



Executive Summary

Introduction

The United States Department of Transportation (USDOT) awarded the Georgia Department of Transportation (GDOT) a National Corridor Planning and Development (NCPD) Program grant in May 1999. The purpose of the grant was to evaluate the central Georgia portion of the strategic east-west freight corridor, designated as High Priority Corridor Six (HPC 6), and make recommendations to more expediently connect Georgia's Atlantic ports to the west. HPC 6 is one of 44 high priority corridors identified by Congress and one of two located in Georgia. HPC 6 follows I-16, SR 96, and US 80 in Georgia and continues along US 80 through Alabama to Meridian, Mississippi (Figure E.1).

GDOT broadened the study to include a thorough evaluation of transportation, commodity movement, and economic development in a 45-county study area in south central Georgia (Figure E.2). Anchored by Columbus on the west, Savannah/Brunswick on the east, and Macon/Warner Robins in the center, central Georgia's study area encompasses both rural and urban counties strategically located to grow into a stronger and more influential "engine" driving the state's economy south of Atlanta. US 280, recently designated as a GRIP¹ corridor, was specifically studied as another east-west freight movement and economic development route. The findings and recommendations for US 280 are presented in a separate report.

The NCPD Program is a discretionary grant program funded by a single federal funding source. The purpose of the NCPD Program is to provide allocations to states and metropolitan planning organizations (MPOs) for coordinated planning, design, and construction of corridors of national significance that support economic growth and international or interregional trade. Initially envisioned as a competitive discretionary funding source for projects selected by the Federal Highway Administration, the program has evolved to one through which projects are selected by Congressional earmark in the yearly transportation appropriation cycle. NCPD funding is limited and highly competitive throughout the nation.

Freight movement along HPC 6 includes movement of military personnel and ordinance between Fort Benning, Warner Robins Air Force Base, Fort Stewart, Hunter Army Airfield, and the Port of Savannah. The importance of the corridor is magnified by the location of these installations and their transportation needs.

¹ The GRIP program (Governor's Road Improvement Program) was designed to ensure that 98% of all areas in Georgia would be within 20 miles of a four-lane road.



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Figure E.1: High Priority Corridor Six

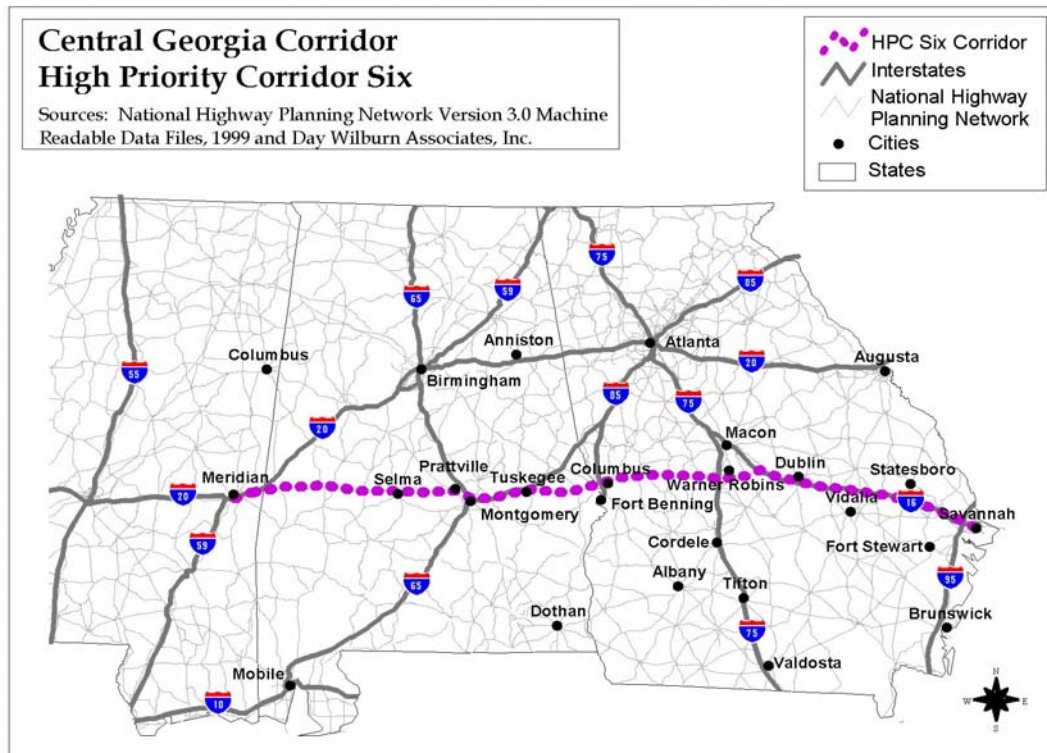
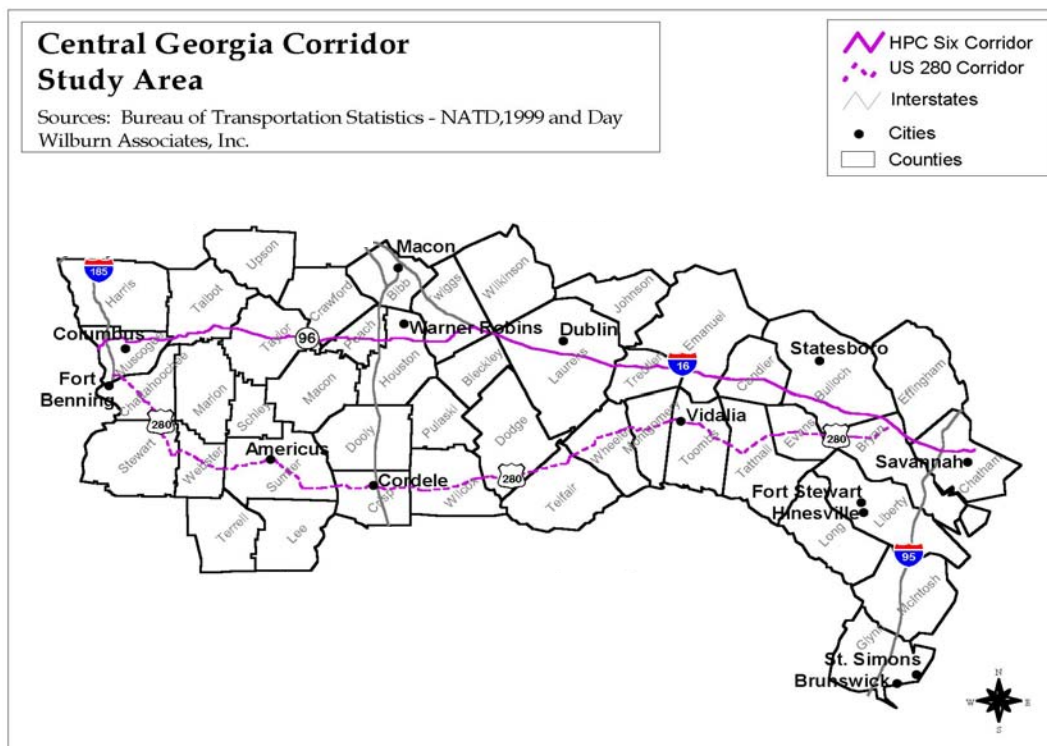


Figure E.2: Central Georgia Corridor Study Area Map





Study Background

The 45-county study area features a diverse population, often characterized by low income, high poverty, and high unemployment in comparison to the state averages. In 2000, two initiatives addressed economic and transportation conditions in Georgia. The Georgia Rural Development Council (GRDC), together with the Georgia Institute of Technology, developed *The State of Rural Georgia Report*. *The Power Alley Initiative: An Assessment of the Economic Development Potential of State Infrastructure Investment in South Georgia* was prepared by the University of Georgia's Carl Vinson Institute in December 2000. The two initiatives concluded that coordinated and customized investment strategy in central Georgia is necessary to overcome these negative characteristics. The study identified that one key factor to sustain community growth is to maximize investment return through transportation infrastructure improvement. The studies also determined that additional investments in communication infrastructure, housing availability, or other economic investments, as opposed to transportation infrastructure alone, are often key to overall sustained community growth. Along with capital investments, strong and active leadership were also recommended for successful community development.

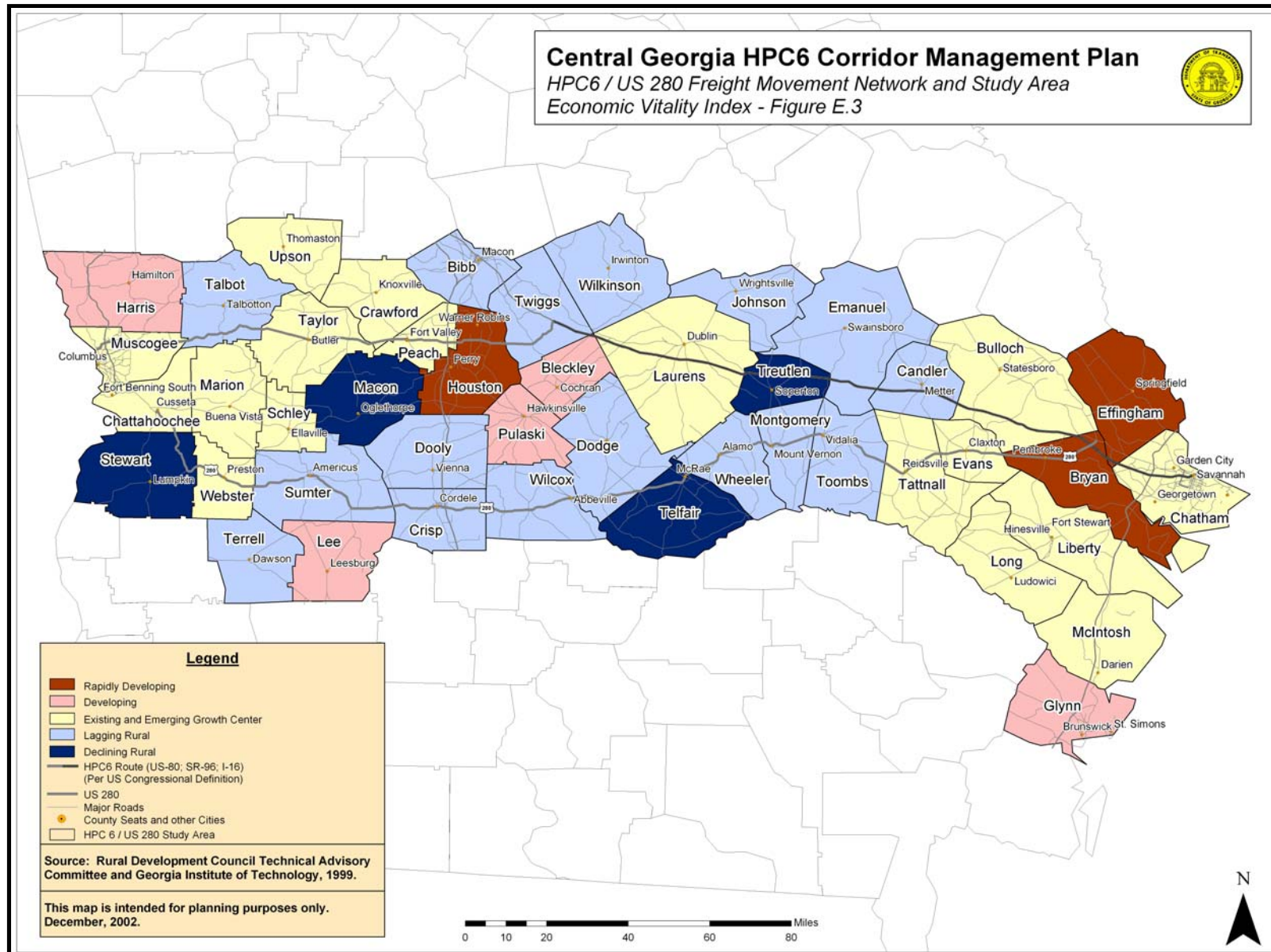
The GRDC's "Economic Vitality Index" is useful in identifying "Rapidly Developing" to "Declining" counties across Georgia. Counties in Georgia have been assigned to one of four tiers based on unemployment rates, poverty rates, and per capita income. Twenty-five of the 45 counties in the study area are classified as Rapidly Developing, Developing, or Existing/Emerging Growth Centers as shown in Figure E.3. The GRDC found these designations as representative of the potential to stimulate growth. The GRDC encourages investment in the corridor, and the Power Alley Initiative recommended focused investment in these 25 counties to create a "corridor of essential infrastructure" between Columbus and Savannah.

Building on the Economic Vitality Index, the ability of transportation infrastructure investment to promote community growth was analyzed using a Transportation Accessibility Index. The Transportation Accessibility Index reflects accessibility of counties to Interstates, commercial airports, business airports of regional impact, intermodal terminals, multi-lane highways, and major rail carriers. Decisions about transportation investment can be better considered by examining both indexes together. A county with a good (growing or emerging) economy and poor transportation access would be an excellent candidate for transportation improvements. Conversely, a county with a poor economy and high access may not need additional transportation investments, but may place more focus on other economic or social issues constraining growth and development.

To identify the specific transportation investment strategies necessary to enhance freight movement capability along HPC 6, the study team utilized several methods of data gathering and analysis. Technical data, along with input from stakeholders and



Figure E.3: Economic Vitality Index





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major users of the freight transportation system, was analyzed to identify potential transportation deficiencies in the study area.

Outreach and Public Involvement

The primary goal of the outreach process was to create ample and ongoing opportunities for input into the development of the HPC 6 Corridor Management Plan. This was accomplished primarily through a series of regional stakeholder meetings held at critical points during plan development when focused input was needed to identify deficiencies and review proposed improvements. A representative group of stakeholders knowledgeable about transportation needs within their region was present at each meeting.

The stakeholder advisory committee, which functioned as an advisory group to the study team, was comprised of approximately 2,000 members selected from organizations directly impacted by the performance of the region's transportation system. Stakeholders were selected from a variety of backgrounds including government, industry, transportation, economic development, planning and engineering, public safety, trade, tourism, and special interest topics. The group included shippers, receivers, and freight carriers across all freight modes, regional advisory councils, chambers of commerce, development authorities, and individual citizens.

Interviews were conducted with a sampling of shippers and receivers and economic development officials throughout the region. The interviews enabled the study team to understand freight operations in the corridor and problems the users encounter. Approximately 250 shippers and receivers were contacted to provide input regarding freight movement operations, transportation problems, and potential solutions for problem areas. The interview results provided helpful information for the study team to use in identifying improvements to the freight movement network.

In addition to the stakeholder meetings, GDOT staff and consultant team members participated in GRDC meetings throughout the study area to provide information and gain public input. Study information was also disseminated through newsletters, distributed at the completion of each phase, and a study website. Each newsletter provided study information and status reports, opportunities for direct public participation, and key project contacts and sources for additional information. The availability of regular study updates and information was further ensured through the use of GDOT's website, which posted newsletters, presentations, maps, and contact information.

Significant input was received throughout the study as a result of the extensive public outreach. Congestion in small downtown areas was often noted during stakeholder outreach activities. In some cases, stakeholders suggested constructing bypass routes around the towns while in other cases they asked that Intelligent Transportation System



(ITS) technology involving the use of changeable message signs and cameras to improve traffic flow be considered. Signage deficiencies were noted, as well as recommended locations for turn lanes, acceleration lanes, and deceleration lanes. Safety was a prime concern at all meetings, with stakeholders pointing out deficient intersections and roadway conditions. At-grade intersections with railroad crossings were a primary concern to the stakeholders due to the delays experienced.

Interstate interchanges with safety and/or operational needs were noted, along with improvements for military transport within the corridor. Improvement of economic development roadways, such as the widening of US 280 to four lanes, was also mentioned in stakeholder meetings, and their completion is eagerly anticipated.

Overview of Methodology

Transportation system deficiencies were identified through various methods. Technical data from the Road Characteristics Inventory (RCI) and Highway Performance Monitoring System (HPMS) databases were reviewed. These databases, maintained by GDOT and USDOT, provide current and historic information about the state's highway system. Interviews with stakeholders, including Regional Development Center (RDC) staff, economic development organization members, and GDOT staff, were conducted to identify potential deficient locations. Study team members also observed and noted deficiencies during numerous field visits and inventories.

The first two phases of the study involved evaluation of the transportation system and the identification of transportation deficiencies in the study area. Identified deficiencies were then screened in Phase 3 to determine those with both a definite freight focus and congestion or safety-based need for improvement. Figure E.4 illustrates the deficiency screening process. The first screen identified all routes in the study area that were freight-focused by virtue of being on the Strategic Highway Network System (STRAHNET)². All identified deficiencies located on the STRAHNET were considered to be freight-focused. Roadways not located on STRAHNET, but carrying above average percentages of truck traffic, were also considered to have a freight focus. Since average truck traffic for roadways in the study area was 8.5%, this was considered to be the logical threshold. Statistics from the 1998 or 2001 HPMS database were used to determine current truck traffic percentages, as well 2025 forecast truck traffic.

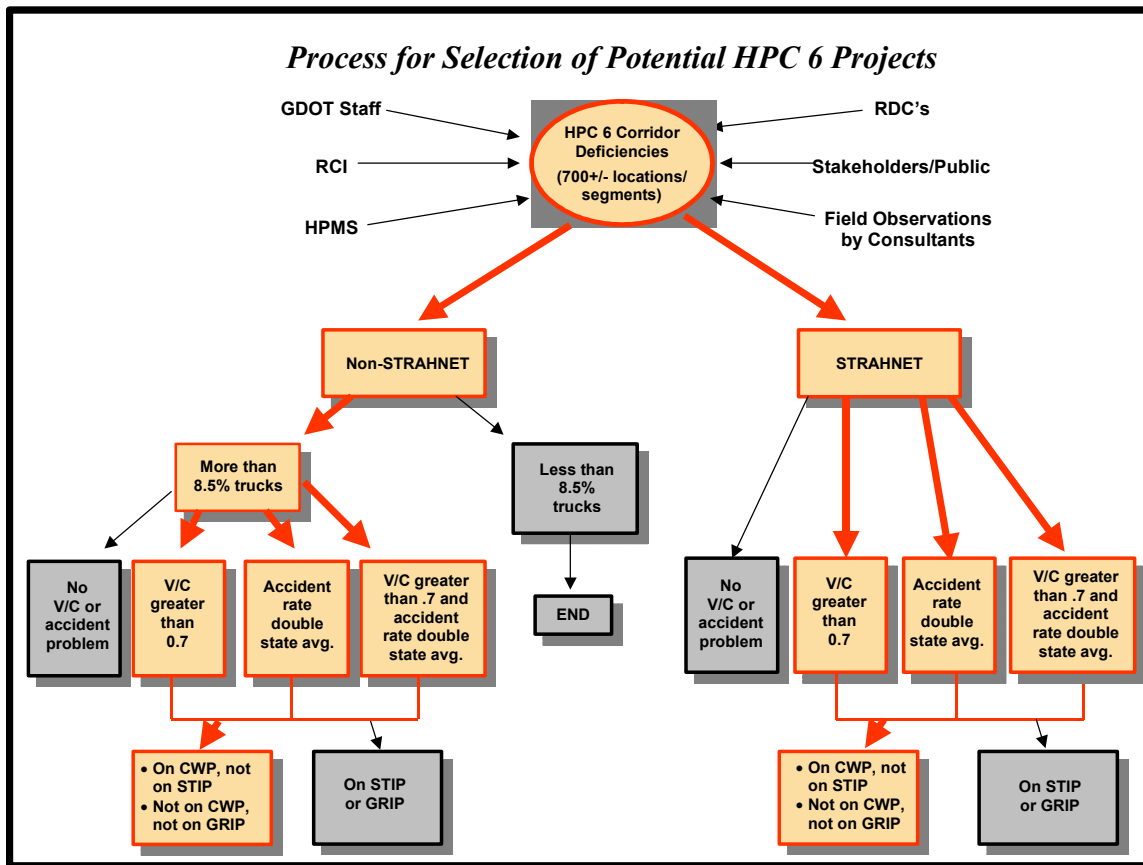
The next screen of deficiencies evaluated congestion or safety problem areas. A volume to capacity (v/c) ratio of 0.7 or greater was the threshold for identifying present and future potentially deficient locations. A v/c ratio is used to determine the volume of traffic on a roadway in relation to the capacity of the roadway. The higher a v/c ratio, the greater the level of roadway congestion. This threshold of 0.7 is lower than that used for urbanized areas (usually 0.8 to 1.0) because congestion in less populated areas is felt more keenly at lower levels and is less expected.

² STRAHNET is a system of public highways that provides access, continuity, and emergency transportation of personnel and equipment in times of peace and war.



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Figure E.4: Deficiency Screening Process



Safety-related deficient locations were identified as those with accident rates equal to or greater than double the statewide average. By utilizing a standard of accident rates double the statewide average, the study team was able to greatly narrow the list to those locations with the most serious potential safety needs³.

The final screen identified locations with a project programmed in the Statewide Transportation Improvement Program⁴ (STIP) or included in the GRIP. Deficiencies with projects included in either of these programs were considered to have a solution identified and were, therefore, not carried forward in the evaluation process.

Hundreds of potential deficiencies were identified and screened through the process described above. The screening process resulted in a list of 34 deficient locations for which projects were developed.

³ The list of identified deficiencies including safety-related locations is included in the Phase 2 Report, Chapter 5.

⁴ The STIP is an annual, financially constrained list of projects programmed by GDOT for the next three years. Funding has been identified and secured for all projects listed in the three-year STIP.



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Project Development

Project descriptions were developed for the final 34 identified deficient locations or roadway segments, along with cost estimates and recommended implementation phases (short, mid, or long-range). Implementation phasing for the projects located on the Interstate system were deferred for further analysis during development of the Georgia Interstate System Plan, currently underway and scheduled for completion in early 2004. The project descriptions, cost estimates, and recommended phases are shown in Table E.1.

In addition to the 34 projects, many of the deficiencies identified during the study were recommended for implementation as best practices during future construction or rehabilitation of existing intersections, roadways, or bridges. These recommended best practices consist of shoulder widenings, including the inside shoulders of Interstates; standards for future bridge replacements; intersection resurfacing; railroad crossing grade separations; passing lanes; and white topping (concrete overlay on asphalt) at high truck movement intersections. The locations that would benefit from the implementation of these practices were presented as Appendices D-H to the Phase 2 report.

Table E.1: Projects

MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	COST ESTIMATE	PHASE*
SR 307/ I-16	Chatham	SR 307 (Dean Forest Road)/I-16 Interchange improvement	\$27,774,440	S
New Location	Chatham	Jimmy DeLoach Parkway Extension from SR 21 to SR 25	\$15,137,043	S
SR 96	Houston	Phase 1 of 5: Operational improvements, intersection improvements, and turn lanes on SR 96 between I-75 and SR 247	\$25,785,772	S
SR 96	Peach	Connect Fort Valley Bypass (SR 49C) to SR 96 east of Fort Valley connecting existing bypass to SR 96	\$16,061,847	S
Subtotal			\$84,759,102	
SR 49	Bibb	Widen SR 49 from five lanes to six lanes divided from Maynard Street to New Clinton Road	\$20,314,355	M
US 41	Bibb	Widen US 41 from five lanes to six lanes divided between US 129 and I-75	\$7,545,000	M
US 301 BYPASS	Bulloch	Widen US 301 from two to four lanes divided from US 80 to SR 67	\$3,991,972	M
SR 204	Chatham	Reconstruct SR 204 from four-lane arterial to six-lane freeway from US 17 to Veterans Parkway	\$29,475,873	M

* S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred to Interstate System Plan



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Table E.1: Projects (cont'd.)

MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	COST ESTIMATE	PHASE*
SR 21 SPUR	Chatham	Widen SR 21 Spur from two lanes to five lanes from SR 25 E to end of road	\$13,018,714	M
SR 96	Houston	Phase 2 of 5: Operational and grade separation improvements on SR 96 between I-75 and Ocmulgee River	\$67,985,990	M
SR 96	Houston	Phase 3 of 5: Purchase ROW for future four-lane divided roadway and frontage roads on SR 96 between Lake Joy Road and Thompson Mill Road	\$95,811,467	M
SR 119	Liberty	Widen the common part of SR 119 and SR 196 from four lanes to six lanes	\$24,491,990	M
US 80	Muscogee	Widen US 80 from the Alabama state line to I-185 from four lanes to six lanes	\$17,419,612	M
Subtotal			\$280,054,973	
US 129	Bibb	Widen US 129 from four to six lanes from .5 miles north of SR 49 to .5 miles north of North Graham Road and widen US 129 from six to eight lanes from US 23 to .5 miles north of SR 49	\$44,795,300	L
US 41	Bibb	Widen US 41 between Houston Road and US 129 from six to eight lanes	\$42,232,167	L
US 129	Bibb	Widen US 129 from six to eight lanes from I-16 EB exit ramp to US 23/ Emery Hwy.	\$4,377,731	L
US 129	Bibb	Widen US 129 from four to six lanes divided from South Bibb County Line to SR 41	\$35,822,663	L
SR 21	Chatham	Reconstruct Derenne Avenue from I-516 to Truman Parkway as a four-lane freeway with interchange at Abercorn and Truman Parkway	\$147,944,762	L
SR 25	Chatham	Widen SR 25 from five lanes to six lanes divided from SR 25C to SR 21 Spur	\$9,142,592	L
SR 96	Houston	Phase 4 of 5: Widen SR 96 from two lanes to four-lane divided from US 41 to Thompson Mill Road	\$92,737,050	L
SR 96	Houston	Phase 5 of 5: Widen SR 96 from two lanes to four lanes from Fort Valley to US 41 and from Thompson Mill Rd to I-16	\$87,780,944	L
US 129	Houston	Widen US 129 from five lanes to six lanes divided from SR 247 C to SR 96	\$43,140,195	L
US 27	Muscogee	Construct four-lane freeway with four-lane frontage road on US 27/US 280 from Alabama state line to 1.5 miles east of I-185	\$264,901,144	L
Subtotal			\$772,874,548	

* S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred to Interstate System Plan



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Table E.1: Projects (cont'd.)

MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	COST ESTIMATE	PHASE*
I-75	Bibb	Widen I-75 from six to eight lanes from south Bibb County line to I-475	\$17,329,096	D
I-16	Bryan	Widen I-16 from four to six lanes from east Bryan County line to US 280	\$24,143,847	D
I-95	Bryan	Widen I-95 from six to eight lanes one mile south of US 17 to north Bryan County line	\$19,274,262	D
I-16	Chatham	Widen I-16 from four to six lanes throughout Chatham County and reconstruct I-16/I-95 interchange and I-16/I-516	\$69,336,434	D
I-516	Chatham	Widen the entire I-516 corridor from four to six lanes	\$42,909,392	D
I-95	Chatham	Widen I-95 from six to eight lanes throughout Chatham County	\$93,785,574	D
I-75	Crisp	Widen I-75 from four to eight lanes throughout Crisp County	\$69,725,099	D
I-75	Dooly	Widen I-75 from six to eight lanes throughout Dooly County	\$60,801,520	D
I-16	Effingham	Widen I-16 from four to six lanes throughout Effingham County	\$11,835,970	D
I-95	Glynn	Widen I-95 from four to six lanes from US 82/17 to US 25	\$ 73,316,672	D
I-185	Harris/ Muscogee	Widen I-185 from four to six lanes from MP 12 in Muscogee County to MP 19 in Harris County	\$17,066,653	D
I-75	Houston	Widen I-75 from six to eight lanes throughout Houston County	\$62,782,783	D
I-185	Muscogee	Widen I-185 or construct parallel facility east of I-185 connecting US 280 and US 80	\$215,817,000	D
I-185	Muscogee	Widen I-185 from four to six lanes from US 80 to north Muscogee County line	\$15,900,614	D
I-75	Peach	Widen I-75 from six to eight lanes throughout Peach County	\$45,968,564	D
Subtotal			\$794,024,920	
Total			\$2,030,695,190	

* S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred to Interstate System Plan



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Projects Recommended for NCPD Funding

NCPD funding is limited and therefore very competitive among high priority corridors throughout the nation. A key focus of this study and the resultant corridor plan was to define a short list of improvements with the greatest potential for providing overall benefit to the freight-moving capacity of HPC 6.

The projects recommended for pursuit of NCPD funding are located in two general areas within the study area: SR 96 (Peach, Houston, and Twiggs Counties) south of Warner Robins and near the Port of Savannah. Projects located on the HPC 6 mainline and near the Port of Savannah provide the maximum benefit to freight and military movement along the corridor. Descriptions and cost estimates of the seven recommended projects are shown in Table E.2, with their locations illustrated in Figure E.5.

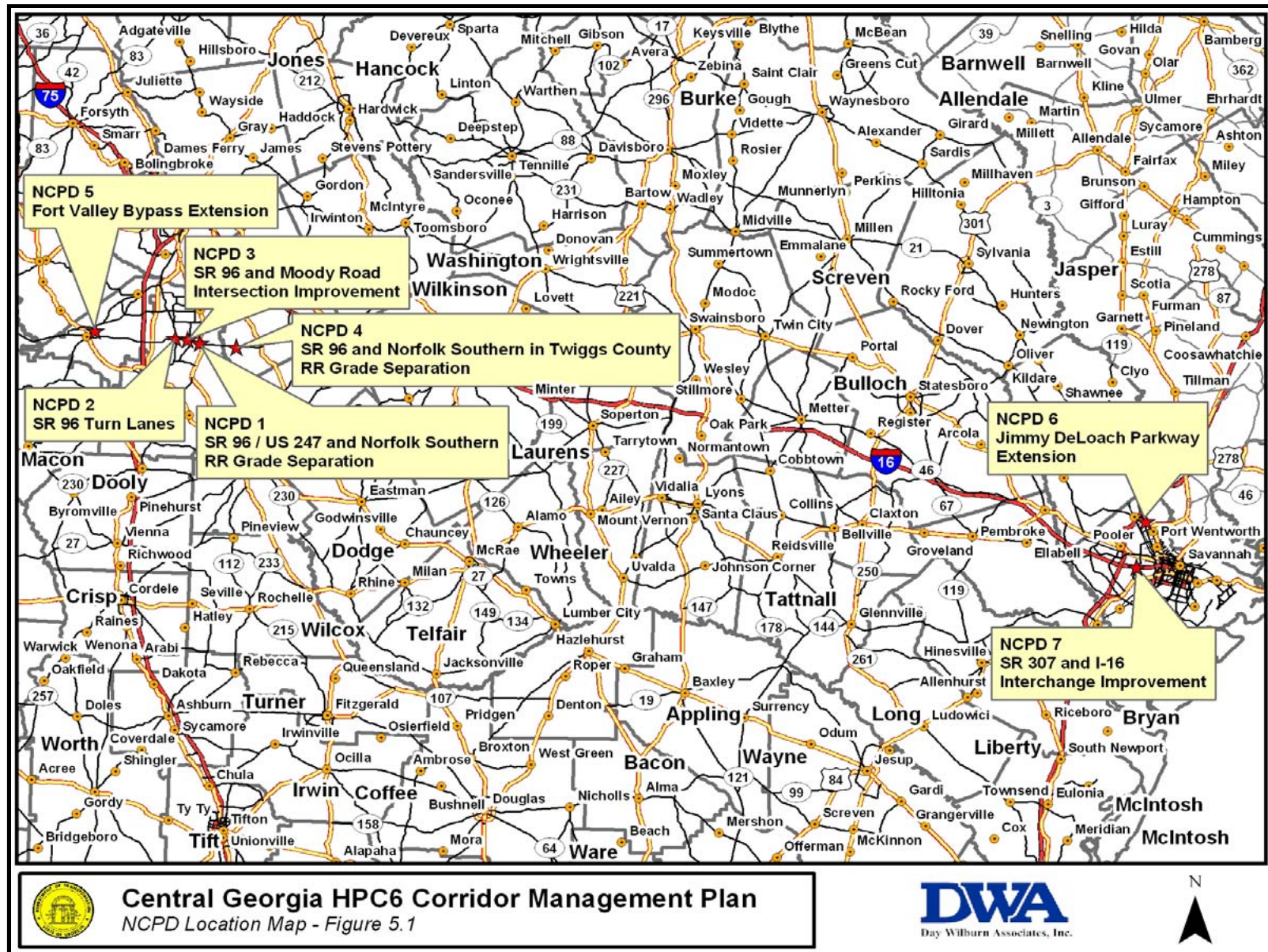
Table E.2: NCPD Projects

Reference Number	Project Location and General Description	Cost Estimate
NCPD 1	State Route 96/State Route 247 Intersection Improvements and Grade Separation, Houston County	\$21,128,483
NCPD 2	State Route 96 Turn Lanes, Houston County	\$801,676
NCPD 3	State Route 96/Moody Road Intersection Improvement, Houston County	\$8,755,697
NCPD 4	State Route 96/Norfolk Southern Railroad Grade Separation, Twiggs County	\$2,237,343
NCPD 5	Ft. Valley Bypass Extension Northeast of Fort Valley, Peach County	\$16,061,847
NCPD 6	Jimmy DeLoach Parkway Extension from SR 21 to SR 25, Chatham County	\$15,137,043
NCPD 7	Interstate 16/Dean Forest Road (SR 307) Interchange Improvement, Chatham County	\$27,774,440
Total		\$91,896,529

Detailed information for each project, including its location, description, need and purpose, concept sketch, and detailed cost estimate, is located in Chapter 5 and Appendix D of the HPC 6 Corridor Management Plan.



Figure E.5: NCPD Project Locations





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Next Steps

GDOT will utilize the package of NCPD recommended projects to compete with other high priority corridors for NCPD funding. The solid freight movement related need and purpose developed for each project will provide a strong basis in competing for the funding. While the requirements for NCPD related funds may change under future federal transportation legislation, GDOT's need and purpose based approach for requesting NCPD funds through Georgia's Congressional delegation will provide a competitive edge for Georgia's pursuit of future NCPD funding.

In addition to the 34 projects identified for enhancing freight movement in the central Georgia corridor and the seven projects considered to be most competitive for NCPD funding, other freight movement deficiencies were identified through the study. A list of pavement, bridge, and railroad crossing deficiencies has been provided to each GDOT District Planning and Programming Engineer in the study area for their utilization in enhancing freight movement throughout the study area.

Conclusion

During the three phases of the Central Georgia Corridor Study, data from technical analysis and interviews with stakeholders and users of the transportation system resulted in the identification of hundreds of potentially deficient locations. These freight focused locations were screened to identify those with a congestion or safety deficiency and without an identified solution. The study identified 34 deficient locations that met the criteria. Seven projects along HPC 6 that would be the most competitive for NCPD funding were defined in detail, with a freight related need and purpose statement supporting each project.

For further details about the methodology used for the study and its results, refer to:

Phase I Report (Corridor & Transportation System Evaluation)
Phase II Report (Development, Evaluation, & Selection of Recommended Improvements)
Final Report (Central Georgia HPC 6 Corridor Management Plan)

For additional information concerning the Central Georgia Corridor Study, contact:

Georgia Department of Transportation, Office of Planning at (404) 657-6699