U.S. 83 Texas Study Corridor—FHWA Economic Development Highway Initiative: Border Crossings and Rural Communities

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ABSTRACT

Congress, in fiscal year 2000, appropriated $4.5 million for the Economic Development Highway Initiative, administered through the Federal Highway Administration. This mandate targeted economically disadvantaged regions to determine what highway improvements were necessary to serve as a catalyst for economic development. The U.S. 83 Texas study corridor (Webb, Dimmit, and Zavala Counties) represents approximately 120 miles of highway with “Super Two” characteristics. Economic growth and development characteristics for these counties vary significantly. In 2000, the Laredo port of entry accounted for roughly 41.2 percent of the total value in overland trade with Mexico, making it one of the busiest ports of entry in the hemisphere. This has created a strong demand for trucking, warehousing, staging areas, and support service industries in the region. Dimmit and Zavala Counties to the north are at the other end of the development spectrum. They are very rural and have higher rates of unemployment, poverty, and declining population. With the ever-increasing demand for trade, increasing truck traffic from the west coast, lower land costs in the northern region of the corridor, and interest from industry in locating to the northern region, the study corridor north of Laredo is poised for economic development as well. This growth potential has a direct relationship with transportation, so continuing to make the necessary improvements on U.S. 83 to enhance transportation safety and efficiency is essential for economic development.

Key words: border crossing—economic development—transportation corridor
INTRODUCTION

Congress, in FY 2000, appropriated $4.5 million for the Economic Development Highway Initiative, administered through the Federal Highway Administration (FHWA). This mandate targeted economically disadvantaged regions to determine what highway improvements were necessary to serve as a catalyst for local and regional economic development. The objective of this study was to determine the potential economic development benefits to the region from highway improvements. The possibility of funding highway improvements based on economic development impacts was a radical departure from basing improvements primarily on traffic volume and safety. Economic development is contingent upon a number of requirements that include income levels, education, housing, healthcare, quality of life and infrastructure. These requirements pose major challenges to the economic growth and expansion of the study corridor and are the basis for the corridor’s selection.

The U.S. 83 Texas study corridor was one of 12 corridors in nine states selected for this initiative. The U.S. 83 study corridor (Webb, Dimmit, and Zavala Counties) represents approximately 120 miles of highway with “Super Two” characteristics. U.S. 83 runs through the heartland of the United States, from Mexico to Canada, and has a strategic alignment to the major consumer markets in Mexico such as Monterrey and Mexico City.

METHODOLOGY

Due to the significantly different degrees of economic activity between the northern and southern portions of the study area, project initiation meetings were conducted with community stakeholders in both regions. Community leaders, business owners, local government representatives and other stakeholders were invited to participate in these meetings. As a result, two Advisory Committees were established, one representing Webb County (Southern Corridor) and the second representing Dimmit, and Zavala Counties (Northern Corridor). The purpose of the Advisory Committees was to provide feedback and oversight; encourage participation by local interests; provide access to previous studies and analysis; and facilitate input from local, regional and state interests. The study work plan was divided into four primary segments: socioeconomic profile, industry sector analysis, transportation improvement concept, and economic development implications. Study analysis was based on empirical and anecdotal information collected through the course of the study. Study insights and additional information to support existing empirical data were gathered from interviews with the advisory committee, business and community leaders, and stakeholders.

Socioeconomic Profile

The existing socioeconomic conditions of the study area, its people and its businesses, were profiled to formulate a picture of the current socioeconomic situation and their relationships with transportation corridors. Socioeconomic characteristics for the counties in the study area vary significantly. Webb County, which includes the Laredo port of entry, has experienced economic growth due to location. In 2000, the Laredo port of entry accounted for roughly 41.2 percent of the total value in overland trade with Mexico, making it one of the busiest ports of entry in the hemisphere. The phenomenal growth that Laredo has seen in the past ten years is without question a result of the Laredo border crossing and the North American Free Trade Agreement (NAFTA), as demonstrated in Table 1 (1) . This has created a strong demand for trucking, warehousing, staging areas, and support service industries in the area. Dimmit and Zavala Counties to the north are at the other end of the development spectrum. They are very sparsely populated and have higher rates of unemployment, poverty and declining population.
TABLE 1. Laredo Border Crossing Activity North and South

<table>
<thead>
<tr>
<th>2000 Amounts</th>
<th>Increase from 1990</th>
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<tr>
<td>9.1 M pedestrians</td>
<td>27.5%</td>
</tr>
<tr>
<td>16.8 M vehicles</td>
<td>24.4%</td>
</tr>
<tr>
<td>2.9 M trucks (8,000 daily)</td>
<td>314.3%</td>
</tr>
<tr>
<td>336 K loaded railcars</td>
<td>242%</td>
</tr>
<tr>
<td>459 M lb. landed weight at airport</td>
<td>897.8%</td>
</tr>
</tbody>
</table>

Source: Laredo, Texas, Chamber of Commerce.

Because of the varying degree of economic vitality in the study area, stakeholders view transportation investment from an economic development standpoint differently. In Webb County, transportation improvements are viewed to improve economic development by accommodating more trade related economic stimulation. In Dimmit and Zavala Counties, stakeholders view transportation improvements from the perspective of increased market access, improved competitiveness for attracting businesses and tourists, and improved quality of life.

Dimmit and Zavala Counties are very sparsely populated with 7.7 and 8.9 persons per square mile, respectively. This compares to Webb County with 57.5 persons per square mile and the state and national average of 79.6 persons per square mile. There are 254 counties in the state of Texas. From 1999 data, Webb County ranked 21, Dimmit County ranked 164, and Zavala County ranked 154. Laredo has approximately 91 percent of Webb County’s population and Nuevo Laredo on Mexico’s side of the border has a population of more than 660,000. Webb County’s population growth rate from 1990 to 2000 of 44.9 percent was approximately double the state’s growth rate of 22.8 percent, considerably greater than the national average of 13.1 percent, and ranked ninth in the nation. This compares to –1.8 percent and –4.6 percent growth rates for Dimmit and Zavala Counties, respectively.

The poverty level for the study corridor is of concern. Webb County has a poverty level of 31.2 percent for people of all ages, Dimmit County 33.2 percent, and Zavala County 41.8 percent. The study area poverty levels are more than double the state average of 15.4 percent and for Zavala County more than triple the U.S. average of 12.4 percent. The educational attainment of persons 25 years and older also raises concern for social issues and economic development initiatives. The percentage of the population that is 25 years and older that has a high school degree or better is 53 percent of Webb County, 54.3 percent of Dimmit County, and 43.4 percent of Zavala County. The study corridor is well below the state average of 75.7 percent. This is alarming when economic growth and personal incomes are a direct reflection of the overall labor pool’s educational achievement.

Per capita personal incomes (PCPI) for the study area are well below state and national averages as identified in Table 2. Average annual unemployment rates for the study area are considerably higher than the state and national averages. From 1990 to 2000, Webb County had a high of 15.3 percent and a low of 7.0 percent. Dimmit County had a high of 20.0 percent and a low of 12.7 percent. Zavala County had a high of 26.1 percent and a low of 15.3 percent. The state for the same period had a high of 7.7 percent and a low of 4.2 percent and the U.S. had a high of 7.6 percent and a low of 4.1 percent.

The industry sector analysis was conducted to predict trends within industry segments and to identify and target economic development opportunities and their relationship/dependence on U.S. 83. The primary industry sectors identified were transportation and border related activity, agriculture, retail trade, and oil and gas.
TABLE 2. Per Capita Personal Incomes

<table>
<thead>
<tr>
<th>Per Capita Income</th>
<th>State Ranking</th>
<th>% State Average</th>
<th>% National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Webb County</td>
<td>$14,112</td>
<td>239</td>
<td>53%</td>
</tr>
<tr>
<td>Dimmit County</td>
<td>$12,789</td>
<td>247</td>
<td>48%</td>
</tr>
<tr>
<td>Zavala County</td>
<td>$11,351</td>
<td>250</td>
<td>42%</td>
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</tbody>
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Source: Regional Economic Information System, Bureau of Economic Analysis.

Industry Sector Analysis

Transportation and Border Related Activity

Goods movement between the U.S. and Mexico has increased steadily and dramatically over the past decades. The growth rate accelerated during the 1990’s to nearly double the growth rate of the 1980’s as demonstrated in Table 3 (6).

TABLE 3. Average Annual Percent of Change in Volume of Goods Traded

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<tbody>
<tr>
<td>U.S.-Mexico trade</td>
<td>$28 B</td>
<td>$58 B</td>
<td>$207 B</td>
<td>7.6%</td>
<td>13.6%</td>
</tr>
</tbody>
</table>

Source: Laredo Development Foundation.

The growth in trade volume has had the most dramatic effect in Webb County, where earnings growth in the transport and utilities sector has averaged over 11 percent per year. This is well above the growth rate of Texas at 9.1 percent and U.S. at 6.1 percent. However, the growth in Dimmit and Zavala Counties lags far behind at 2.1 percent and 1.9 percent, respectively (4). Laredo with good crossings and good transportation on either side, provides a clear competitive advantage to the region. The advantage is being exploited through close cooperation with Nuevo Laredo in cross-border maquiladora development, outreach to industrial centers in Mexico such as Monterrey, and development of industrial parks, warehouses, and value-added distribution facilities.

Agriculture

Agriculture is a major industry and employer in the region, and is particularly significant in Dimmit and Zavala Counties, which have an extensive winter vegetable garden industry. Farm earnings in Zavala County have far surpassed Texas and U.S. growth rates at 6.0 percent compared to 3.4 percent and 1.3 percent, respectively (4). Del Monte, located on U.S. 83, is one of the larger employers in Zavala County. Since 1995, full time employment has risen to 130, a 47.7 percent increase. The plant also supports 800 part time employees who typically work 42–52 weeks per year. They typically receive 10 to 20 truckloads of raw vegetables and ship 40 to 50 truckloads of finished product per week. Another business significant to the corridor is Dixondale Farms located in Carrizo Springs on U.S. 83. Dixondale Farms produces and distributes approximately 60 percent of all the onion seed plants in the U.S. Twenty percent of their distribution is through mail order, primarily to Texas, California, New York, and Ohio, utilizing UPS and FedEx services. They also serve Wal-Marts in 17 states.

Ranching has continued at a fairly steady pace, but many of the ranches now rely on hunting permits for substantial income. According to the Laredo Chamber of Commerce, deer hunting brought in an
estimated $40 million in revenue to Webb County in 2000. Along U.S. 83, the local economy depends heavily on income generated during the hunting season, as hunters are good customers for the small retailers.

Retail Trade

Located near the Mexico border and the thriving city of Nuevo Laredo, and with one of Mexico’s best roads leading from Monterrey to Laredo, Webb County in particular enjoys a diverse and vibrant retail trade sector. Nuevo Laredo has a population of more than 660,000, and Monterrey, Mexico, with a population of 3.9 million, is only two hours away, by good roads. Many people cross the border on foot or by car on a regular basis to take advantage of the prices and selection in U.S. stores. The retail trade sector has grown annually by 4.8 percent for Webb County and Dimmit and Zavala Counties have shown a steady growth rate of 5.2 percent and 4.9 percent, respectively (4). The Laredo Wal-Mart is the busiest store for its size in the entire United States—thanks largely to shoppers from Mexico. Average annual retail employment growth in Webb County outpaces the state’s growth rate.

Oil and Gas

Oil and gas extraction has clear boom and bust cycles, with volatility ranging from wildcat discoveries of new sources to tensions in the Middle East affecting oil futures and prices. Texas is the nation’s leader in oil and gas extraction, producing approximately 58 percent of all U.S.-derived oil and gas. Three years ago the oil industry in Dimmit County started to turn around, and is in a period of recovery. As a result, the Eastern Oil Well Service Company, which services existing wells, has grown during this period. The company has 50 employees, and as such is a major employer in Dimmit County.

Transportation Improvement Concept

The transportation improvement concept for the U.S. 83 corridor was developed to identify current and planned improvements that may lead to changes in transportation travel demand and patterns within the corridor. The improvement concept would set the stage for evaluating the relationship between transportation and economic development. Desired transportation improvements in the study area were identified based on safety, mixed traffic use, and economic development opportunities. For the study corridor, the main issue was traffic mix that included tractor trailers, RVs, delivery trucks, oil drilling rigs and equipment, oil tankers, and local traffic and its relationship to traffic safety and continued road damage as a result of the heavy trucks. U.S. 83 for the most part does not have sufficient lanes for acceleration or deceleration for the large heavy equipment coming on and off U.S. 83 from local farm access roads (oil drilling and exploration equipment, oil tankers, agricultural machinery, etc.) and businesses, which becomes a safety issue when combined with fast moving trucks. As a result, highway improvements would facilitate highway safety and economic development expansion based on increased transportation efficiencies.

Traffic Flows/Routes

During the course of the study, traffic flows/routes based on traffic type became apparent. U.S. 83 serves as an important transportation route and link between economic development and transportation. Well-defined traffic flows and patterns were identified for

- westbound border trade—a two-hour time savings
- wholesale deliveries to local businesses—the necessary goods to support retail
- Lucky Eagle Casino in Eagle Pass—a major regional tourism draw
- RVs traveling north and south—snowbirds to and from the upper Midwest
students going to and from the Junior College in Uvalde—continuing education

As a result of U.S. 83 being a more direct route and bypassing the heavy San Antonio traffic, trucks going to or coming from the Laredo Border crossing use U.S. 83 as an option for West Coast origins or destinations. Total trip time can be reduced by two hours when taking U.S. 83 north to Carrizo Springs, 277 west to Del Rio, and 90 to I-10. In addition, heavy loaded trucks will detour onto U.S 83 when the scales are open at Moore, on I-35. At times one can almost tell by the increased number of trucks on U.S. 83 when the scales are open.

Traffic Counts

The annual average daily traffic (AADT) counts were tallied in five-year intervals from 1980 to 2000 to identify traffic volumes and patterns and provide percentage change and average annual growth rates to demonstrate the traffic impacts of NAFTA on the study region (7). The AADT increase from Carrizo Springs west to Eagle Pass on U.S. 277 supports conversations with retailers and truck drivers that the majority of the truck traffic on U.S. 83 is going to or coming from the west coast. The traffic flows in the area have demonstrated solid growth and there is evidence in most cases of accelerated traffic growth on U.S. 83 in the post NAFTA (1995–2000) period. It is expected that this strong growth rate will continue, resulting from increased trade liberalization and the interaction between and the integration of the North American markets.

U.S. 83 and I-35 are one and the same for approximately 20.5 miles from Laredo heading north. This section had a 167 percent increase in AADT from 5,100 to 13,600 trips between 1980 and 2000. From 1995 to 2000, a 49 percent growth in AADT occurred. When expressed in terms of average annual change, there was a 5 percent yearly growth over the 20-year period, and an 8.4 percent per year growth between 1995 and 2000.

From the U.S. 83 and I-35 juncture, continuing north on I-35 to Encinal at the Webb County line, there was an AADT increase of 232 percent from 3,700 to 12,300 trips between 1980 and 2000. This is equivalent to a 6.2 percent average annual growth. From 1995 to 2000, a 45 percent growth in AADT occurred, which represents an average annual increase of 7.7 percent.

From the U.S. 83 and I-35 juncture, continuing north on U.S. 83 to Carrizo Springs, there was an AADT increase of 59 percent from 1,700 to 2,700 trips between 1980 and 2000. This represents a 2.3 percent average annual growth rate. Between 1995 and 2000, there was a 54 percent increase, which represents a 9.1 percent average annual growth.

On 277 heading west to Eagle Pass from U.S. 83 in Carrizo Springs, the 1980 to 2000 period showed an increase in AADT of 71 percent from 1,750 to 3,000 trips, with a 30 percent increase from 1995 to 2000. The 20-year average annual change on this segment was 2.7 percent, while the post 1995 increase was at the rate of 5.5 percent. This AADT increase from Carrizo Springs to Eagle Pass on U.S. 277 is similar to the 59 percent increase from the I-35 break away to Carrizo Springs, which supports conversations with retailers and truck drivers that the majority of the truck traffic on U.S. 83 is going to or coming from the West Coast.

Current and Planned Improvement Costs

Planned transportation improvements have included new pavement, additional pullover lanes, four-lanes through the larger towns, curbing and guttering, sidewalks and designer retention walls. Cost figures provided by the Laredo District Office of the Texas DOT, showed the Texas DOT having spent approximately $10.9 million dollars on U.S. 83 in the study corridor in FY 2001 and 2002. No funding
has been allocated for improvements in FY 2003 and 2004 and $10 million has been earmarked for FY 2005. However, from February 1998 to December 2012, approximately $76.6 million has been spent or earmarked for projects in the U.S. 83 study area.

**Improvement Concept Recommendations**

Recommendations from advisory committee members and stakeholders advocate the future development of U.S. 83 as a four-lane highway from the U.S. 83 and I-35 junction to Uvalde to provide for improved safety due to the user mix on the existing road, adequate entry and exit access for heavy equipment, and for facilitating economic development. The majority of advisory committee members and individuals interviewed recommend that U.S. 83 should be four-lane to Uvalde with improved shoulders to connect with rail and I-90 to San Antonio and points west. Such an upgrade, according to a preliminary estimate, would cost approximately $225 million. (Figures were provided by the Texas Department of Transportation’s Laredo District Office and WSA’s Houston Office.)

Other options include additional pullover lanes as expressed by numerous users. Crystal City would like to see signs on U.S. 83 pointing to downtown Crystal City indicating a business route designation. This would encourage more U.S. 83 drive-bys to go into Crystal City and hopefully stop. Other relatively inexpensive recommendations include Scenic Highway and Texas Wildlife Trail signs and historic markers. More signs and other guides to attractions such as birding trails or natural and tourist attractions would take advantage of the eco-tourists.

**Economic Development Implications**

The economic development implications of the improvement concept were shaped based on the information gathered during the course of the study. Much of this was based on the understanding of the relationship between the success of the local industry sectors (existing and potential) and U.S. 83. It is apparent that opportunities exist for developing distribution facilities in Dimmit and Zavala Counties geared towards Mexican trade, and land is much cheaper than near Laredo. By continuing to improve upon and building better roads, there would be a substantial increase in west coast traffic business, due to the two-hour timesaving alone. Distribution centers could take advantage of the bilingual work force and location, providing jobs in receiving, disbursing, assembling and distributing. The focus would have to be on logistics and transportation, with value added in services such as break-bulk and customs facilitation. It may be possible to develop a lower-cost warehouse/value added niche, possibly in combination with a truck service and inspection center, and perhaps even a truck driving school.

A number of business start-ups have occurred since 1995 (post NAFTA) that have contributed greatly to the local economies in the northern portion of the study corridor. Recent new business start-ups were identified based on interviews, which are not all-inclusive, with a conservative estimate of 160 new jobs.

In January 2002, the U.S. Department Agriculture announced the selection of the Middle Rio Grande FUTURO Communities to receive the empowerment zone (EZ) designation in Round III (8). The EZ designation encompasses portions of Dimmit and Zavala Counties in the study corridor. EZ benefits include specific tax advantages that accrue to existing and potential owners, businesses and developers. Tax advantages for Round III designations contain wage credits of up to $3,000 per qualified employee and rural zones can issue up to $60 million each in new tax-exempt bonds. These bonds can be used for shell buildings and financing the construction of a new building or the renovation of an existing building. The Round III Empowerment Zone provides an excellent marketing tool for the communities on the U.S. 83 corridor in combination with its proximity to the border crossing and east and westbound traffic from Eagle Pass and U.S. 83 juncture.
**Crystal City Prospects**

A number of potential job increases are expected to result from the attraction of businesses to the Middle Rio Grande FUTURO Communities Empowerment Zone and the various incentives it offers. Crystal City, Texas is actively trying to draw into the area three establishments, all of which would heavily rely on utilizing the U.S. 83 Corridor in Southern Texas for their shipments. First, a Mexican cheese processor, currently negotiating with the city, is anticipated to open a processing facility in 2003, employing about 200 individuals when fully operational. Second, the abundance of high-quality water in the Carrizo Wilcox Aquifer has attracted interest from Californian and Mexican entrepreneurs to build a water bottling plant around the Aquifer. Such a plant would generate about 20 direct new jobs in the area. Third, there is a potential for the development of a transportation staging facility along U.S. 83 in the area. This facility would handle approximately 400 containers per month, and create 10 new jobs. The potential impact of these additional jobs would provide a gain in earning power from $7.4 to $7.9 annually as identified in Table 4.

**TABLE 4. Potential Economic Impact of Prospects**

<table>
<thead>
<tr>
<th>Estimated Impact</th>
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<tr>
<td><strong>Potential new positions</strong></td>
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<tr>
<td><strong>Conservatively expected increase in job creation</strong></td>
</tr>
<tr>
<td><strong>Total employment impact</strong></td>
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<tr>
<td><strong>Average weekly industry wage</strong></td>
</tr>
<tr>
<td><strong>Annual earning power increase</strong></td>
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Source: Regional Economic Information System II, Bureau of Economic Analysis.

**SUMMARY**

U.S. 83, as rural as it may be, has a dynamic role in the development and growth of the small communities along its path. The border trade dynamics of Laredo will continue to increase as a result of NAFTA, which will continue to provide development opportunities along the U.S. 83 corridor. Highway improvements on U.S. 83 will continue to have a positive impact on economic development in supporting its key industries. Local communities are in a good position to take advantage of their empowerment zone incentives and their proximity to U.S. 83 and the border.

Local officials and stakeholders believe with justification based on the current and future economic potential of the region that the U.S. 83 study corridor should eventually be improved to a four-lane highway. The Texas DOT, as demonstrated during the course of the study period, is committed to improving U.S. 83 and recognizes that continued improvements will help the local communities in the corridor and region recognize their potential. However the costs of providing the four-lane highway are too great to be able to implement in the near future, especially during a time of limited resources and competing interests. The Texas DOT will continue to provide additional selective improvements as identified in the transportation improvement plan. This level of improvement should not impede any new economic development activity anticipated by local officials.

Challenges do exist in regard to income levels, education, housing, and healthcare. The local leadership, stakeholders and development agencies in the study corridor recognize these challenges and are leading efforts to address them. They also realize that they are in a unique position to make positive change and to take advantage of their natural resources, cultural diversity, U.S. 83, proximity to Laredo, and NAFTA.
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