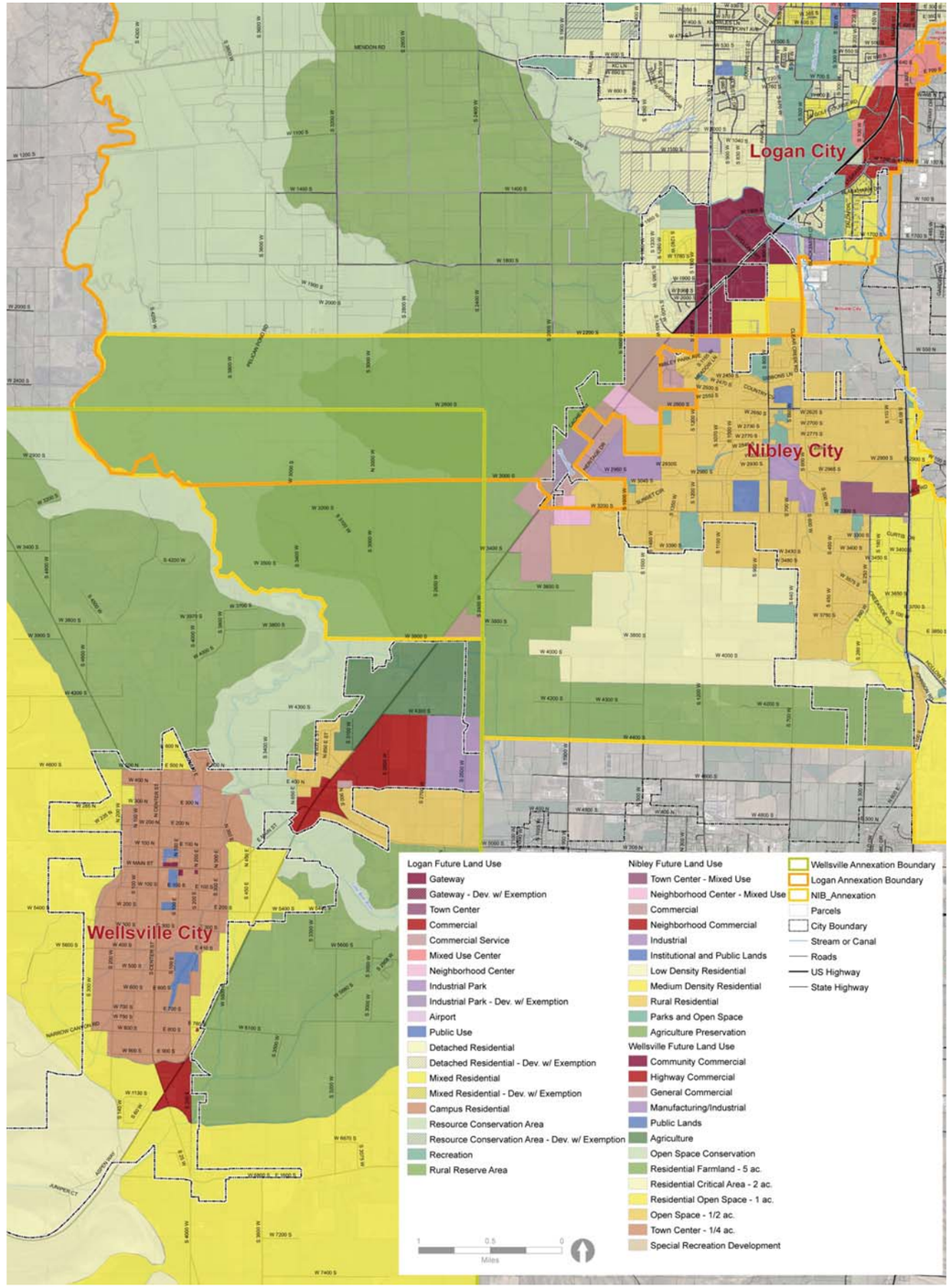


Figure 1-6 Future Land Use

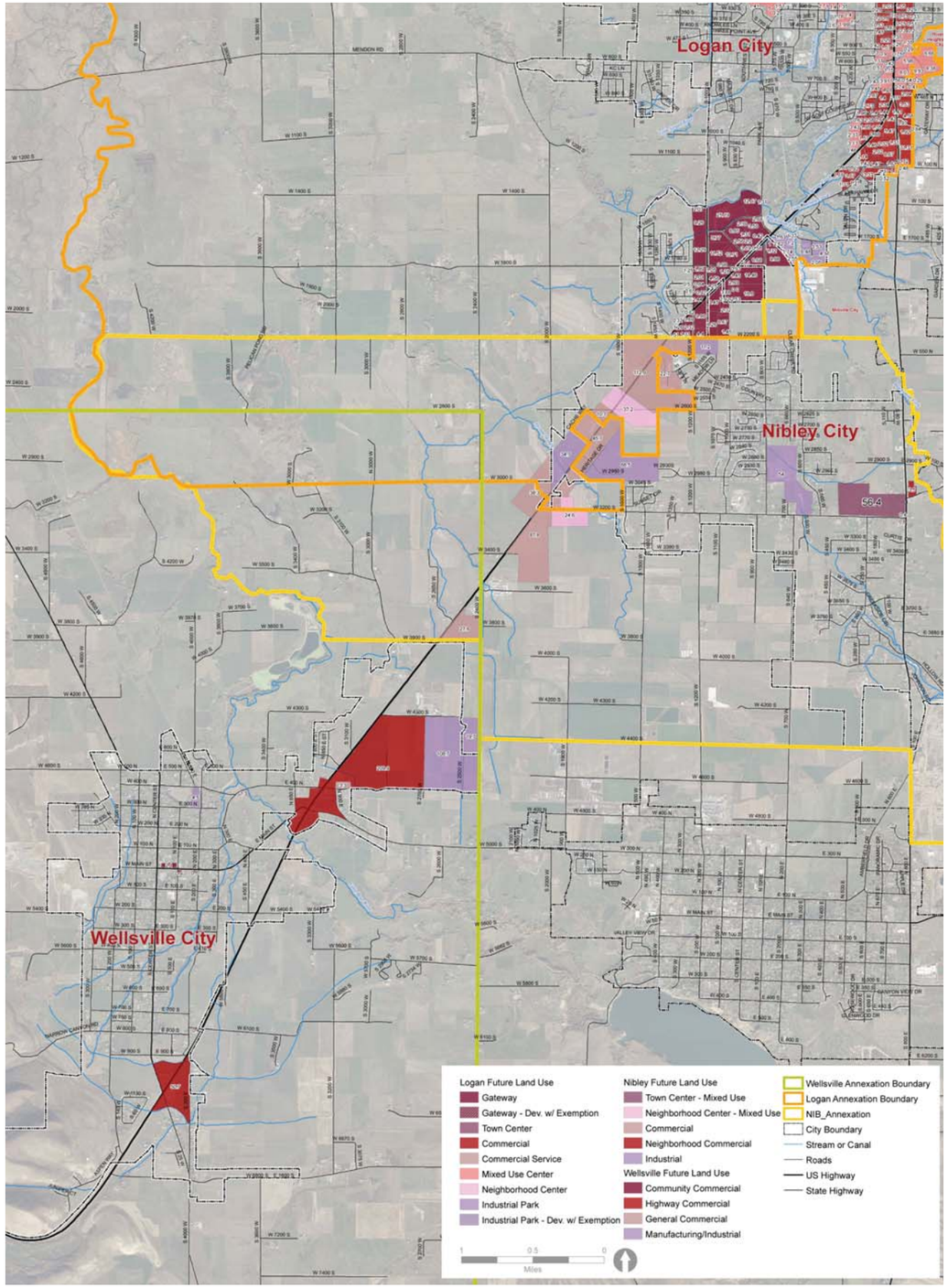


Figure 1-7 Future Commercial Acreages

A narrow strip of commercial and industrial land lines both sides of the highway in Nibley, illustrating the community's vision for highway-oriented commercial development. The first project to be implemented according to this concept is Petersen's Country Store, which is located on the west side of the highway near 2600 South. The project is only partially complete and largely unoccupied. It has generated substantial scrutiny and debate, particularly regarding the design, visual impact, and lack of economic success. The land surrounding the project was recently incorporated into Logan City at the request of property owners, effectively eliminating expansion of the envisioned concept.

The future land use vision in Logan illustrates a desire to establish the south entrance into the City as a "corporate campus/gateway" and a memorable entrance experience. Logan's vision includes agricultural and rural preservation areas along the south edge of the community, reflecting the shared vision of all three communities to preserve agricultural land and open space along their edges thereby enhancing the sense of three separate cities.

Future Land Use Commercial Acreages

Figure 1-7 illustrates that the commercial acreages contained in the Future Land Use Maps of Wellsville and Nibley far exceed demand over the next 50 years. A critical function of this plan is to ensure that the future land use vision reflects realistic projections.

Corridor History

US-89/91 in Cache Valley facilitates travel between northern Utah and various locations in southeastern Idaho. The highway also serves as a primary connection between Cache Valley and the Salt Lake and Idaho Falls population centers. This corridor has traditionally served as the primary access for goods and services between the agricultural areas and built-up communities throughout the corridor.

Prior to the mid-1970's this route served as an international commerce route between California and the Canadian border. With the installation of Interstate 15, the corridor now serves as the primary corridor for travel through Cache Valley. The Logan, Utah – Idaho Metropolitan Statistical Area is one of the few metropolitan areas in Utah of its size that is not connected via an interstate highway. Members of the public have stated on several occasions that this corridor is Cache Valley's "freeway".

The South Corridor begins in Wellsville Canyon on the south and proceeds into and through Logan City, to the aforementioned service areas. US-89/91 within the study area is 9.8 miles of 5 lane roadway owned and controlled by the Utah Department of Transportation (UDOT). The right-of-way for the roadway ranges from 104 feet to 213 feet in width, with a typical width of 120 feet.

General Use of the Corridor

The primary land uses surrounding the corridor have traditionally been agricultural, with several farmsteads located directly adjacent to the roadway. The roadway has long been used as a way for farmers to travel between farm sections and for hauling harvest to market. As Logan City has grown, the corridor has experienced a transition to more commercial and retail type land uses. Additionally, large scale employment centers in the area have utilized the US-89/91 corridor to access the adjoining city road networks. As the transition to more commercial use has occurred, the interaction of trucks, passenger vehicles and farm equipment has created increased public safety and capacity concerns.

Corridor Agreement

Foreseeing the future growth and transition of the traffic characteristics within the valley, the municipalities in the valley previously worked cooperatively with UDOT to develop a plan to mitigate transportation concerns along this corridor. This action plan, referred to as the *Corridor Agreement* was supported by the *2005 South US-89/91 Transportation Corridor Study* and related public/agency coordination. The *Corridor Agreement* identified intersection control measures as well as access management requirements. Figure 1-9 identifies the study area and the proposed features identified within the *Corridor Agreement* and supporting traffic study.

Community Connections

The corridor passes through three municipal jurisdictions. Wellsville has two primary connections from the corridor via State Road (SR) 23 and SR-101. Nibley City has primary connections to the corridor from 3200 South and 2600 South. Logan City occupies the north portion of the study area where US-89/91 turns into Main Street. There is also an intersection connection to SR-252 (1000 West) that provides additional north/south access into Logan City.

Transportation and Traffic

Existing Traffic Conditions

In order to understand future corridor needs, an analysis of anticipated traffic and travel conditions was performed. The Cache Metropolitan Planning Organization (CMPO) has the responsibility for transportation planning within the Cache Valley area. The CMPO is currently in the process of updating its long-range plan out to the year 2035. A draft study entitled *Cache County, Utah Regional Transportation Plan, 2035* includes traffic analysis and modeling for all major roads within the valley, including US-89/91. The existing daily traffic volumes on the corridor as represented within this study range from 23,600 to 27,500.

In order to categorize the relative congestion on roadways, a recognized standard called Level of Service (LOS) has been established and applied to this study. According to this system, LOS can range from A-E, with "A" describing free-flow operations and "E" describing operations at capacity. Figure 1-10 illustrates relative values of LOS along the corridor. The baseline that UDOT typically utilizes for planning purposes representing conditions that are at or near free-flow capacity is LOS C-D range. The existing CMPO traffic volumes for the US-89/91 corridor vary from LOS A to LOS C, and therefore appear to be operating within the acceptable range.

Vehicles that utilize the roadway range from passenger vehicles to large semi-trailers. Truck traffic is a substantial component of the corridor, servicing commercial interests in Cache Valley as well as providing a connection to Southern Idaho and Northern Utah. Agricultural equipment and vehicles access the corridor primarily in the southern end of the study area.

Transit and Non-Motorized Conditions

A UDOT park-and-ride lot is located at the southern end of the valley along Center Street (SR-23) in Wellsville. The lot is typically filled to capacity on weekdays, primarily by commuters traveling through Wellsville Canyon and points south.

The Cache Valley Transit District provides bus service within the Logan area and in a limited capacity to Nibley and Hyrum.

Roadway Configuration

Cross Section

US-89/91 is classified by UDOT as a Major Arterial roadway with a posted speed of up to 60 miles per hour. The asphalt surfaced roadway consists of two travel lanes in each direction along with a striped center median. The existing roadway width varies from 80 to 90 feet and the right-of-way varies from 104 feet to 213 feet. Figure 1-8 depicts the typical current roadway section.

Since the US-89/91 corridor traverses predominantly through agricultural and undeveloped areas, there is no curb and gutter along the edges of

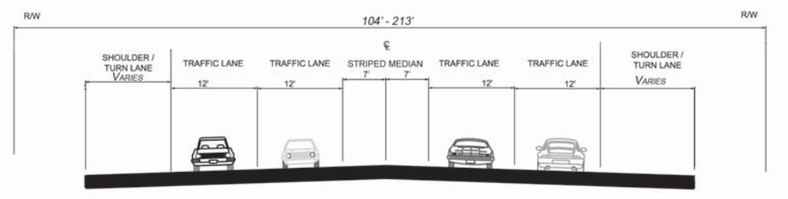


Figure 1-8 Existing Roadway Cross Section

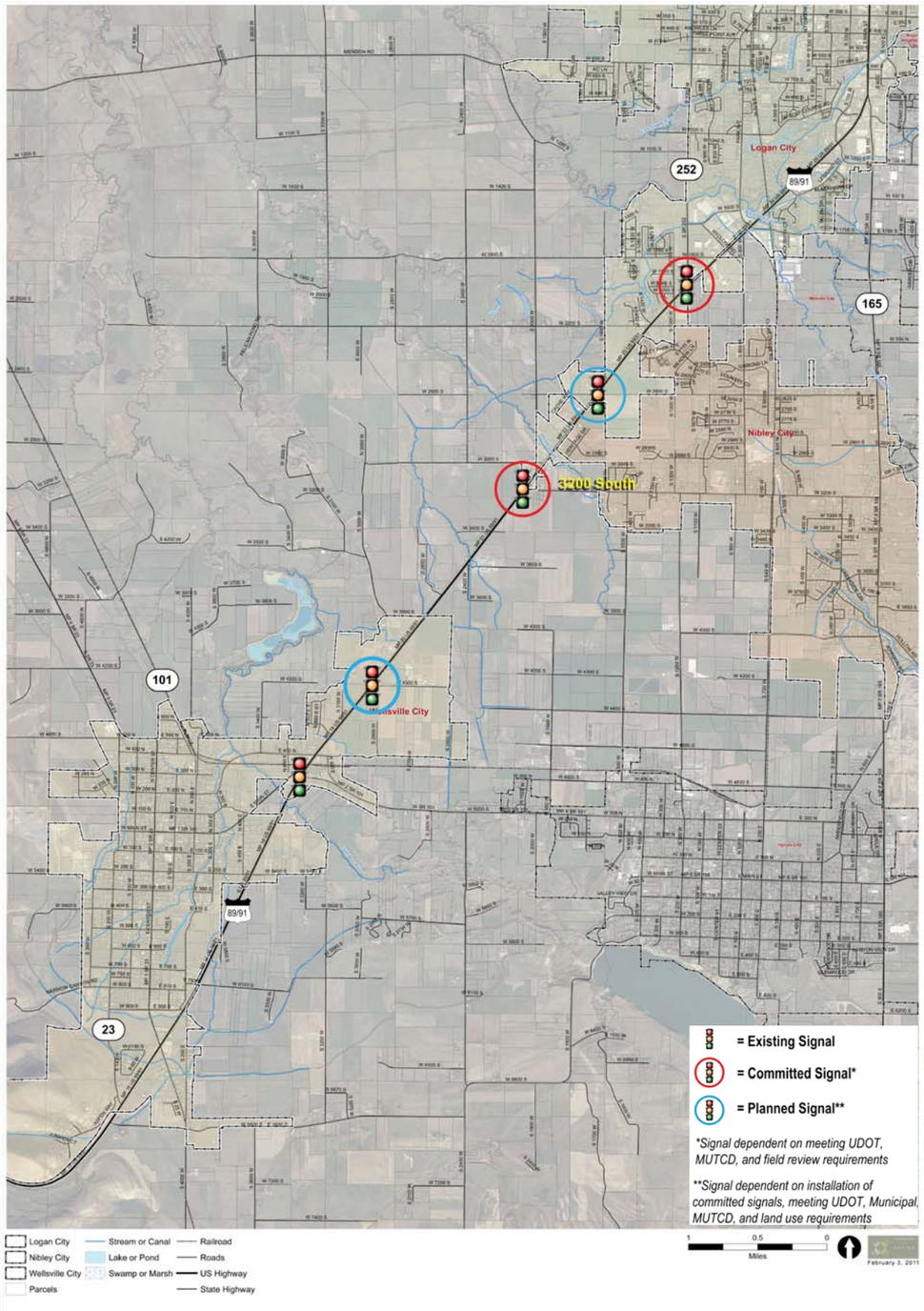


Figure 1-9 Current US-89/91 Corridor Agreement

- Level of Service is a measure of how streets and intersections perform
- Uses a letter grade system:
  - LOS A (least congested)
  - LOS F (most congested)
- Goal is to provide LOS C/D or better

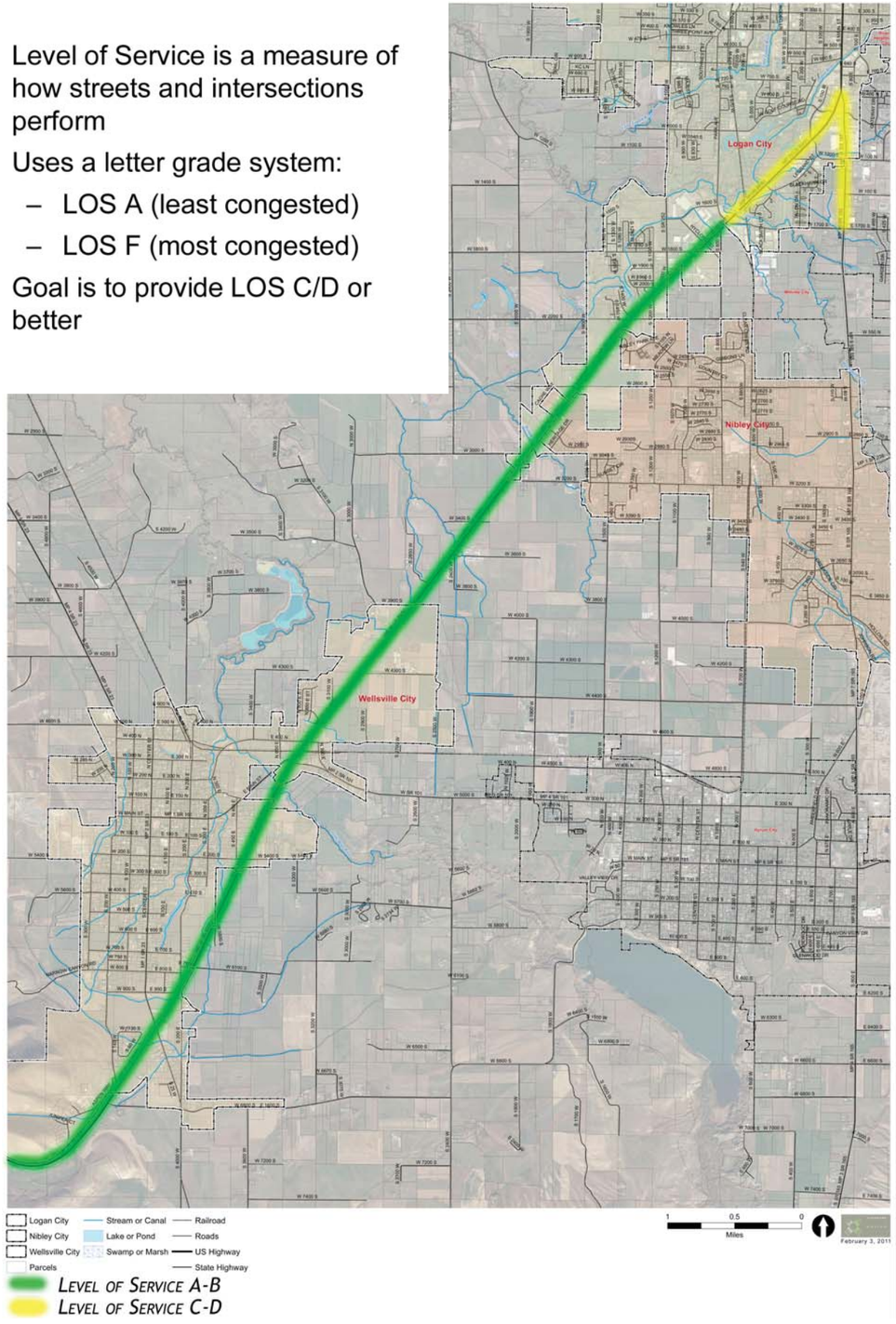


Figure 1-10 Existing Level of Service

the roadway. This results in surface runoff being collected and conveyed in roadside ditches that run along, and adjacent to, the roadway. The current configuration of the roadway includes acceleration/deceleration lanes at various intersection locations, including SR-252 (1000 West), 3200 South, and SR-101. These auxiliary lanes improve the safety of traffic entering and exiting the highway.

Topography

US-89/91 crosses several waterways including Blacksmith Fork River, Hyrum Slough, and Little Bear River. There is also a railroad crossing, just north of SR-101 that provides limited rail service into the area. There are relatively steep grades on the south portion of the corridor, near the mouth of Wellsville Canyon, which results in increased access challenges and speed conditions.

Accesses

The corridor has historically provided access to adjacent agricultural areas and residential properties. The majority of these front the existing roadway and have a single driveway access directly onto US-89/91. Figure 1-11 illustrates the large number of existing driveways and the higher density of accesses north of the highway's intersection with SR-101. The number of driveways coupled with the typical backing maneuver that is required to regain access, results in safety concerns that have prompted UDOT to pursue access limitations. In 1987 UDOT undertook a project to obtain access control along the corridor from SR-101 to the mouth of Wellsville Canyon. This effort resulted in the access locations shown on Figure 1-11 as well as limitations of future expansion beyond the sizing shown at that time.

Corridor Agreement

In 2006, the corridor municipalities and UDOT cooperatively formalized the *Corridor Agreement* that identified access and intersection control conditions planned for the immediate future. This agreement called for the installation of two new signals along the corridor at SR-252 (1000 West) in Logan and 3200 South in Nibley, when they each become warranted. The agreement further allowed for two other signals based upon implementation of the first two signals and the faithful pursuit of access control consistent with UDOT's Administrative Rule R930-6 and the Cache Access Management Policy. One of these potential signals is located at approximately 4400 South (where the Caine Dairy access exists). The other could be placed at the intersection of US-89/91 and either 2600 South (1600 West) or 2300 South.

The parties involved also agreed that no other intersections may be signalized. Instead, to alleviate future conflicts, any un-signalized intersection or access may be restricted to a right-in/right-out access only or a similar restriction.

As part of the *Corridor Agreement*, the three cities agreed to master

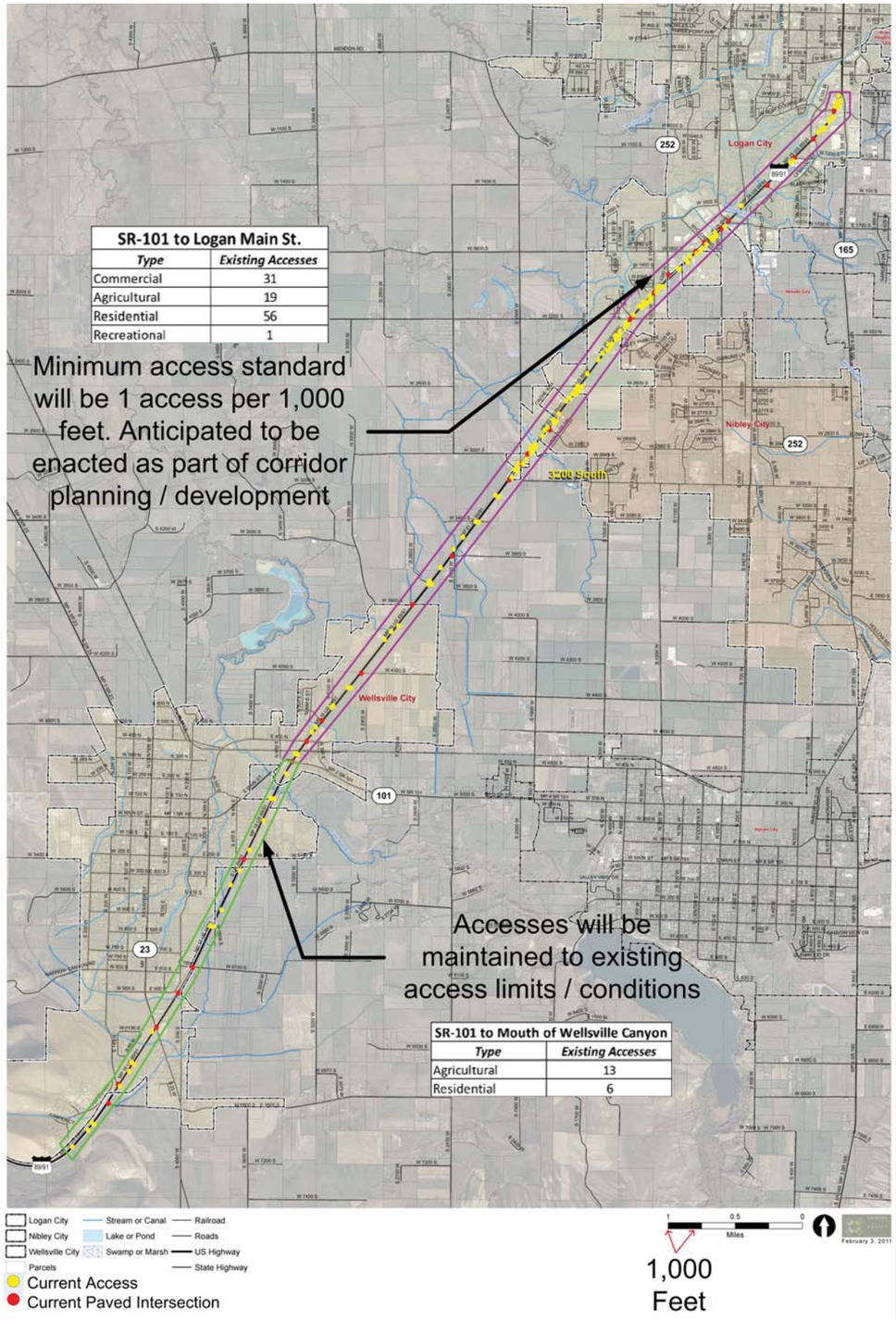


Figure 1-11 Current Access Conditions

plan and pursue roadway projects to fulfill the Preferred Options and Key Recommendations, as outlined in the related *South US-89/91 Transportation Corridor Study* (December 30, 2005.)

Demographics and Market

Demographic Projections

Cache Corridor demographic projections are based on several sources: recently released 2010 Census population figures at the block and place level; Utah Governor's Office of Planning and Budget (GOPB); and traffic area zone (TAZ) data prepared by the Cache Metropolitan Planning Organization (CMPO). Projections were made for two 25-year periods, beginning with Census 2010 data; therefore, for the years 2035 and 2060.

2010 Census Data

Recently released 2010 Census data was used to establish the baseline from which future growth projections were made for the County. Future projections were then based on the 2010 Census data, using growth rates from the GOPB and TAZ as described in following sections. Table 1-1 demonstrates how 2010 Census data has been used to update the 2010 GOPB projections. It also illustrates which communities, over the past few years, experienced growth that was greater than or lesser than what was anticipated (i.e., the GOPB projections for 2010). The two cities that had greater than anticipated growth were Nibley and Providence.

Table 1-1 - Comparison of GOPB Population Projections with 2010 Census Data

	2010 GOPB Estimate (2008 Baseline Projections)	2010 Census
Cache County	117,758	112,656
Hyde Park	3,992	3,833
Hyrum	8,342	7,609
Logan	52,776	48,174
Millville	2,027	1,829
Nibley	4,224	5,438
North Logan	8,432	8,269
Paradise	982	904
Providence	6,795	7,075
River Heights	1,705	1,734
Smithfield	9,808	9,495
Wellsville	3,575	3,432

Traffic Area Zone Data (TAZ)

The Cache Metropolitan Planning Organization (CMPO) makes long-term socioeconomic forecasts through 2040. The CMPO data is based on traffic area zones. Because TAZ boundaries do not match the municipal boundaries, the TAZ areas have been aggregated and/or subdivided as closely as possible to conform to the existing municipal boundaries.

While the forecasts prepared by CMPO are controlled at the County level by the GOPB's projections, CMPO has the authority and flexibility to adjust and allocate growth figures to different areas within the County. Because of CMPO's greater familiarity with Cache County, the CMPO growth rates from 2010 to 2040 were applied to the 2010 Census figures in order to calculate the population for the first 25-year period – to 2035, as shown in Table 1-2.

Table 1-2 - 2035 Population Projections

	Census 2010 Population	TAZ 2010 Population Estimate	TAZ 2010 – 2040 AAGR*	2035 Population Projections
Cache County	112,656			
Hyrum	7,609	7,880	2.30%	13,922
Logan	48,174	50,770	1.18%	**75,000
Mendon	1,282	2,060	1.85%	3,257
Millville	1,829	2,600	2.78%	5,161
Nibley	5,438	5,760	4.69%	18,115
Paradise	904	1,090	1.31%	1,509
Providence	7,075	6,330	1.50%	9,173
River Heights	1,734	2,020	0.60%	2,348
Wellsville	3,432	4,270	2.47%	7,852

**AAGR = Average Annual Growth Rate*

***Projection based on input from Logan City; not based on TAZ AAGR from 2010-2040*

GOPB Projections

GOPB makes projections for a 50-year period – through 2060. This is 20 years longer than the TAZ projections which extend through 2040. Therefore, while TAZ growth rates are applied to the entire first 25-year period (2010-2035), TAZ growth rates are only applied to the first five years of the second 25-year period. In other words, TAZ rates are applied to 2035-2040, and then GOPB growth rates are applied to the period from 2040 to 2060. These two rates are combined in Table 1-3 to make projections for the period from 2035-2060.

These projections are critical information, particularly for the establishment of realistic commercial acreage projections that follow.

Table 1-3 - 2060 Population Projections

	2010 Census Population	2010-2040 AAGR* (TAZ)	2035 Population Estimate	2040 Estimate**	GOPB AAGR 2040-2060	2060 Population Estimate
Cache County	112,656					
Hyrum	7,609	2.30%	13,922	15,600	1.94%	22,893
Logan	48,174	1.18%	75,000	80,000	1.95%	117,819
Mendon	1,282	1.85%	3,257	3,570	1.99%	5,298
Millville	1,829	2.78%	5,161	5,920	2.44%	9,596
Nibley	5,438	4.69%	18,115	22,780	2.20%	35,231
Paradise	904	1.31%	1,509	1,610	1.99%	2,389
Providence	7,075	1.50%	9,173	9,880	2.95%	17,670
River Heights	1,734	0.60%	2,348	2,420	0.33%	2,585
Wellsville	3,432	2.47%	7,852	8,870	1.62%	12,223

**AAGR = average annual growth rate*

***Based on TAZ projected growth rates from 2010-2040*

Public Involvement Process

As detailed in the Appendix and summarized below, the public involvement process was extensive.

Interviews

At the beginning of the planning process, interviews were conducted with key staff members and the leadership of Wellsville, Nibley, Logan, Cache County, Bear River Association of Governments, UDOT and others. The purpose was to clearly understand the current vision and ideas for the South Corridor in each community and key groups.

Steering Committee

Project steering committee meetings were held on four occasions, in order to provide direction and guidance to the planning team as the plan was developed. The committee was chaired by Wendell Morse, and included representatives of Cache County, Logan, Nibley and Wellsville, in addition to UDOT, the Chamber of Commerce, agricultural interests, Utah State University, the transportation industry, the State Legislature, the American West Heritage Center, nearby property owners, and other members of the public. Each representative signed a *Partnering Agreement* (see Appendix) at the beginning of the study, which defines the purpose of the committee, and provides a consensus vision statement. The steering committee approved the following Vision Statement, which described the intent of the plan:

Vision Statement

"The South Corridor is a critical element of Cache County as a whole. In addition to facilitating the flow of goods, services and people along Highway 89/91 and destinations to the north and south, the corridor is a place of future growth and economic development for the valley as a whole, and for Nibley, Wellsville and Logan in particular. The corridor is a place that is defined by its beautiful setting, including the unique visual characteristics of adjacent fields, settlements and distant mountains which recall the historic roots of the area. As one passes through the corridor, one begins to understand the unique "sense of place" and the future potential of the place and its surroundings.

The South Corridor should be a place that grows responsibly without compromising the values and cherished features of this special place. In order to strike a balance between corridor growth, development and preservation, a united approach and a cooperative spirit is required by all participating parties. The result will be a comprehensive vision that facilitates the smooth flow of traffic through the valley, creates a safe and efficient transportation corridor, minimizes traffic conflicts, maximizes positive development potentials, and aligns local community needs and desires with those of the county, region and natural conditions of the surrounding landscape."

Charettes and Workshops

At the outset of the project, three Public Scoping Meetings were held over two days at locations in Nibley, Wellsville and Cache County. The purpose of the meetings was to help define the key issues to be addressed in the plan. The meetings were well-attended, and the information provided was significant (see Appendix for details).

Once Alternative Planning Concepts were developed, a day-long Public Workshop was held at the American West Heritage Center. Approximately 50 people attended the workshop. The input and ideas that were received were helpful in the formation of the Preliminary Preferred Plan for the corridor.

South Corridor Development Plan Web Page

The Cache Valley South Corridor Development Plan Web Page was hosted by Landmark Design, providing project news and access to plan data and information throughout the planning process. To date, the project web page has received over 600 unique page views.

Identification of Key Planning Issues

The identification of important planning ideas, opportunities, and constraints emerged as part of the analysis and public scoping process. The following is a summary of the Key Planning Issues that were identified, with more details provided in the Appendix.

General

- Develop implementation strategies that encourage cooperation and coordinated implementation by Wellsville, Nibley, Logan and Cache County;
- Coordinate and utilize information and tools contained in past studies and plans;
- Develop tools and ideas that promote economic and land use equity;
- Strike a balance between individual property rights and community interests; and
- Be sensitive to existing residences/neighborhoods along the corridor.

Transportation

- Minimize transportation conflicts/maintain safety;
- Keep traffic flowing; and
- Incorporate alternative transportation types and modes, public transit, bicycle paths.

Land Use

- Focus development at town centers;
- Create commercial clusters;
- Allow traffic lights only at commercial clusters;
- Use buffering, clustering, and other tools to help locate and design development properly;
- Identify and consider only the most feasible land uses; and
- Preserve agricultural uses along the corridor.

Open Space/Visual

- Maintain open space/rural character/views;
- Protect opens space using appropriate tools (conservation easements, clustering, etc.); and
- Keep the corridor free from billboards and other signage.

Planning Process/Implementation

- Create and implement a plan that is fair to all of the communities involved in the planning process;
- Balance private property rights with public needs; and
- Incorporate all voices into the planning process.

2 South Corridor Development Plan

Preferred Land Use Plan

The Preferred Land Use Plan represents the consensus planning direction and comprehensive development vision for the corridor. The following are some of the key ideas of the plan, which is illustrated on the following page:

- UDOT should obtain sufficient right-of-way to implement the improvements envisioned in the plan, including all anticipated lanes, shoulders, safety zones and the multi-purpose trails/farm roads. As elements of the highway, it is assumed that UDOT will have the primary responsibility for implementing and maintaining these features.

- Development along the corridor should be limited to “clustered nodes” located at the following existing and proposed intersections:
  - SR23/Center Street (Wellsville)
  - Main Street/5000 South (Wellsville)
  - 4400 South (Wellsville)
  - 3200 South (Logan/Nibley)
  - 2600 South (Logan/Nibley)
  - 1000 West Gateway (Logan)

- Each node should be designed in a comprehensive manner, merging the development goals of each community with the integrated corridor vision. For example, 2600 South could be transformed into a commercial/big-box/mixed-use node, 3200 South into a commercial/mixed-use node, and 4400 South into an industrial/mixed-use node.

- Establishment of open space land use buffers along the length of the highway, providing adequate space between the highway and adjacent uses, thereby avoiding the need for sound walls, berms and other obtrusive noise and safety mitigation techniques.

- Establishment of a 500’ Open Space buffer on each side of the highway centerline between the clustered nodes. This will help maintain the unique viewsheds and connections with the surrounding landscape, while allowing traditional agricultural uses and practices to be maintained.

- Establishment of a 300’ Open Space buffer between the highway centerline and the clustered nodes. This will help maintain the open feel of the corridor while enhancing the sense of arrival and the establishment of each node as a distinct place and community gateway.

- Establishment of a continuous multi-use path along both sides of the highway within an expanded UDOT right-of-way. These facilities should link existing and proposed east-west pathways, facilitating the movement of pedestrians, bicycles and equestrian riders along the corridor. The movement of agricultural vehicles and farm equipment should also be facilitated as part of these routes. Since the layout of the pathways and other right-of-way features is conceptual, it is essential that the final design is carefully coordinated with UDOT and other project partners to ensure that essential safety and traffic requirements are met.

- Integration of new residential, commercial, mixed-use and industrial uses within the existing cities of Wellsville, Nibley and Logan to the greatest degree possible. This will reduce the need for and impact of new development along the corridor.

- Prohibition of future residential and other uses from locations within the open space buffers, thereby eliminating the need for sound walls, berms and other obtrusive buffering techniques, and helping to preserve the character and visual attributes of the surrounding landscape.

- Prohibition of strip development along the highway. This is essential for maintaining the unique characteristics of the corridor.

- Adjusting the amount of land earmarked for commercial and other land uses to match realistic market projections.

As the highway passes through the three municipalities, specific steps will need to occur to ensure the comprehensive vision is maintained. The following are some of the key actions to be implemented by each community:

Logan City

- The Gateway Corporate Campus Zone should be completed as envisioned, utilizing established design guidelines to create a strong and unified entrance experience into the City.

- No future residential uses should be allowed within 500 feet of the highway centerline in the southern extents of the city. This will alleviate the need for sound walls, berms and other sound mitigation technique while maintaining associated open space and visual characteristics.

Nibley City

- Encourage commercial and mixed-use development to take place within the established City core on the east side of the highway to the greatest degree possible.

- Develop the 2600 and 3200 South intersections as commercial/mixed-use nodes. Each node should be developed with a unique profile and gateway “message”. Ensure that the acreage designated for these nodes reflects project market needs.

- Nibley has adequate land available for residential growth far from the highway. Future residential uses should not be allowed within 500 feet of the highway centerline, thus alleviating the need for sound walls, berms and other sound mitigation techniques. This will also help maintain associated open space, sensitive lands and visual characteristics along the highway.

Wellsville City

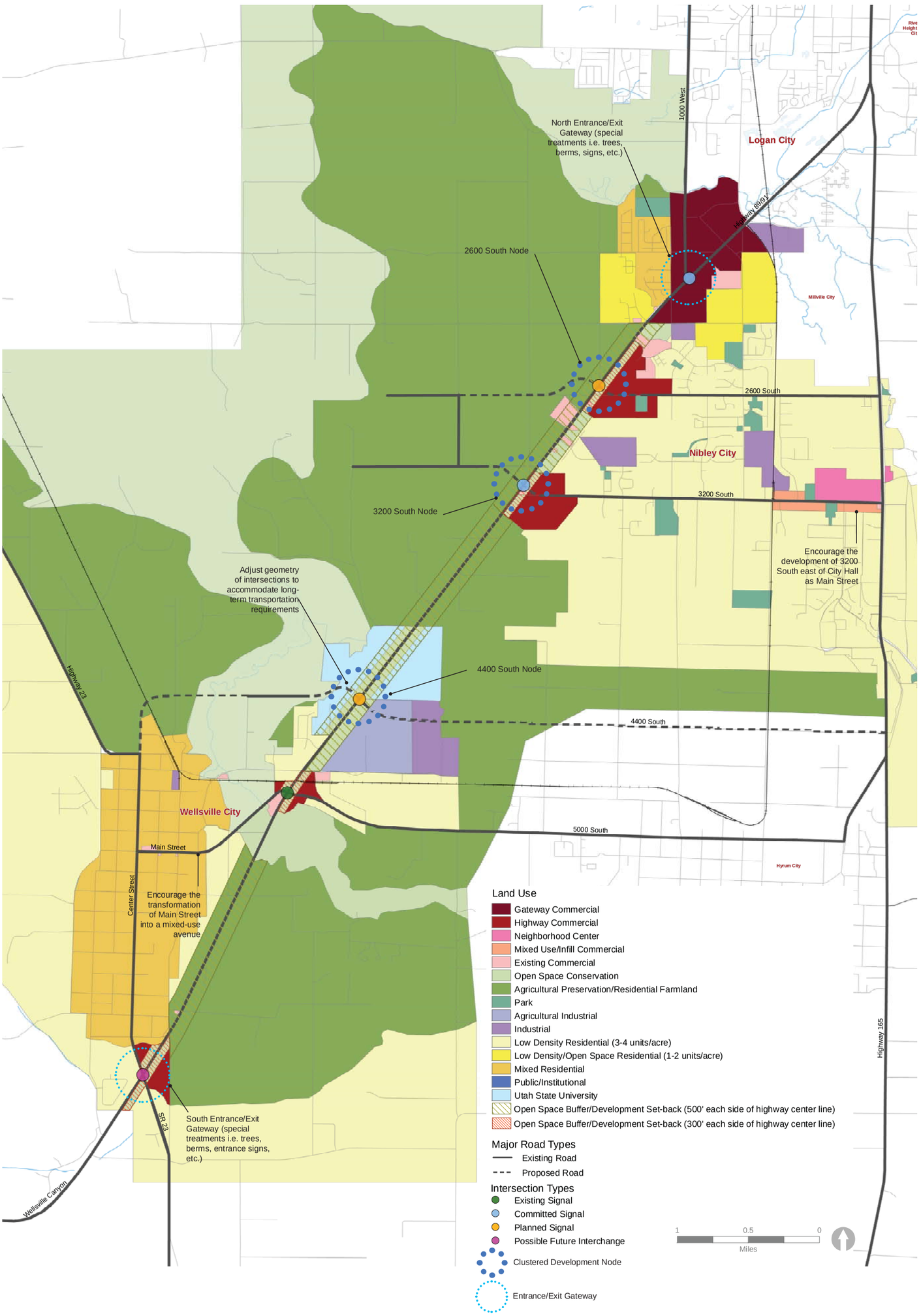
- The need for commercial land through 2060 is limited. Future commercial, industrial and mixed-use development should be centered at the large site currently proposed on the east side of the highway south at 4400 South. Agricultural industries should be encouraged closest to the highway at this location, with mixed commercial/industrial/residential uses located in the core of the site. The railroad just south of the node should be explored as a possible opportunity for servicing the site.

- Wellsville has adequate land far from the highway that is suitable for residential development. No future residential uses should be allowed within 500 feet of the highway centerline, thus alleviating the need for sound walls, berms and other sound mitigation techniques, and helping to maintain associated open space and visual characteristics.

- Consider the establishment of limited commercial enterprises within the existing City center and as part of the American West Heritage Center. The uses for each should reflect and support the nature and function of each place, including restaurants, small local businesses, agricultural supply stores, etc.

Figures 2-2 through 2-12 illustrate how the corridor may appear once the Preferred Land Use Plan has been implemented. It should be noted that the layout of the nodes, the multi-use trails, buffer areas and other plan elements illustrate only possible ideas, and that numerous other iterations are possible. It should also be noted that the design of the multi-use trail is conceptual; the final design of this element will require detailed design studies and close coordination with UDOT and other project partners to ensure that aesthetic, safety and traffic requirements are achieved.

Figure 2-1
Preferred Land Use Plan



Corridor Overview

As Illustrated in this aerial view, concentrating future development at key nodes and establishing reasonable 'no-build' buffers along the highway are critical actions for preserving the unique qualities of the South Corridor.

Figure 2-2 Corridor Overview, Looking North Above Wellsville Toward Nibley

Corridor From 4400 South

Figure 2-3 Aerial View Looking North from 4400 South Node. (Note the distinctive agricultural/industrial uses at the Wellsville node.)

Figure 2-4 Aerial View Overlooking 4400 South Node. (Note how uses become mixed-use and denser in the core of the development.

Figure 2-5 Elevated View of 4400 South, Looking East from Intersection.

4400 South Intersection

The corridor design concept encourages the establishment of roadside trails adjacent to and within the highway right-of-way. Additional design studies and coordination with UDOT and other project partners is necessary to ensure the final system is both safe and practical.

Figure 2-6 Motorist's View of 4400 South Intersection, Looking North.

3200 South Node

Each node should have a distinct “theme” or concept that ties it together and creates a discernible “place.” For example, the 3200 South Node might focus on smaller-scale commercial/mixed-use residential.

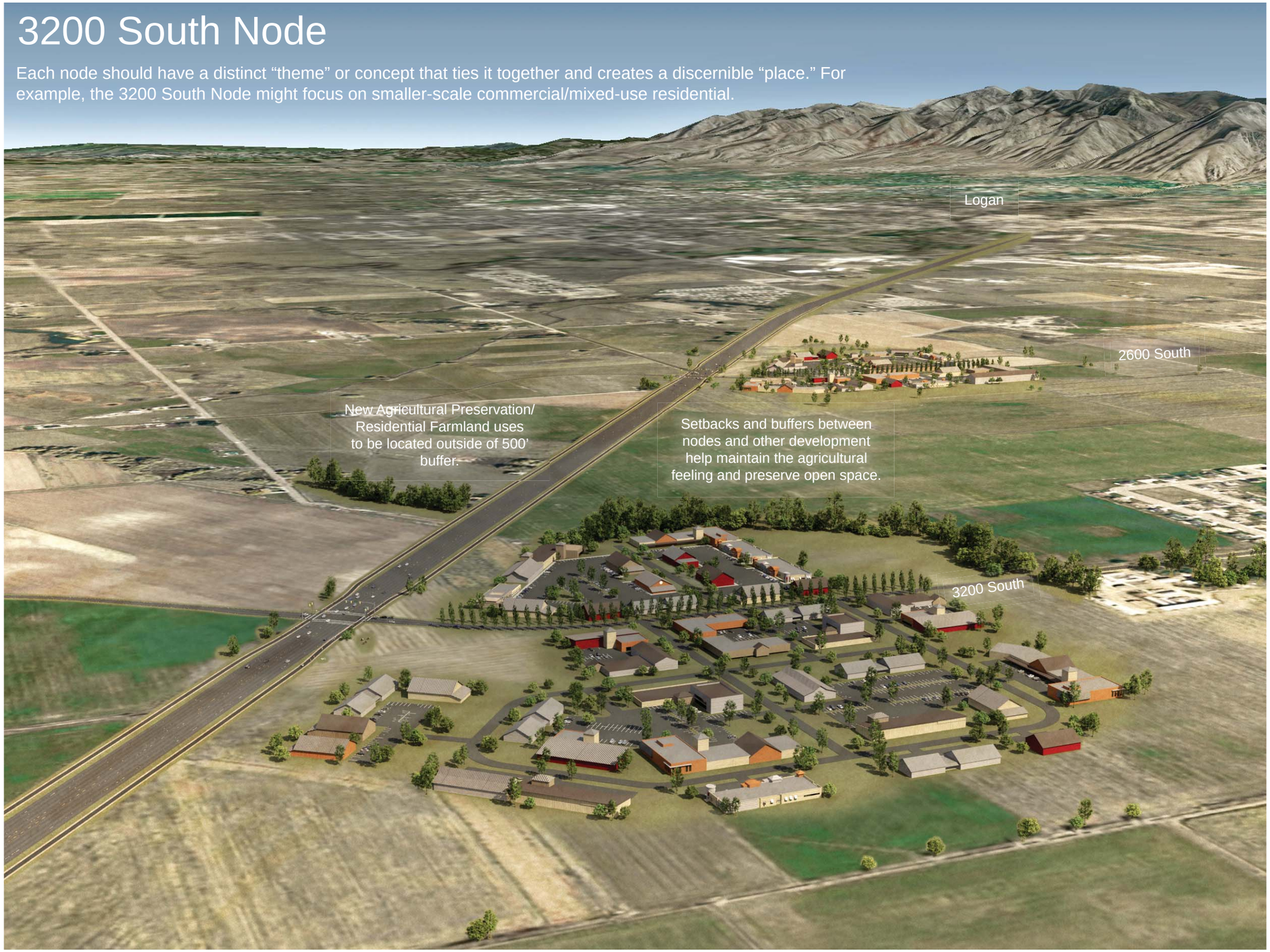


Figure 2-7 Aerial View Looking North from 3200 South Node Toward Logan.

3200 South and 2600 South Nodes

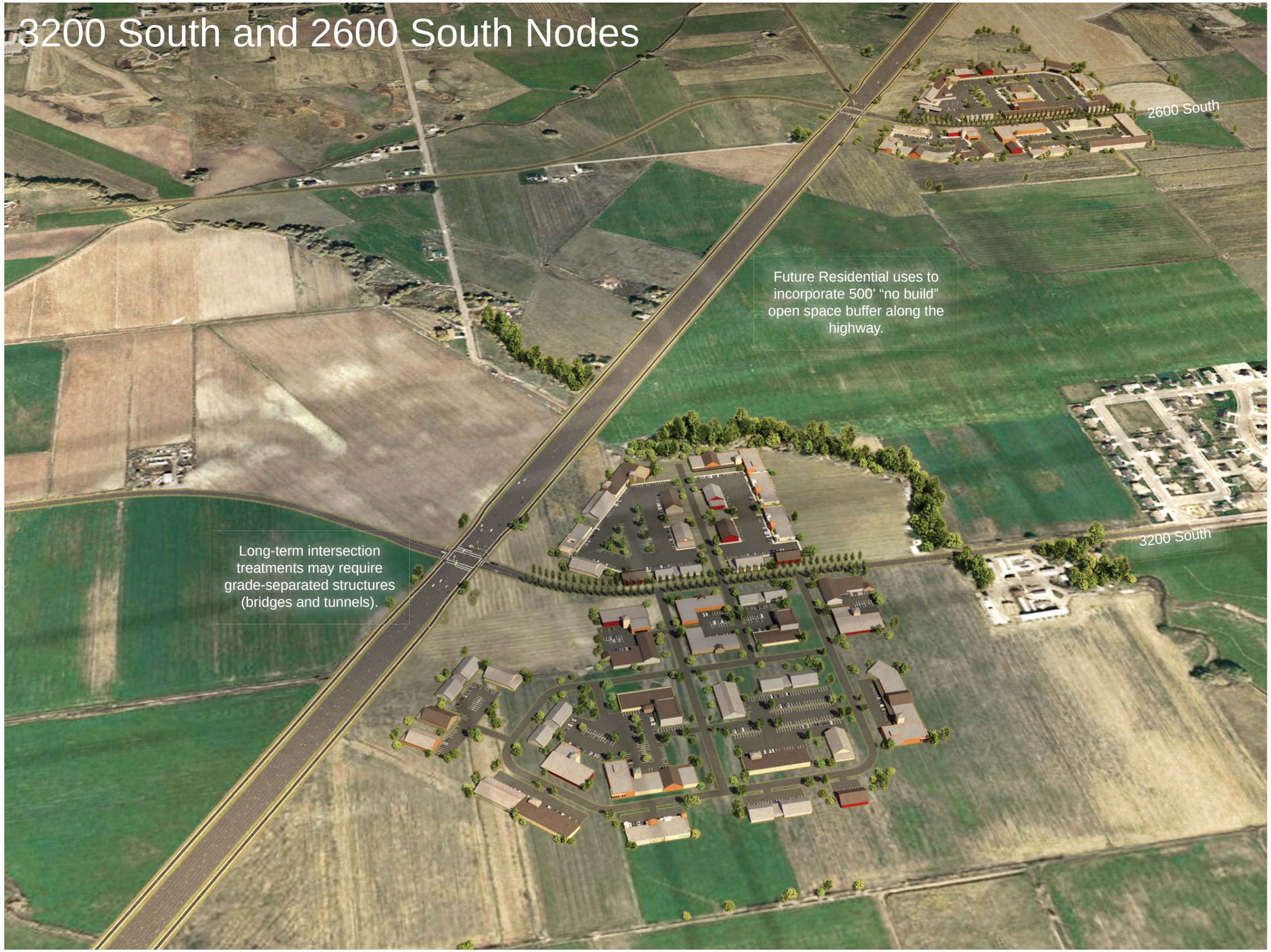


Figure 2-8 Aerial View Above the Nibley Nodes. (Note the consistent 300’ setback at the nodes.)

Figure 2-9 Elevated View of 3200 South Node, Looking East from Intersection. (Note how well-landscaped parking lots and vegetated buffers create an inviting place.)

Figure 2-10 Motorist's View of 3200 South Intersection, Looking North.

2600 South Node

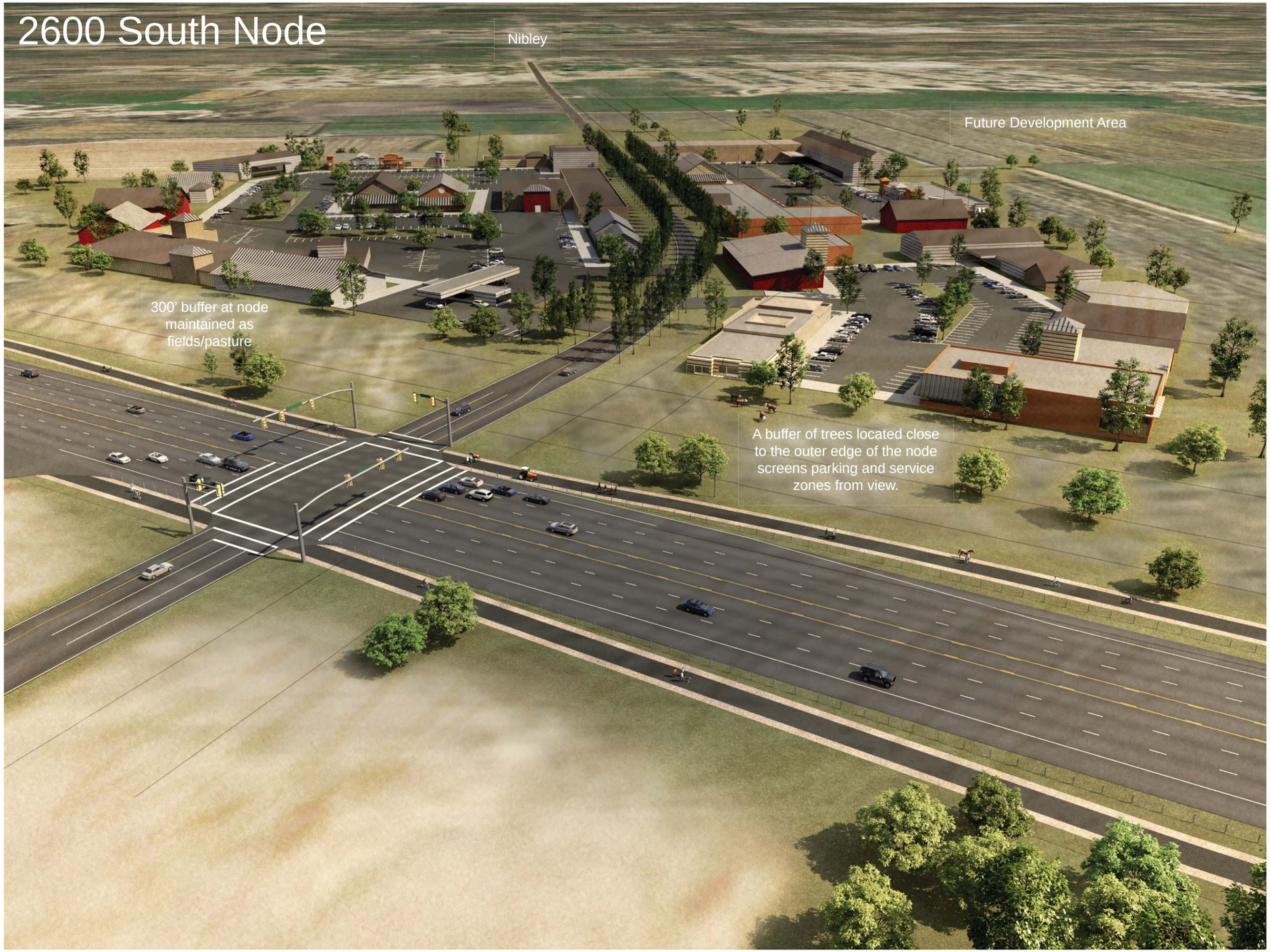


Figure 2-11 Elevated View of 2600 South Node Looking Northeast.

2600 South Intersection

Figure 2-12 Motorist’s View of 2600 South Intersection, Looking North.

Transportation and Traffic

Traffic

For planning purposes, transportation and traffic ideas have been broken into two separate time periods: short-term and long-term. The short-term is from the present to the year 2035. Long-term improvements address anticipated conditions from 2035 to 2060.

Short-Term

The traffic modeling and results from the *CMPO Regional Transportation Plan-2035* were utilized to form the basis for short-term evaluations. Table 2-1 illustrates existing and future US-89/91 traffic volumes by segment.

Table 2-1 - Existing and Future Traffic Volumes

Location	2010 Traffic Volume (Est.)	2035 CMPO Traffic Volume (Est.)
Wellsville Canyon to 4400 South	23,674	49,156
4400 South to SR-252	25,173	54,803
SR-252 to Logan Main St.	27,453	47,597

The short-term Level of Service (LOS) is shown on Figure 2-13, which anticipates that the CMPO planned long-range improvements will be implemented. This includes two additional lanes (one in each direction) to be added onto US-89/91 from 3200 South to the intersection with SR-165/Logan Main Street on the north as shown in Figure 2-14.

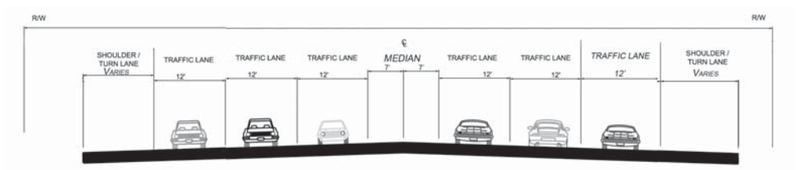


Figure 2-14 Future Roadway Cross Section

Types of Traffic

The growth trend in the valley toward more residential and commercial uses will increase the number of passenger vehicles and heavy trucks using the corridor. Additionally, the number of commuters is expected to increase, thereby increasing the need for more transit options. Agricultural uses are expected to remain the same, although higher traffic volumes on the corridor will lead farmers to seek alternate routes with slower speeds and which are less heavily traveled.

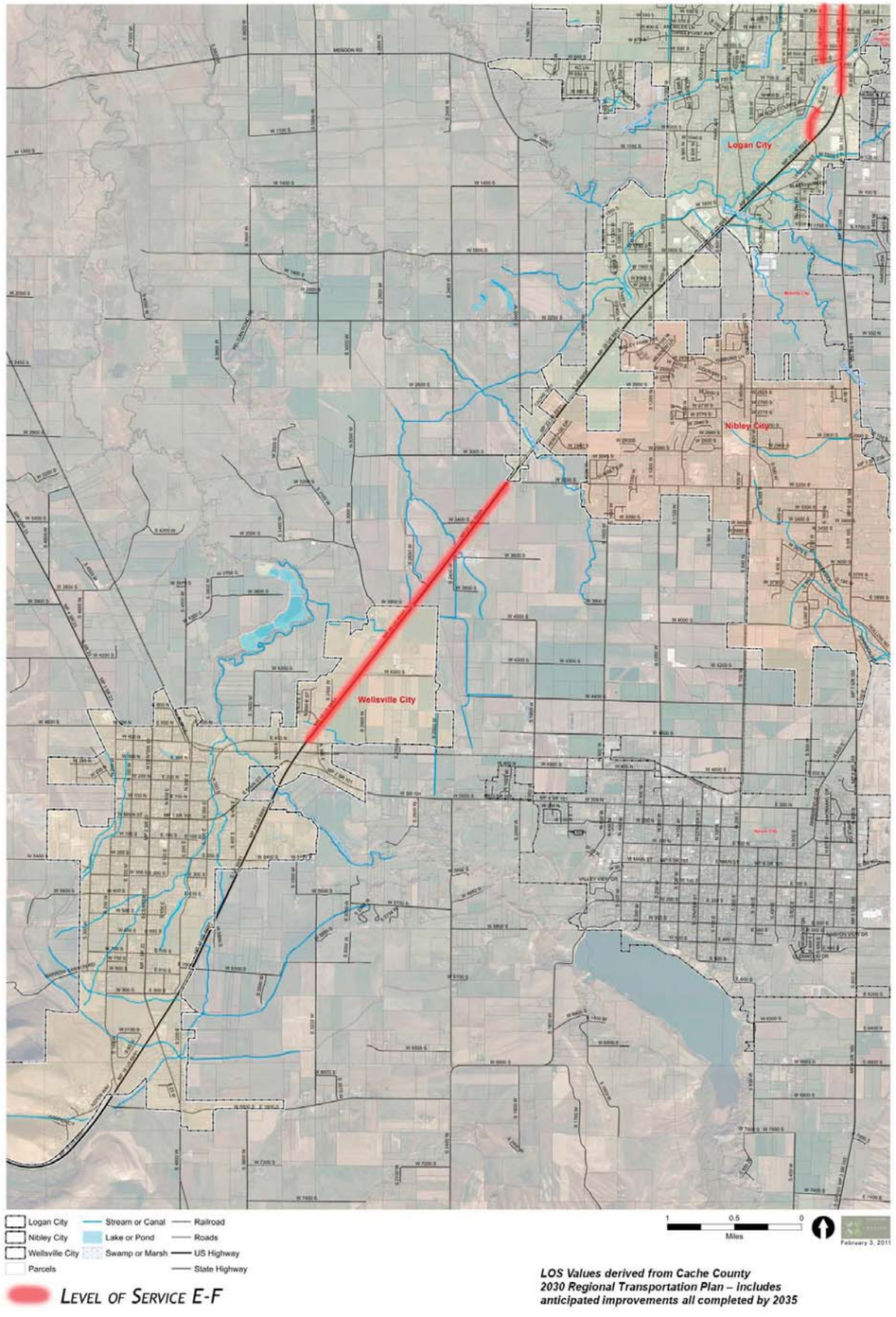


Figure 2-13 Short-Term Level of Service to 2035

Short-Term Implementation Strategies

Corridor and Intersection Improvement Strategies

The corridor will need to be widened from 3200 South to SR-165/Logan Main Street. The cross-section will match CMPO and UDOT plans for six lanes with a striped median. To address the anticipated short-term traffic demand, proposed implementation strategies are recommended as shown in Figure 2-15.

The intersection signal improvements as identified within the aforementioned *Corridor Agreement* are anticipated to be installed prior to the end of this period. In the interim, acceleration and deceleration lane improvements will need to be considered by UDOT and planned at the major intersections as shown on Figure 2-15. Integration of a future connection from the CMPO planned Western Corridor (dashed green line on Figure 2-15) at 3200 South will also be necessary.

Transit and Total Demand Management

Increased bus service and inter-connectivity to a possible UTA Frontrunner station in Brigham City will need to be implemented as demand requires. It is anticipated that expanded park-and-ride facilities and transit interconnections will need to be provided. This could include expansion of the existing park-and-ride lot near SR-23, or the development of additional facilities closer to the Logan/Nibley population centers.

Total Demand Management (TDM) is a set of practices that provide for enhanced community involvement in reducing traffic during peak periods. It is recommended that the CMPO take the lead in developing TDM workshops with large employers in the area to promote off-peak travel and shuttle services that will help reduce corridor congestion.

Pedestrian/Non-motorized and Agricultural Equipment

It is anticipated that non-motorized forms of transportation will continue to grow. To address this condition, Cache County and local communities have produced extensive pedestrian plans that provide for facilities throughout and surrounding the study area. Many of these facilities are connected to the corridor but do not adequately address highway crossings. The Preferred Plan therefore integrates continuous and parallel trails on each side of the corridor. These trails will encourage users to move to the planned traffic signal locations along the edge of the highway, where safe crossing movements can be made. Figures 2-2 through 2-12 and Figure 2-16 illustrate these planned features.

During the development of the Preferred Plan, it became apparent that addressing agricultural transportation needs is critical to reduce high speed/low speed conflicts. To address these, it is proposed that a farm road be developed as part of a multi-use trail in the buffer area adjacent to the corridor. This farm road would allow for travel between localized farm sections and relieve the current condition of farm equipment accessing the roadway for short travel lengths to nearby fields. The trail as illustrated is conceptual only, and will require further investigation and detailed design coordination with UDOT and others to ensure the final result is both safe and functional.

Access

As the corridor is widened to allow for additional lanes, there will be impacts to properties along the corridor. Table 2-2 illustrates the number of properties that will be impacted depending upon the setback from the future right-of-way line to existing structures.

Table 2-2 - Number of Impacted Properties Based on Setback Distances

Wellsville Canyon to SR-101			
Setback Distance	20 Feet	25 Feet	30 Feet
Residential	0	0	1
Commercial	0	0	0
SR-101 to 3200 S.			
Setback Distance	20 Feet	25 Feet	30 Feet
Residential	2	2	3
Commercial	0	1	2
3200 S. to Logan Main St.			
Setback Distance	20 Feet	25 Feet	30 Feet
Residential	14	18	24
Commercial	14	14	16

Limiting access will be critical to the long-term viability of the corridor. A facilitated approach to conform with UDOT's Access Management Program for the roadway as described in the *Corridor Agreement* discussion will be necessary and fundamental to the implementation of the Preferred Plan.

Environmental

Implementing the Preferred Plan will require addressing the full range of environmental impacts, including noise, visual impacts, water quality and other conditions. National Environmental Policy Act (NEPA) issues related to wetlands, prime farmlands, and cultural concerns will also need to be addressed. The results of these assessments may limit what can be constructed. It is anticipated that the proposed open space buffers will provide sufficient separation between the highway and future uses so noise attenuation features will not be necessary. The integration of nodal development and the maintenance of agricultural viewsheds takes into account the visual impacts of corridor development. Other elements to

Concept: 2300 South Intersection

Concept: 3200 South Nibley Intersection

Concept:US-89/91 looking south toward intersection with SR-23

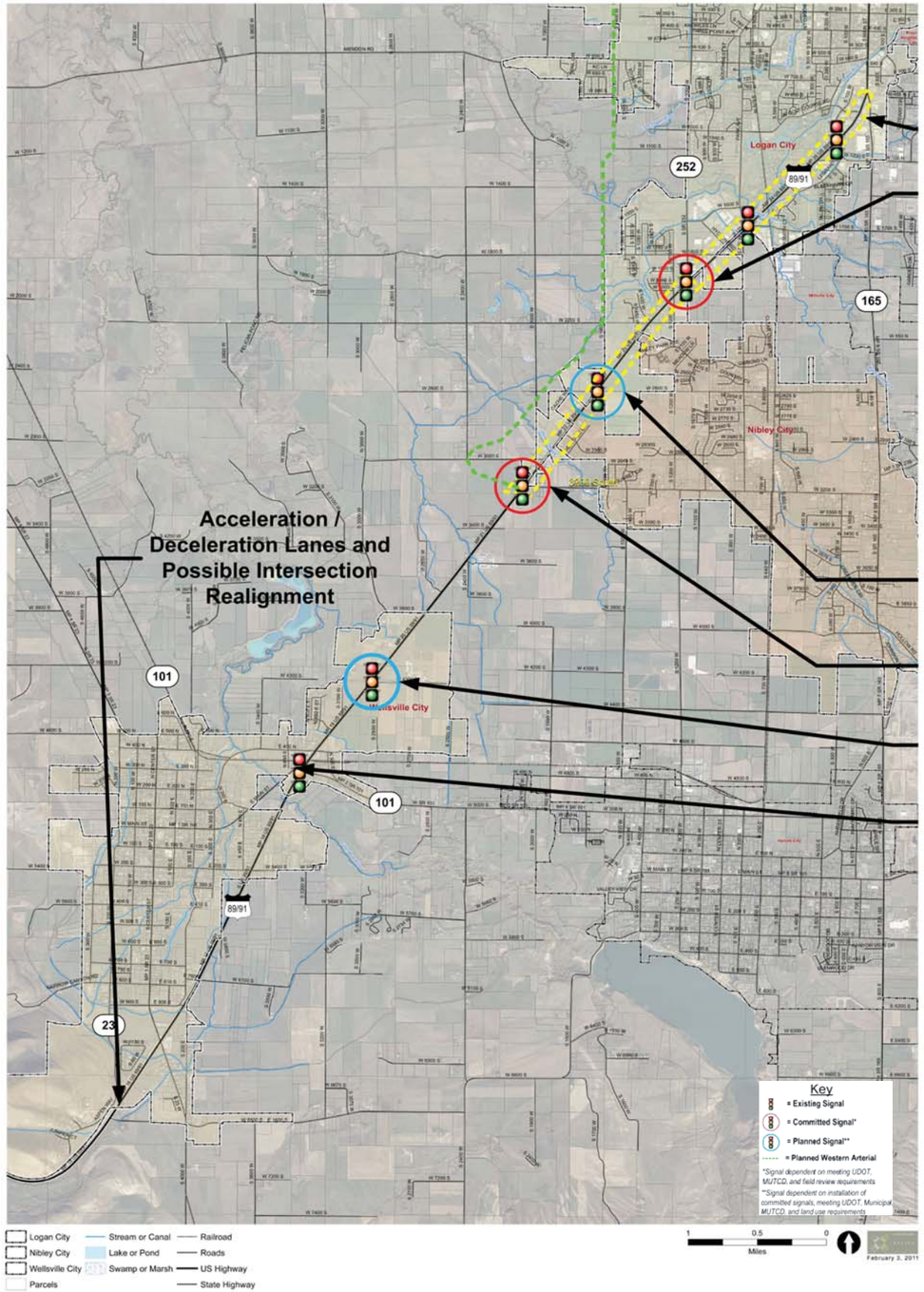


Figure 2-15 Short-Term Implementation Strategies

Alternate Transportation Options

- Express Bus Scheduling to Future Frontrunner Station in Brigham City
- Multi-use Trail Connectivity
- Expanded Park & Ride Facilities
- Expansion of Cache Valley Transit Bus Routes
- Total Demand Management (TDM)
  - Coordinate with large employers along corridor to adjust to “off-peak” shift times
  - Shuttle services

Access Control Issues

- Preserve/Obtain/Acquire Access Control Along Corridor
  - SR-101 North to “Y Intersection” - at a minimum 1 access every 1,000 feet (anticipated to be enacted as part of planned corridor development)
  - SR-101 South to Wellsville Canyon - follow existing UDOT limited access restrictions
- Pursue funding for corridor preservation and access reduction
- Address safety concerns/alignment issues, assess right-in/right-out options
- Implement proactive access management process - via agreements with existing owners.

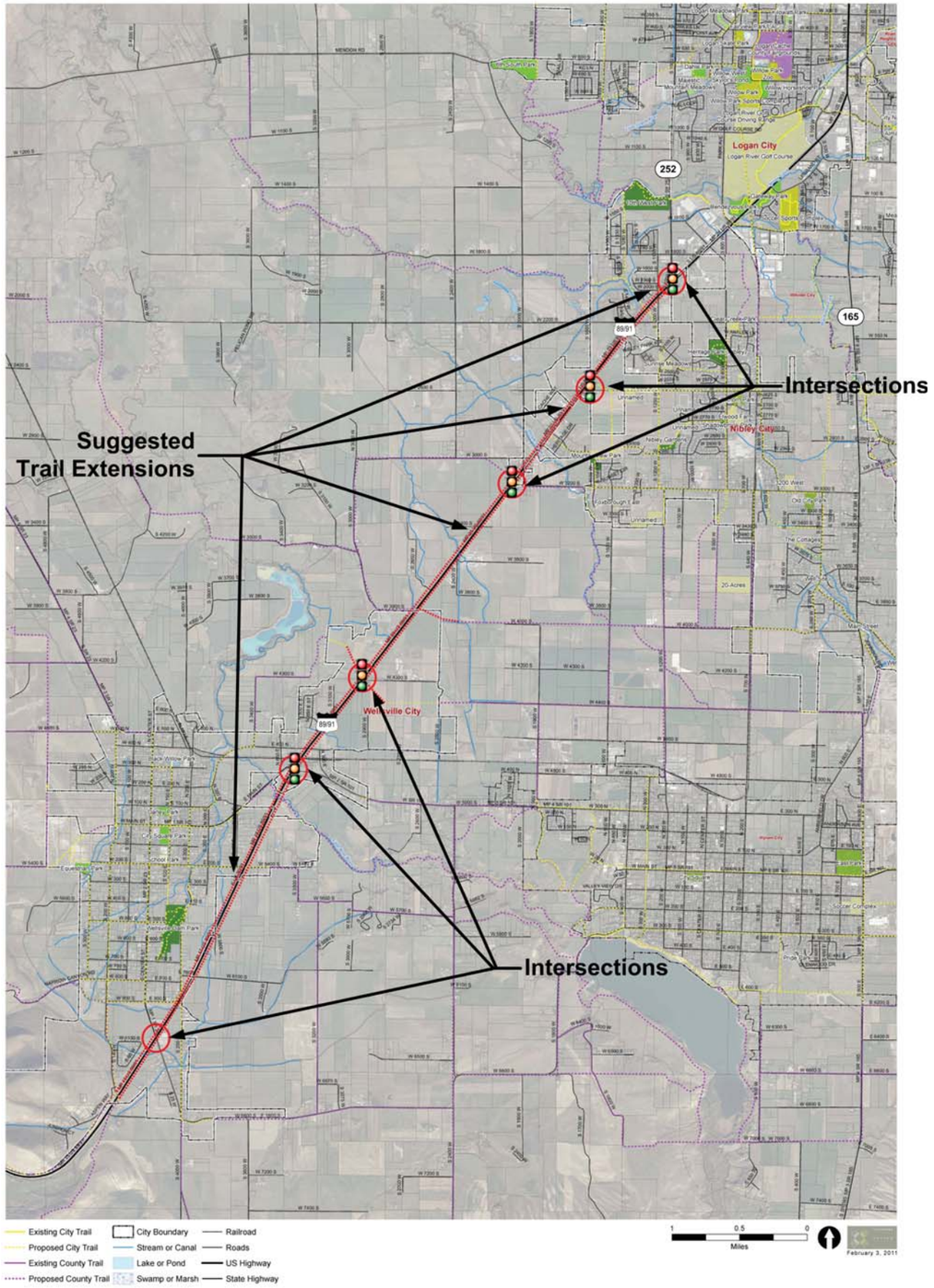
Pedestrian Planning

- Offer options for pedestrian control at signalized intersections
- Provide for continuity with County Trails/ Continuous Trail/ Bikeway
- Suggested trail extensions (shown in red) to signalized intersections to allow for safer pedestrian crossings

Looking south near 3200 South intersection

Current

Concept - note that the trail design is conceptual and will require detailed design input to meet the needs outlined in this plan.



Looking northeast near 1100 West intersection

Current

Concept

Figure 2-16 Pedestrian Plans

be considered include the need to integrate existing irrigation and water quality features into the cross-section.

Intersections

The most notable change to the intersections along the corridor during the short-term will be the installation of the signals at SR-252 (1000 West), 2600 South (or 2300 South), 3200 South, and 4400 South. Since the implemented *Corridor Agreement* prohibits any additional signals, once traffic increases, other innovative methods will need to be utilized to improve intersection operations. One such technique is the installation of acceleration and deceleration lanes for right turn movements. These will remove the slower (accelerating and decelerating) vehicles from the main flow of traffic.

Another Level of Service enhancement on US-89/91 is the coordination of signal phasing at each signal location. This will require the interconnection of signals via a fiber-optic network that will integrate with UDOT's traffic management network. UDOT is already developing these networks on other state routes in the valley including SR-30 and SR-252, which will afford interconnection opportunities for valley wide management.

As the end of the short-term period approaches, the need will arise to further enhance the operational capacity and effectiveness of the signalized intersections. There are several innovative variations of the standard signalized intersection that are designed to provide operational enhancements. Information on several of these intersection options is provided below. Specific selections will ultimately be determined by UDOT study/design to be implemented at the time of operational need.

Jughandle Intersection

Jughandles work because the turning queues are moved away from the main flow of traffic. This eliminates the need for left turn lanes in the median.

One drawback to Jughandle Intersections is that the additional arm requires more land than a traditional intersection. This means that right-of-way acquisition would be required along the corridor. Another concern is that drivers would need to be educated on how to use a Jughandle Intersection.

Continuous Flow Intersection (CFI)

CFI's have been implemented successfully in other locations in Utah to improve traffic flow. A CFI works because the left-turning vehicles are moved opposite of on-coming thru traffic.

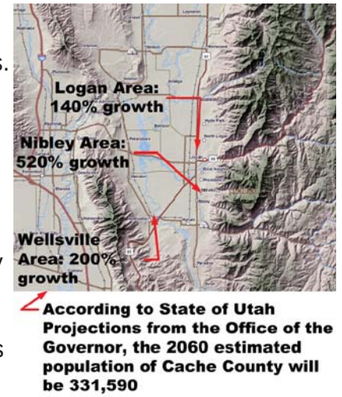
A drawbacks to CFI's is that they require more right-of-way than traditional intersections, which increases the impacts to adjacent property owners. Another concern of CFI's is that vehicle movement is unnatural, so additional signage will be required to mitigate driver confusion. Additional driver education may be required to ensure fluid use of a CFI.

More in-depth analysis would be required prior to any specific implementation of either of these or other intersection options.

Long-Term Implementation Strategies

Traffic

An analysis of planned growth of the valley out to the year 2060 provides a basis for projecting the amount of traffic on the US-89/91 corridor. The map to the right shows the anticipated growth within the study area.



The resulting 2060 estimated traffic volumes by US-89/91 segment are described in Table 2-3.

Table 2-3 - Anticipated Growth in Traffic Volumes

Location	2010 Traffic Volume (Est.)	2060 Traffic Volume (Est.)
Wellsville Canyon to 4400 South	23,674	74,800
4400 South to SR-252	25,173	74,800 – 85,700
SR-252 to Logan Main St.	27,453	85,700-88,500

Corridor

As shown in Figure 2-19, the increased traffic will necessitate the extension of the six lane cross-section from 3200 South to the mouth of Wellsville Canyon. To address the large traffic volumes that are anticipated, new and larger scale improvements are proposed. These improvements include interchange features at the locations shown on Figure 2-19.

Intersections/Interchanges

As the area and traffic volumes continue to grow, it will become essential to reduce the amount of stoppage along the corridor. This will require eliminating the intersections (signalized and un-signalized) and replacing them with grade separated crossings and interchanges. Visual impacts of potential interchanges were extensively discussed as part of the planning process and are shown in Figures 2-20 through 2-22. The photo-

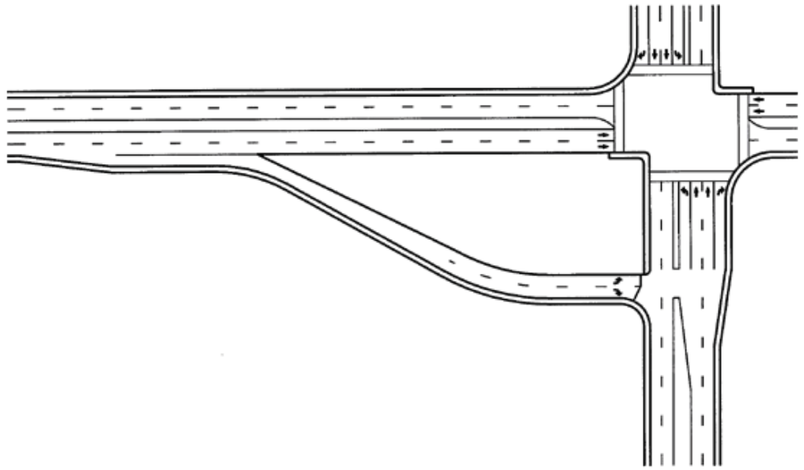
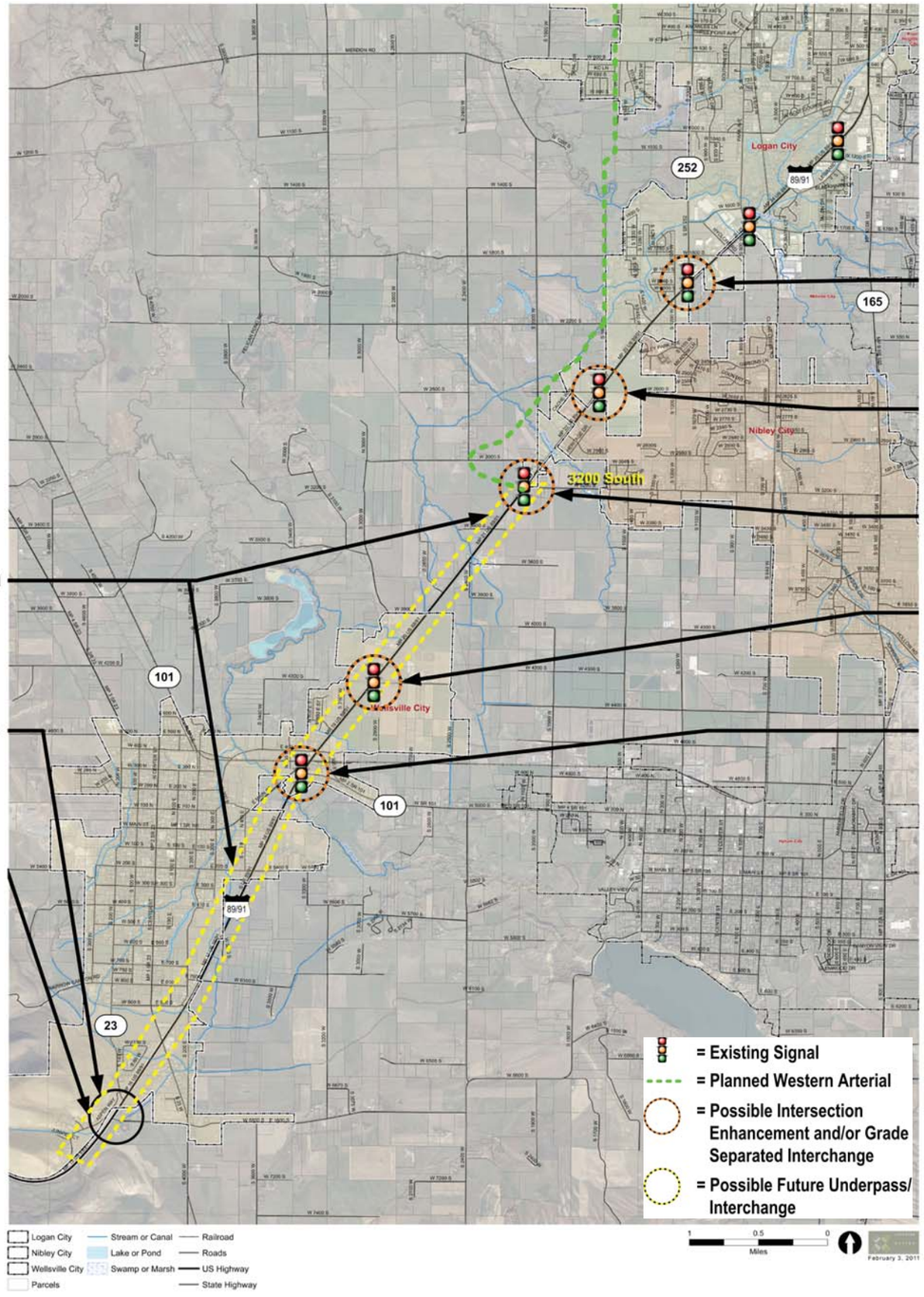


Figure 2-17 Jughandle Intersection

Figure 2-18 Continuous Flow Intersection

Alternate Transportation Options

- Bus Rapid Transit (BRT)/Intermodal Center Connectivity
- Multi-Use Trails (Underpasses & Overpasses)
- Total Demand Management (TDM)
  - Continue coordination & shuttle service options with large employers along the corridor



Access Control Issues

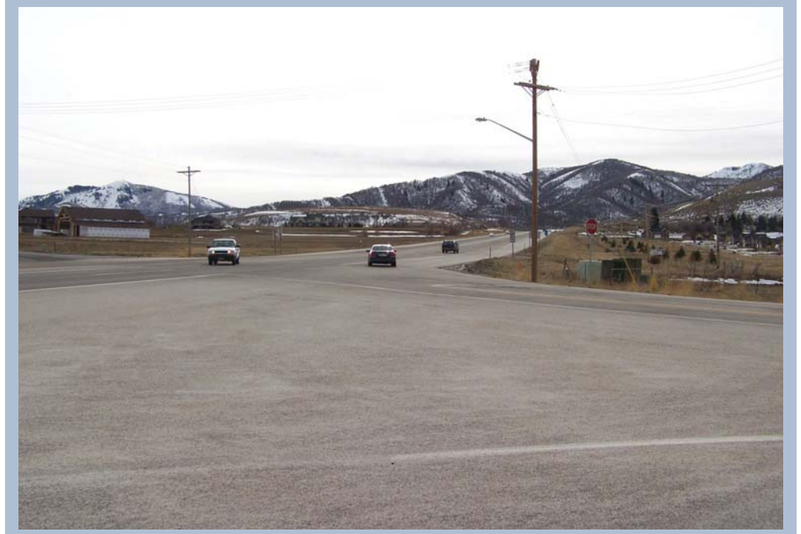
- Preserve Access Control Standards along corridor
- Continued facilitation of Property Agreements
- Implementation of funding for preservation/access reduction
- Expanded farm road access in applicable areas

Figure 2-19 Long-Term Implementation Strategies

Current

Concept

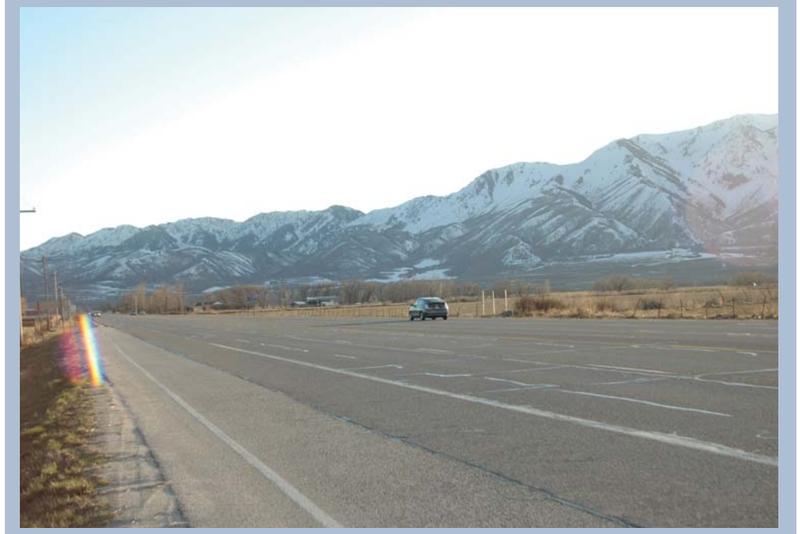
Figure 2-20 Potential Overpass Illustration (Long-Term Solution)



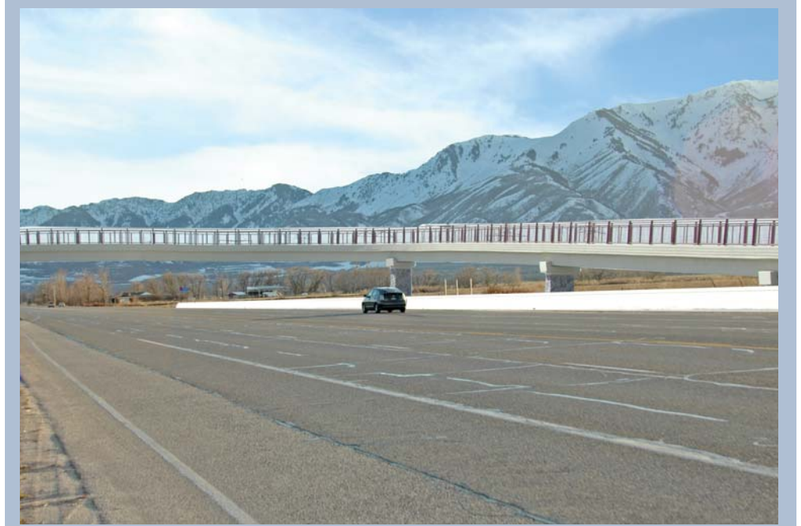
Current

Concept

Figure 2-21 Potential Underpass Illustration (Long-Term Solution)



Current



Concept

Figure 2-22 Potential Pedestrian Crossing Facility (Long-Term Solution)

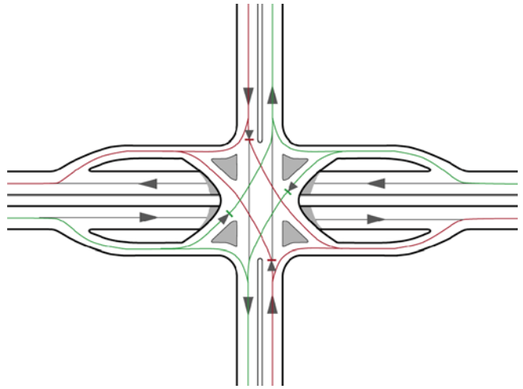


Figure 2-23 Single Point Rural Interchange (SPRI)

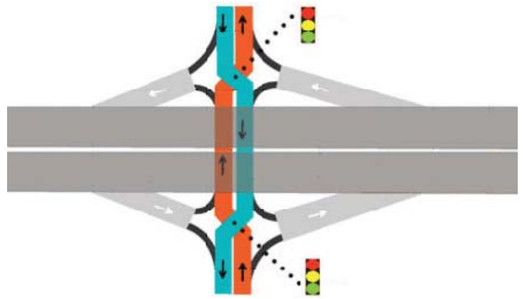


Figure 2-24 Diverging Diamond Interchange (DDI)

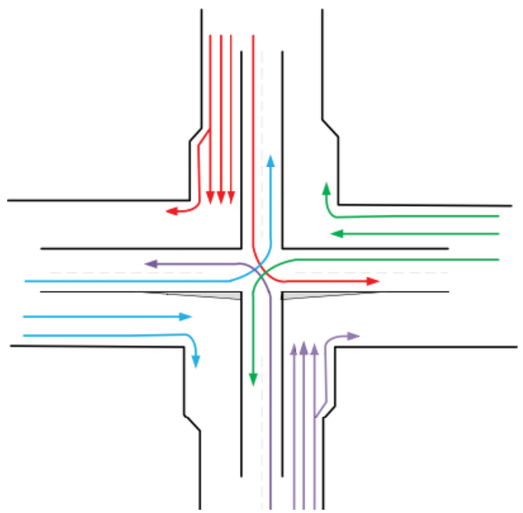


Figure 2-25 Left-Turn Flyover Structure (LFS)

renderings illustrate the potential long-term impacts.

Although several interchange options that may be considered, specific solutions applicable to each intersection are beyond the level of detail of this plan. It is anticipated that as a result of high groundwater in the study area, underpass options will be less feasible, making overpass features the more likely solution. The following are some of the long-term options that may be considered.

Single Point Rural Interchange

A Single Point Rural Interchange (SPRI) interchange and its counterpoint, the Single Point Urban Interchange (SPUI), are very common throughout the state. This is an advantage in that users will be accustomed to seeing and using them. See Figure 2-23.

When implementing a SPRI or any grade separated interchange there will be visual impacts as well as impacts to adjacent property owners in the form of right-of-way acquisition. When implemented properly, though, a SPRI has the potential to require minimal additional right-of-way. Another consideration with grade-separated crossings is the additional cost that will required for construction.

Diverging Diamond Interchange

Another interchange option that is still emerging in the United States is the Diverging Diamond Interchange (DDI). One was recently completed in American Fork, Utah. As illustrated in Figure 2-24, the main advantage to the DDI is that it eliminates all left turns across opposing traffic, thus reducing safety issues related to left turns.

One drawback to DDI's is that they are the most costly interchange option. This is partially because they require a substantial amount of right-of-way. Another concern is that since they are still an emerging idea, driver education would also need to be considered.

Left-turn Flyover Structure (LFS)

This option combines a grade separation and a signalized intersection, and is designed to eliminate the stopping of traffic for left-turn movements. See Figure 2-25. This is accomplished by placing all left-turn movements on a grade separated ramp in the center of the roadway. Left-turns would be given acceleration and deceleration lanes in the center of the roadways. Thru and right-turn traffic would be controlled by a signal. Right turns would also be given acceleration and deceleration lanes which would remove speed separated traffic from the main flow.

An advantage to the LFS is that thru and right signal phasing would be maximized since there is no left-turn phase. Installing a LFS would also reduce the need for a full interchange. The compact design of an LFS could require less right-of-way acquisition than a full interchange.

Even though a LFS is not a full interchange, many of the drawbacks of a full interchange are attached to its implementation. One of these is the visual impacts of having a grade separated structure. Also, structural costs would be similar to those of building a full interchange structure. Additionally, with costs and impacts similar to a full interchange, the flow is still impacted by the operational constraints of a traffic signal.

Transit

Transit is anticipated to become integral to the transportation solutions for the corridor. The potential Frontrunner station in Brigham City will also increase the need and desire for connectivity from Cache Valley to Brigham City. Bus Rapid Transit (BRT) will likely need to be implemented to meet this demand. BRT would yield many of the benefits of a traditional Light Rail system while requiring less capital to speed its implementation.

Pedestrian/Non-motorized

As traffic volumes along the corridor continue to increase, it will become necessary to separate pedestrian and other non-motorized forms of traffic from vehicular traffic. Multi-use trails incorporated with short-term improvements will be interconnected with planned roadway grade separations to enhance safety. Additionally, separate pedestrian crossing structures may be necessary depending upon site specific needs and operational constraints at planned interchanges. Photo-simulations of possible grade separated pedestrian crossings are illustrated in Figures 2-20 to 2-22. Typically, grade separations can either go over or under the roadway. However, due to the existing high groundwater table in the Cache Valley it appears more prudent to have all multi-use crossings pass over the corridor.

Access

As the roadway is widened in the southern part of the valley, there will be impacts to the adjacent properties that are similar to those described in the short-term discussion. Impacts will be less severe than those incurred in the short-term period because fewer properties are affected. Potential impacts are described in Table 2-4.

Table 2-4 Number of Impacted Properties Based on Setback Distances			
Canyon to SR-101			
Setback Distance	**20 Feet**	**25 Feet**	**30 Feet**
Residential	0	0	1
Commercial	0	0	0
SR-101 to 3200 S.			
Setback Distance	**20 Feet**	**25 Feet**	**30 Feet**
Residential	2	2	3
Commercial	0	1	2

Modifications to existing residential accesses will need to be considered in the long-term. Provisions for right-in and right-out access with acceleration and deceleration lanes may be appropriate. Since the ultimate goal is to minimize corridor access to improve safety, it may be necessary to offer alternate access to existing homes and farms along the corridor. One solution is the expansion of the short-term farm roads to connect the off-corridor roadway network.

Environmental

Environmental considerations for the long-term planning are the same as those for the short-term. Noise, visual and water quality impacts have been considered and incorporated into the Preferred Plan.

Public Infrastructure

All existing utilities are addressing current demands. As the cities expand, the current facilities will need to be upgraded and/or expanded. Historically, utilities have been neglected and then are requested after they are needed. It is suggested that the CMPO and all municipalities coordinate with one another and other utility providers to install or at least have plans that are consistent with the master plans for all growth in this area. Municipalities will need to be proactive in planning for adequate rights-of-way for future construction and coordinate with UDOT on possible placement within the corridor area.

Economics and Market Conditions

Sustainable Commercial Development Along the Corridor

Given growth projections for Cache Valley, one of the key questions to consider is how much commercial development will be sustainable along the corridor? A two-fold approach was taken in order to provide some answers:

1. Levels of current commercial development were assessed in other counties – Salt Lake, Weber, Utah and Davis in order to project sustainable development in Cache County; and

2. A “capture rate” was used to project the amount of the sustainable development that would likely take place along the Corridor.

As illustrated in Table 2-5, current levels of commercial development were evaluated for Salt Lake, Davis, Weber and Utah counties. Commercial development includes retail, office and industrial/business park development. Broker data provided by Commerce Real Estate Solutions is tracked regularly and was easily available for these four counties.

Table 2-5 Commercial Development in Comparative Counties							
	Salt Lake County	**Weber County**	**Davis County**	**Utah County**	**Average***	**Weighted Average***	**Adjusted Average***
Population 2010	1,029,655	231,236	306,479	516,564			
Office SF*	31,282,745	2,551,063	2,553,930	9,294,059			
Industrial SF*	111,840,216	32,211,920	26,106,135	30,071,498			
Retail SF*	37,352,228	5,904,675	7,449,808	10,391,821			
Office SF per capita	30	11	8	18	17	22	12
Industrial SF per capita	109	139	85	58	98	96	72
Retail SF per capita	36	26	24	20	27	29	23
TOTAL commercial sf per capita	175	176	118	96	141	147	107

*Average data represents the average square feet per capita weighted equally by county; weighted average represents the average square feet weighted according to the population of each county; adjusted average does not include data from Salt Lake County for office, industrial and retail development and does not include data from Weber County for industrial development. This adjustment was made because of Salt Lake County’s regional role along the Wasatch Front and large population size which is not realistic for Cache County, even 50 years in the future. Weber County has an extraordinarily high level of industrial development and so was deleted from the industrial analysis.

The projections are based on the “Adjusted Average” which does not include data from Salt Lake County and deletes the Weber County data in the industrial category. The adjusted average data is considered to be relevant to Cache County, since population is projected to reach approximately 332,000 persons by 2060[1]. The 2010 population in Davis County is 323,087; Utah County is 560,511; and Weber County is 232,696. Cache County’s population projections for 2060 are similar to the current population range of the three counties used in the analysis.

The amount of supportable commercial acreage in Cache County in 2035 and 2060 was projected using the “adjusted average” from the

1 Governor’s Office of Planning and Budget, http://www.governor.state.ut.us/dea/popprojections.html

comparable counties. In order to convert building square foot data into acreages, the following floor area ratios (FAR) were used: retail (0.15); office (0.25); and industrial (0.18). Because this plan focuses on the "corridor," the analysis groups communities into three main clusters along the corridor:

1. Wellsville Area – this is the southern portion of the Valley and includes Hyrum, Paradise, Wellsville and a portion of Mendon. Because of travel patterns to Mendon, one-half of Mendon's growth was included in the Wellsville area analysis, and the other half was included in the Logan area projections.

2. Nibley Area – this area represents the midsection and part of the northern the section of the corridor and includes Nibley and Millville.

3. Logan Area – this is the northernmost portion of the corridor study area and includes Logan, a portion of Mendon, Providence and River Heights.

As illustrated in Table 2-6, the analysis shows that most communities have more land zoned for commercial uses than is currently supportable, and more than will be supportable in 25 years and in 50 years, based on population growth projections for the area. It should be noted that industrial projections should be considered for the regional area, and not community by community, as illustrated in Table 2-7. Business park and industrial development will not be spread evenly between communities (based on population), but rather will cluster in communities that have access to transportation infrastructure (such as major roads, rail and airports) and that desire, and allow for, this type of development in their communities.

Only a portion of future commercial development will take place along the corridor. In order to estimate the amount of future supportable acreage along the corridor, capture rates for corridor development were assumed for each community. These capture rates represent the percentage of total sustainable commercial development for each community that is considered likely to occur along the corridor. While some of these communities, such as Providence, River Heights, Hyrum, etc., are not located along the corridor, their residents travel the corridor and it is assumed that a certain percentage of the buying power for these communities could be captured along the corridor.

Table 2-6 Projections of Supportable Retail/Office Square Footage and Currently Zoned Commercial Acreage

	Zoned Acres (2011)	Retail Office Supportable 2035	Retail Office Supportable 2060
WELLSVILLE AREA			
Hyrum	135	64	106
Paradise	41	7	11
Mendon (1/2)	33	8	12
Wellsville	457	36	56
TOTAL	666	115	186
NIBLEY AREA			
Millville	171	24	44
Nibley	73	84	163
TOTAL	244	108	207
LOGAN AREA			
Logan	1,128	347	545
Mendon (1/2)	33	8	12
Providence	149	42	82
River Heights	22	11	12
TOTAL	1,331	407	650

Table 2-7 Projections of Supportable Industrial Square Footage and Currently Zoned Industrial Acreage

	Zoned Acres (2011)	Industrial Supportable 2035	Industrial Supportable 2060
WELLSVILLE AREA			
Hyrum	160	128	210
Paradise	0	14	22
Mendon (1/2)	0	15	24
Wellsville	41	72	112
TOTAL	201	229	369
NIBLEY AREA			
Millville	0	47	88
Nibley	122	166	324
TOTAL	122	214	412
LOGAN AREA			
Logan	1,588	689	1,082
Mendon (1/2)	0	15	24
Providence	0	84	162
River Heights	0	22	24
TOTAL	1,588	809	1,292

CORRIDOR COMMERCIAL CLUSTERS

The analysis of commercial development along the corridor considers clusters in the Wellsville, Nibley and Logan areas. Each of these areas is discussed below, and illustrated in Table 2-8.

Wellsville Area

By 2060, the Wellsville area should be able to support nearly 100 acres of retail and office space, and approximately 200 acres of industrial/business park development. Of concern is the fact that Wellsville City currently has 457 acres zoned for retail/office uses – between four and five times the amount projected to be supportable in the next fifty years. Further, Wellsville's town center is located some distance from the highway. Without good access and visibility, the town center will not capture retail sales. As a result, Wellsville's retail development will need to take place on the corridor.

The zoning for industrial development is more closely related to the sustainability projections. Wellsville has some competitive advantages in Cache Valley that may allow it to exceed its industrial/business park projections, and the City may want to consider changing some of its retail/office acreage to industrial/business park uses for the following reasons:

1. Wellsville is the first development upon entering the Valley and provides closer access to I-15 and the Wasatch Front than other parts of Cache Valley.

2. Union Pacific has a rail line that runs through Wellsville that may provide opportunities to attract an added range of industrial development types.

3. Wellsville City has accumulated significant water rights that will also allow it to attract a wider range of development types than are possible in communities with more limited water availability.

Therefore, some of the designated retail/office development currently earmarked for commercial uses on the east side of the highway could realistically be changed to encourage industrial and business park uses. Industrial and business park development should be a top priority of Wellsville in order to establish a stronger property tax base.

Nibley/Logan Areas

Nibley is expected to see rapid growth over the next 50 years, increasing from a population of nearly 5,500 today to over 35,000 by the year 2060 – an average annual growth rate of 3.8 percent over the time period, and more than six times the population in the area today. This population growth will create increased demand for goods and services. It is important since Nibley is largely a bedroom community today, to expand the tax base to include retail sales and establish a more-balanced tax base that will be economically sustainable in the future.

Table 2-8 Projected Sustainable Corridor Commercial Development

		ADJUSTED 2035		ADJUSTED 2060	
	Capture Rates	Retail/Office Supportable	Industrial	Retail/Office Supportable	Industrial
WELLSVILLE AREA					
Hyrum	20%	13	26	21	42
Paradise	50%	3	7	6	11
Mendon (1/2)	30%	2	4	4	7
Wellsville	100%	36	72	56	112
TOTAL		55	109	87	173
NIBLEY AREA					
Millville	50%	12	24	22	44
Nibley	100%	84	166	163	324
TOTAL		96	190	185	368
LOGAN AREA					
Logan	100%	347	689	545	1,082
Mendon (1/2)	30%	2	4	4	7
Providence	20%	8	17	16	32
River Heights	20%	2	4	2	5
TOTAL		360	714	567	1,126

Nibley currently has 73 acres zoned for retail/office uses, but is projected to be able to support 163 acres in 50 years. Therefore, Nibley will need to identify more land for future commercial development – either in its existing boundaries or through future annexations.

In contrast, Logan, for which strong growth is also projected (from a population of over 48,000 today to nearly 118,000 by 2060), has zoned nearly 1,100 acres as retail/office, but will only be able to support about half of that amount by 2060. Logan may need to re-evaluate its current zoning to determine if there are some retail/office areas yet to be developed that would be better served with other uses.

Nibley and Logan should work together closely to assess opportunities for commercial development, taking the following factors into account:

- Available land at key intersections (with good visibility and accessibility from the highway) in Nibley and the south part of Logan;
- The potential to identify two commercial clusters in the Nibley/Logan area, and the relative "identity" of each area – such as big box/power center, higher-density mixed use, restaurant/entertainment center, lifestyle center, etc.
- Potential revenue sharing arrangements.

General Guidelines for Retail Development

The following guidelines for retail development reflect population density within a specific geographic radius, as well as the approximate drive time to reach the retail outlets. See Table 2-9. This analsysis based on the corridor development will be geared to "community" and "neighborhood" scale development.

Table 2-9 Primary Trade Area Guidelines

Type of Center	Minimum Population Support Required	Radius	Driving Time
Super Regional	300,000 or more	12 miles	30 minutes
Regional	150,000 or more	8 miles	20 minutes
Community	40,000 - 150,000	3-5 miles	10-20 minutes
Neighborhood	3,000 - 40,000	1.5 miles	5-10 minutes

Source: Urban Land Institute, Shopping Center Development Handbook, 3rd ed.

Table 2-10 summarizes research conducted by the Urban Land Institute (ULI) regarding the characteristics of shopping centers. According to the findings, community and neighborhood centers ranging between three and 30 acres in size can be expected within the corridor. These uses could be sited alone or grouped near business parks, thus increasing the overall commercial development in the area. See Appendix for additional details.

Table 2-10 Characteristics of Shopping Centers

Type of Center	Leading Tenant	Typical GLA (sf)	General Range in GLA	Site Area (acres)
Super Regional	Three or more full-line department stores	900,000	500,000 - 2,000,000	15-100 or more
Regional	One or two full-line department stores	450,000	300,000 - 900,000	10-60
Community	Varies based on type: Power; Town; Lifestyle; Outlet; Off-Price Centers	150,000	100,000 - 450,000	10-30
Neighborhood	Supermarket	50,000	30,000 - 100,000	3-10

Source: Urban Land Institute, Shopping Center Development Handbook, 3rd ed.

3 Implementation Tools

Land Use

Land Use Guidelines

Now that the corridor vision has been established, it is essential that it is adopted and codified by Wellsville, Nibley, Logan and Cache County as part of existing ordinances and laws. The easiest way for this to be achieved is for each entity to adopt the Cache Valley South Corridor Development Plan, either as a separate document or as an addendum to the General Plan.

Once the Cache Valley South Corridor Development Plan has been adopted, the policies and ordinances of each jurisdiction should be revised to ensure that future development is aligned with the intent of the plan. In particular, the Zoning Ordinance and Zoning Map of each jurisdiction should be reviewed and adjusted to ensure it is aligned with this plan.

Once the plans, ordinances and policies have been adjusted, it is essential that the three communities, Cache County, UDOT, USU and others with interest in the corridor maintain the positive dialogue that has been established, and continue to review and discuss the corridor as a unified group. It is therefore recommended that a *Cache Valley South Corridor Review Committee* is established, with the specific purpose of reviewing and providing input and advice on all development within the corridor. The committee should be mandated to ensure that the vision contained in this plan is maintained and implemented. It will ultimately be up to the various entities and interest groups to establish the details, but it is essential that the committee include representatives of the corridor cities (Wellsville, Nibley and Logan), Cache County, UDOT, the American West Heritage Center, Utah State University, nearby property owners, as well as others deemed appropriate.

Landscape and Streetscape Guidelines

The Landscape and Streetscape Guidelines that follow are intended to help maintain the strong and positive rural character of the corridor landscape. The guidelines should serve as references and ideas for Wellsville, Nibley, Logan, Cache County and others as they modify their plans, ordinances and official documents.

As has been noted, the landscape is the main element that establishes the special “sense of place” and rural character of South Corridor. The nearby fields and pastures, small streams, rolling hills, simple fences, windbreaks and clusters of trees and vegetation are essential elements of this extraordinary place.

The intent of these guidelines is to extend vernacular landscape traditions and forms into the new and evolving landscape. In general, existing open spaces and natural areas earmarked to remain should be left alone to the greatest degree possible. In contrast, future roads, development areas and the clustered nodes should be developed utilizing the following guidelines. The width and treatments of adjacent roadways, the number of traffic lanes, on-street parking treatments, the location of street trees, and the scale and detail of buffer zone landscaping all have significant visual impacts that will shape impressions of the area.

US-89/91 - Landscape and Streetscape Treatments

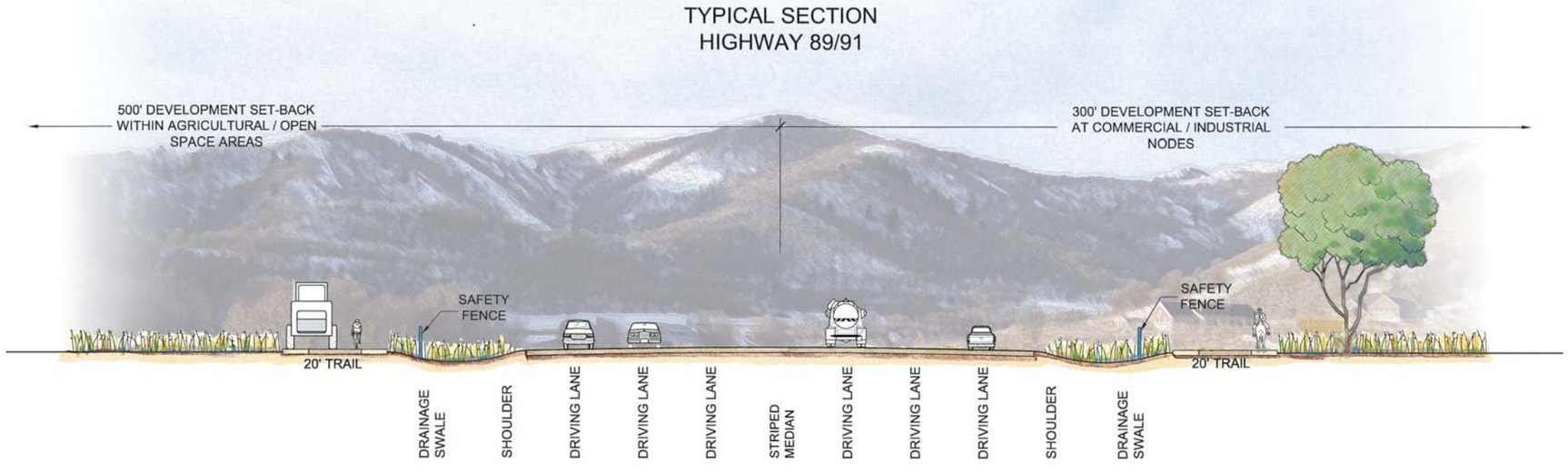
As illustrated in the Typical Section of Highway 89/91 in Figures 3-1 and 3-2, a multi-use trail should be located adjacent to the highway, providing a flexible system for walkers, cyclists, equestrian riders and farm machinery to safely navigate the corridor. The trail that is illustrated in the drawing is conceptual in nature and will require detailed design input by UDOT and others to ensure it is safe and doable. However, it is essential that the implemented design results in a trail system that provides north-south movement for all envisioned users.

Loose plantings of trees and shrubs should line the outer edges of the nodes for about 50 feet. These elements should reflect the vernacular landscape which surrounds these places. This will help soften the hard edge of the buildings, and provide a visual buffer between the highway and nearby parking lots and service areas. Individual and small clusters of shade trees should be located in proximity to the trail and near intersections, providing places for trail users to wait, rest and relax.

Beyond the nodes, the 500’ open space buffers should continue to reflect the rural/agricultural setting. Pastures, fields, natural open spaces and similar treatments should be encouraged and maintained to the greatest extent possible. In contrast, manicured parks, lawns and other, high maintenance and out-of-character treatments should be prohibited. Individual shade trees should be located in proximity to the trail.

Fences should be used only where needed, such as along the edge of the highway, and along the edge of private properties. Fences should match those existing in the area, thereby helping to maintain a unified corridor appearance. Fences should be simple and open, and only as tall as necessary to fulfill the function they serve. They should be constructed using readily-available local materials that fit with the rural setting. The design of fences and walls should correspond to the surrounding fence treatments already established along corridor farms.

Note: The US-89/91 Highway Right-of-Way should be widened to incorporate all elements illustrated, including the multi-purpose trail.



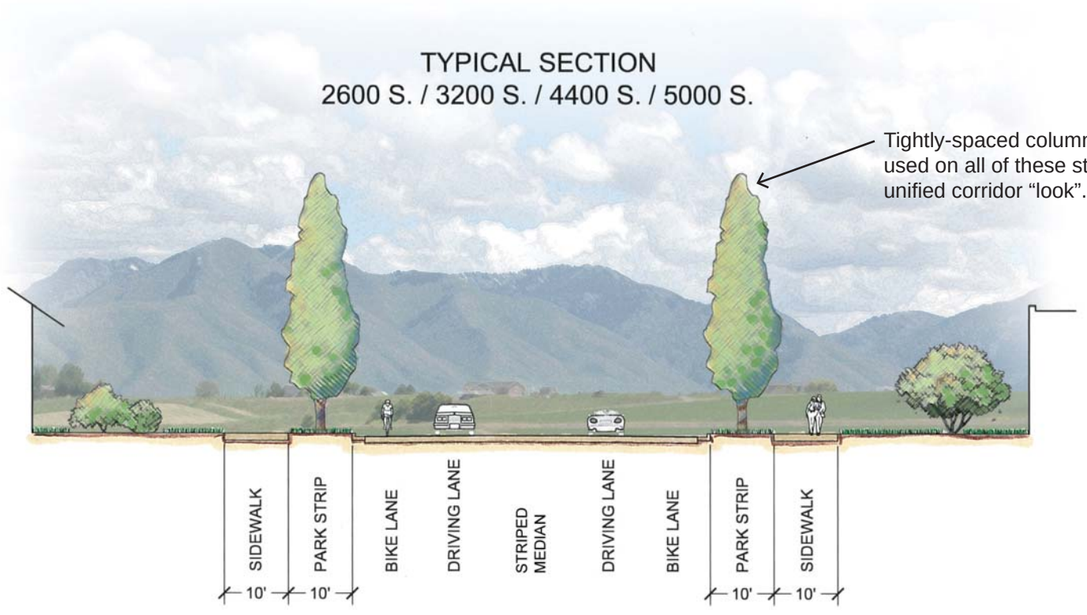


Figure 3-1 Typical Highway and Road Sections

Figure 3-2 Example of Multi-Purpose Trail that Serves Multiple User Groups

Controlled Access Street - Landscape and Streetscape Treatments

- Main Street/5000 South (Wellsville)
- 4400 South (Wellsville)
- 3200 South (Nibley)
- 2600 South (Nibley)
- 1000 West Gateway Commercial Area (Logan)

As illustrated in the Typical Section for 2600 South, 3200 South, 4400 South, and 5000 South on Figure 3-1, streetscape improvements along the main east/west roadways should help create a unified overall look for the corridor while providing a special feeling for each node. The roadways should generally include a bicycle lane in each direction, rural-style street lights, and deep front yards generously landscaped with trees, shrubs and special garden treatments.

In order to enhance the establishment of each node as a gateway destination, no street trees should be planted along the roads between US-89/91 and the outer edges of node development. Within the nodes, strict rows of upright trees should be planted in wide park strips between the road and sidewalks, reflecting the traditional practice of planting windbreaks along farm roads and property edges. This will be a unified treatment for each node.

Trees and plants should be utilized that are suited to the local climate, that fit with the surrounding landscape, and that are water-conserving.

Pedestrian Circulation and Crossings – Landscape and Streetscape Treatments

The US-89/91 trails should be extended over the cross-streets as crosswalks, thereby promoting continuous and safe pedestrian/bicycle movement along the highway.

Additional design input is necessary to determine the final configuration of each trail segment and the incorporation of envisioned trails users (pedestrians, cyclists, equestrian riders, and farm equipment). The location and design of highway crossings should be carefully considered to ensure safe passage by all potential users. Tunnels and/or bridges should be considered at key locations as long-term solutions.

Sidewalks and walkways that line the east/west streets should be constructed of asphalt, concrete, unit pavers or similar materials in accordance to specific needs and functional requirements. Pavement colors should be carefully considered to ensure these facilities fit in the surrounding landscape.

Figure 3-3 Examples of Appropriate Light Fixtures

Figure 3-4 Examples of Appropriate Site Furnishings

Figure 3-5 Additional Examples of Appropriate Site Furnishings

Lighting and Furnishings

Streetlights and furnishings should be coordinated at each node, while encouraging a sense of individuality for each node. Furnishings should be limited to a select range of benches, trash receptacles and other basic elements appropriate for the rural setting. Streetlights should be selected from a single model-line for each node, and poles and fixtures should be used that complement the rural feel. Only “Night Sky” compliant fixtures should be used.

Parking Lots and Service Areas

Parking lots and service areas are essential components of successful commercial, industrial and mixed-use developments. The design of these areas should be treated with the same care as the adjacent streets, with a focus on “fitting in” and putting the needs of pedestrians on equal footing with motorists.

A well-conceived shading strategy provides a level of order and structure that can transform a parking lot from an undifferentiated asphalt expanse into a clearly articulated, safe, comfortable and visually interesting place. Parking lots should be landscaped with a mix of medium-to-tall shade trees (25-45 feet high and wide). Trees should have a heavy canopy to provide good shade. They should be water conserving and distinctly different in species and form from those of adjacent streets. Tree species with roots that are likely to heave paving or which are difficult to maintain should be avoided. The trees should be typically planted in rows within barrier islands, although clustered tree planting may be preferable in certain cases.

Where parking is visible from the highway and adjacent roads, trees should be used to help buffer the parking area from the street. A loose and informal layout should be used to fit in with the surrounding landscape.

Lighting should be provided in all parking lots. Poles and fixtures that complement the rural feel of each node should be used. Only “Night Sky” friendly fixtures should be used.

Street Trees and Landscape Elements

A variety of large shade trees should be used to transform each node into a lush and inviting place. In general, shade and street trees should be selected that are large at maturity, since this will reinforce the formation of a pleasant and traditional character for each area.

Fences and Barriers

Fences should be used only where needed, such as along the edges of the nodes. They should match existing fences in the area, which will maintain a unified corridor look.

Figure 3-6 Examples of Appropriate Tree Characteristics






Figure 3-7 Examples of Appropriate Fences and Barriers

Figure 3-8 Examples of Appropriate Architectural Scale and Form

Solid fences and walls should be used sparingly, helping to screen or buffer parking lots, loading zones and similar utilitarian spaces from view. In general, fences and screens should be limited to the rear and sides of buildings, thereby helping to reinforce the establishment of each node as a unified place. These features should be constructed from forms and materials that fit with the rural setting.
Wood, timber and wire are particularly appropriate. The design of fences and walls should respond to surrounding fence treatments.

Architectural Guidelines and Preferences

This section provides general guidelines and preferences for the architectural character of buildings constructed along the Cache Valley South Corridor. These guidelines are intended to provide design and development direction to the leaders, property owners, architects, designers, and developers of Wellsville, Nibley and Logan, Cache County as they design and construct new projects that reflect the special qualities of the South Corridor.

The most iconic buildings found throughout the corridor, and those that give the strongest sense of this rural place are the agrarian vernacular buildings. These buildings are typified by and include the following qualities:

- Simple and straightforward building forms.
- Practical and utilitarian use of space.
- Use of natural building materials.
- Expression of exposed structural elements such as beams and rafters, columns, and steel brackets.
- Stand alone structures surrounded by open-space.
- Restraint and order with little or no decoration.

The intent of the guidelines is to promote characteristics that are similar to the vernacular buildings in the corridor, as well as modern or contemporary interpretations of such buildings that enhance the corridor.

Scale, Massing, and Form

One of the most important design principles for the corridor is ensuring that future development in the South Corridor has an appropriate scale

and fits with existing buildings and the surrounding landscape. In order to achieve this, smaller buildings are encouraged in the area, as they are the most appropriate fit, particularly in comparison to large “big box” uses. Corresponding support for such building types should be reflected in land use plans, zoning ordinances and other implementation tools of the three jurisdictions and Cache County. The vernacular buildings of the corridor have a simplicity that provides for a simple understanding or readability of the building. The forms are also timeless in a sense. New development and buildings along the corridor should continue and enhance this simplicity and straightforward approach.

New construction in the South Corridor should build upon and reflect the historical legacy of the South Corridor. Each building should be designed for its specific context and not look as if it could be located just anywhere.

Original designs and forms for each building in the corridor are preferable to corporate building prototypes and building designs that are easily-replicated and monotonous. Historical stylization and “theme” architecture, especially of styles unrelated to the rural vernacular, or which have no precedent in the west, should be discouraged. Each building within the corridor should be designed with individual character for this rural place.

To minimize the impact on the viewshed, buildings along the corridor should be maintained as low, single story buildings when possible. Where mixed-use buildings are envisioned, such as lower-level retail and upper-level housing, a maximum of three stories is suggested. The further these taller buildings are separated from the highway, the less impact they will have on the viewshed.

Multiple buildings on the same site should be cohesively designed in a manner that provides a visual relationship between buildings while also providing connections to pedestrian plazas, open space, and view corridors to the surroundings.

Stand-alone buildings with a single or few tenants are preferred to long buildings with numerous tenants. Where long buildings are required, architectural features and elements should be used to break down the scale and massing of the building. These features should relate to the rural vernacular and could include the stepping of roofs, changes in roof pitch, variation in windows and openings, vertical breaks in the facade and other architectural variation.

Materials

Materials consistent with the corridor and western region rural buildings, include:

a. Wood siding including horizontal, vertical, and board-batten types.
b. Corrugated and other horizontal and vertical metal siding patterns in pre-finished colors, and natural metal finishes, including weathering steel.
c. Standing seam and corrugated metal roofing.
d. Exposed board-formed concrete.
e. Monolithic stone.

Orientation

Building design and siting should consider solar orientation, climatic conditions, wind patterns, and other environmental conditions.

The location of the highway adjacent to the outer walls of new buildings makes it essential that the design of the rear of buildings be carefully considered for forming positive first-impressions about the corridor. It is preferred that the longest orientation of a building not be tangent to the highway, thereby minimizing the visual impact. In cases where the back facade is tangent and visible from the highway, exterior building design including windows and openings, materials, and architectural features should be considered and coordinated for all sides of the building to achieve harmony and continuity of design.

Screening

Roof top and ground level mechanical units, condensing units, electrical equipment and transformers, dumpsters, and service loading areas should be screened from view. Screening for all equipment and dumpsters should be integrated and complementary to the design. Service loading areas will need to be considered early on in the site planning process to accomplish effective screening.

Signage

Signage is often a prominent feature wherever commercial establishments exist. Numerous signs, highly colored and stylized signs, and signs that are out of scale can have a negative impact on the rural setting. The use of buildings as advertising, which prominently display corporate identity, is not conducive to this rural area and should be discouraged. Billboards and similar signs should be explicitly forbidden throughout the corridor.

Sustainability

The design of sustainable buildings that are energy efficient and have less impact on the environment will continue to gain importance in the coming years. It is essential that cities understand sustainable design and programs such as the USGBC (U.S. Green Building Council) LEED (Leadership in Energy and Environmental Design) rating system. Sometimes ordinances are put into affect that contradict sustainable practices. One example might be that an ordinance requires dark colored roofing, while sustainable practices would promote light colored roofing that reflects heat energy and supports the cool roofing process. It is up to

Figure 3-9 Examples of Appropriate Materials

the individual municipalities to understand the importance of sustainable practices and to keep up-to-date with appropriate development and implementation.

Design Review

Each of the municipalities along the corridor is encouraged to establish building and zoning ordinances and to participate in a corridor design review committee. As ordinances are developed and proposed building developments are reviewed, the following four general questions should be considered:

1. Does the proposed design relate to the rural character of the corridor?
2. Does the proposed design establish an undesirable precedent?
3. Does the proposed design create a substantial detriment to the adjacent properties?
4. Does the proposed design protect the character of and enhance the corridor?

Transportation and Traffic

Integrate UDOT Planning/STIP Process

As part of their regular planning process, the Utah Department of Transportation's (UDOT) 5 year State Transportation Improvement Program (STIP) incorporates projects into a funded year. It is recommended that a prioritized list of corridor improvements be identified by UDOT along with the planned funded year to begin integration of these improvements into future STIP programming.

Pursue UDOT Corridor Preservation Funding

UDOT currently maintains a statewide corridor preservation fund to secure properties for future transportation needs. It is recommended that the CMPO and the municipalities work together to develop applications for funding acquisition of property that may become available as part of the land development process.

CCCOG Facilitation of Sales Tax for UDOT Corridor Preservation

Currently a ¼ cent sales tax is captured by Cache County for the development of transportation related facilities. In order to implement access, right-of-way for future roadway expansion, intersection enhancements, and other critical improvements associated with the corridor, it is recommended that the Cache County Council of Governments (CCCOG) incorporate US-89/91 corridor preservation into the use of these funds. This would also require the CCCOG to implement a process to entertain applications from the municipalities as development occurs and the opportunity for property acquisition may be available.

Access Facilitation

It is recommended that the CCCOG work cooperatively with the municipalities to develop a facilitated approach to the property owners along the corridor. This could include discussions on corridor preservation applications as well as possible right of first refusal agreements that would allow the CCCOG or UDOT to purchase parcels of property prior to future development.

Transit (FTA) Funding

It is recommended that Federal Transit Administration (FTA) transit related funds be pursued as expansion of the transit system becomes necessary to meet future demands.

Economy and Financing

Financial Tools

A discussion of financial tools is included, as it will be necessary for the communities to use a variety of funding mechanisms in order to: 1) preserve open space and protect the corridor from sprawling, leapfrog development; and 2) encourage clustered commercial development at identified nodes along the highway.

As described below, the tools used to preserve open space include: conservation easements, purchase of open space through bonding, density bonuses and transfer of development rights (TDRs).

Tools used to encourage clustered commercial development at specific locations include: tax increment financing and revenue sharing interlocal agreements.

Conservation Easements can be used to achieve the desired development setbacks along the highway and to protect agricultural property. A conservation easement is a legal document between a property owner and a government agency or a land trust that restricts the right to real estate development. In essence, an easement divides property rights into a bundle of rights that includes such things as ownership, development, mineral rights, water rights, etc. The property owner can either voluntarily donate some of these rights, or he or she can be compensated for them. A conservation easement is binding on all future land owners. Although the landowner has given up specified rights, he continues to own the land.

How should a conservation easement limiting development rights be valued? The value can be established by taking the difference between the fair market value appraisals with and without the easement. Depending on size, configuration and location of the property, conservation easements will vary greatly in value. For example, a conservation easement on a smaller piece of property may greatly limit future uses, and thereby significantly increase the cost of the easement. In comparison, an easement on a larger piece of property may have no material impact on development which may be able to be clustered on the remaining acreage, thereby significantly reducing the cost of the easement in comparison to a smaller piece of property.

Easements can be public or private in nature. However, if the easement is purchased with public funds, most communities require the easement to be accessible by the public.

Easements can also be encouraged by suggesting **escrow arrangements** that allow property owners to tentatively commit to conservation easements, but do not finalize the easement until neighboring owners commit as well. The arrangement works by allowing property owners to place conservation easements in escrow. If a predetermined percentage of nearby landowners agree to similar easements, the entire package of easements is transferred to a governmental agency or land trust. If not, the conservation easements never take effect and owners are free to do with their property as they please.

If landowners want to preserve their land in perpetuity yet use it during their lifetime, they should consider using a **remainder interest**. The remainder interest enables landowners to donate property to a qualified organization, receive an income tax deduction, and reserve a life estate for themselves so they can live out their lives on the land. Donations can also be made by will, which preserves for the landowners the right to change their minds. It does not entitle the landowners to an income tax deduction during their lifetimes, but does reduce the size of the taxable estate. A landowner should make sure the recipient organization will accept the gift before donating by will[1].

An owner of very valuable land who wants to donate his or her land to a trust and retain an income source from it may consider **charitable remainder unitrusts**. The landowner places a conservation easement on the land, sells the land and invests the proceeds into a trust fund that provides the landowner with income for life. Upon the landowner's death, the remaining trust funds are donated to a nonprofit organization or charity. This method provides income, tax benefits and charitable contributions[2].

General obligation bonds for open space can be issued by the County to raise funds to purchase conservation easements. No study has been done to quantify the purchase price of conservation easements in Cache County; therefore, the following table simply shows the potential tax impacts to property owners based on three different revenue amounts raised: $2,000,000, $5,000,000 or $10,000,000. Under these three scenarios, the annual payment per $100,000 of taxable value[3] ranges

1 Ways to Conserve Wyoming's Lands: A Guidebook
2 Ibid.
3 Taxable value on a primary residence is equal to 55 percent of the assessed

from $2.84 to $14.21.

Table 3-1 Projected Open Space Bond Payments			
Cache County taxable value	$5,254,290,413		
Interest rate	4%		
Bond term in years	20		
Issuance costs	1.5%		
Par amount of bond	$2,030,000	$5,075,000	$10,150,000
Revenue available for open space	$2,000,000	$5,000,000	$10,000,000
Annual debt service	$149,371	$373,427	$746,855
Tax rate	0.000028	0.000071	0.000142
Per $100,000 of taxable value	$2.84	$7.11	$14.21

General Obligation bonds ("GO") are subject to simple majority voter approval by the constituents of the issuing entity. General obligation elections can be held two times each year, in November and June, following certain notification procedures that must be adhered to in accordance with State Statutes in order to call the election (pursuant to Utah State Code 11-14-2 through 12). Following a successful election, it is not necessary to issue bonds immediately, but all bonds authorized must be issued within ten years. Once given the approval to proceed with the issuance of the bonds, it takes approximately sixty days to complete the bond issuance.

General obligation bonds can be issued for any governmental purpose as detailed in Section 11-14-1. The amount of general obligation debt is subject to the following statutory limitations:

- Counties are limited to two percent (2%) of the total taxable value of the County;
- Cities of the 1st and 2nd class are limited to a total of eight percent (8%) of the total taxable value; four (4%) for general purposes; and four (4%) for water, sewer and lights; and
- Cities of other classes or towns are limited to a total of twelve percent (12%) of total taxable value; four percent (4%) for general purposes; and eight percent (8%) for water, sewer and lights.

Notwithstanding the limits noted above, most local governments in Utah have significantly less debt than the statutory limitations. Pursuant to state law, general obligation bonds must mature in not more than forty years from their date of issuance. Typically, however, most GO bonds mature in twenty-five to thirty years.

(market) value of the home. Therefore, a home with an assessed value of $181,818 would have a taxable value of $100,000.

Since general obligation bonds are secured by the taxing power and are a full faith and credit pledge of the issuing government, they offer the lowest credit risk to the bondholders and the lowest overall cost. The downside to GO bonds is that they require an election, and election outcomes are uncertain and can be costly (win or lose). GO bonds are generally most successful when the benefits are viewed as accruing to the community as a whole – not just one specific area or demographic group.

Another funding tool for the acquisition of open space is **TDRs – Transfer of Development Rights**. TDRs are based on the premise that development rights can be sold, or transferred, from one area to another. Sending areas sell development rights that can be used in receiving areas that are willing and able to absorb higher densities. Communities involved with TDRs have found that it is relatively easy to identify sending areas (areas where land preservation is desirable), but is often harder to locate receiving areas (areas that are willing to absorb greater density and where market conditions are favorable). In order for TDRs to succeed, communities need to identify areas where there is a strong desire for density.

The ratio of selling development rights to receiving development rights is based on the price that a developer is willing to pay for density. TDRs may be held and used when market conditions are favorable. They have no expiration date, as the courts have determined that such would be considered a "taking."

One of the disadvantages of the TDR program is that, because it is voluntary in nature, it tends toward patchwork conservation patterns. Good planning must accompany a TDR program and it is essential that all communities involved work together to ensure consistency with the program. Cities must understand that they cannot increase density through other means, or there will be no incentive to participate in the TDR program.

Cache County could consider a TDR program but, in order for it to be successful, it would need to identify receiving areas that are suitable for higher-density development. Another variation of the TDR approach is for the County to grant **increased density** on a portion of a property and, in exchange, the County receives some portion of the property (as compensation for the added density). This land can then be sold and proceeds can be used to purchase conservation easements. Increased density can also be granted on one portion of a property in exchange for a conservation easement on another portion of the land.

A **deed restriction** is established by the landowners on a property's title, typically when the landowners are selling the land and wish to exert some influence over its use. For example, home site purchasers may buy subject to deed restrictions that limit the number of buildings and their size, preserve views, or specify architectural guidelines that will blend homes into the landscape. By creating home sites that are secluded, scenic and pristine enough to demand top dollar, property owners may be able to maximize their return while developing a small amount of land that will still preserve open space.

A **right-of-first refusal** is an agreement between a landowner and a potential buyer in which the landowner agrees that if he or she receives a legitimate offer from another party, the holder of the right of first refusal will have a specified period of time to match the offer and acquire the property. Rights-of-first refusal can be especially useful to landowners who want to guarantee a neighbor or land trust a chance to purchase their property in the event of a forced sale. Rights of first refusal do not have to be executed, and if there is another offer made that will preserve open space, the right of first refusal will likely not be used.

Tax Increment Financing is a way that the public and private sectors can join together to encourage desired economic development. Community development areas (CDAs) could be created at specific development sites. The existing taxable value of the site becomes the base taxable value. Any increase in taxable value over the baseline, during the period of the CDA, forms the basis for tax increment revenues. Taxes are not raised in a CDA. Rather, the property taxes generated from the new development that occurs after the CDA is formed can be used to incentivize economic development in the project area. Increment may be used for a wide variety of projects in the area, including roads, utilities, land write-downs, demolitions, parking, street lighting, parkways, etc. In order to use the tax increment, the taxing entities in the area (i.e., school district, city, county, special districts, etc.) must agree to participate in the CDA through interlocal agreements that designate a portion of their increment to the project area for a specific period of time.

Experience suggests that it is easier to obtain the approval of the taxing entities when the development involves industrial/business park uses, rather than retail uses. This is due to the fact that industrial/business park uses have significantly lower costs for municipal services (i.e., police calls for service, traffic generation, etc.) than do retail areas, and they also do not have children that raise school costs. Therefore, many communities attempt to establish tax increment areas by combining industrial park/ business park areas with some retail development, as long as the time frames for development are similar and the areas are adjacent to each other (and so can be combined into one CDA).

Another concern raised during the course of this study has been the relative equity of where commercial clusters should be located along the highway. Because sales tax revenues are distributed both on population and point of sale, it is advantageous for communities to have sales tax-generating businesses locate within their boundaries. The sales

tax distribution formula in Utah has often created planning issues, as communities frequently locate grocery stores or other large retail centers on their borders in an effort to attract dollars into their community from surrounding areas. For this reason, Nibley and Logan may want to consider revenue sharing agreements for commercial development that will allow for equity between the two communities, given growth projections in the local area, and that will also account fairly for the cost of providing municipal services to retail development. This arrangement has worked well for other communities with bordering developments, where buildings and parking lots straddle municipal boundaries. City boundary adjustments between Nibley and Logan may also need to be considered in order to achieve good planning and equity with highway corridor commercial development.