SECTION E
MISSISSIPPI HIGHWAYS

As explained in the main Alliance Report, the specific highways determined to comprise the LATTS Strategic Highway System were identified using a series of criteria to help identify a network of highways which had the greatest significance regarding trade with Latin America. The 22,859-mile mainline LATTS Strategic Highway System shown in Exhibit E-1 is the result of this process.

More than six percent of the mainline LATTS Strategic Highway System (1,396 miles) is located in Mississippi (Exhibit E-2). The Mississippi components[1] include the following:

- All of Mississippi's 685 miles of interstate highways, including:
  - I-10, a major east-west interstate linking west Texas with Houston, Gulfport, Mobile, and Jacksonville
  - I-20, a major east-west interstate linking central Texas with Jackson, Birmingham, and Atlanta
  - I-55, a major north-south interstate linking St. Louis, Memphis, Jackson, and New Orleans
  - I-59 between Meridian and the Louisiana State Line near New Orleans
  - Several urban interstates, including routes I-110 and I-220
- 711 miles of non-interstate National Highway System (NHS) facilities
  - U.S. 45/S 63 from I-20 to I-10 at Pascagoula (177 miles) on the eastern edge of the state, part of Corridor 3 (New Orleans to Washington, D.C. and Pennsylvania). This section is mostly two lanes, but has some four-laned sections with partial access control.
  - U.S. 49 from Jackson to I-10 @ Gulfport (146 miles), part of Corridor 7. U.S. 49 is a four-lane highway with partial access control.
  - U.S. 78 from the Tennessee State Line near Memphis to the Alabama State Line (116 miles), part of Corridor 20. This highway has been upgraded to interstate standards throughout (four lanes, full access control).

[1] Mileage, number of lanes, pavement condition and other data reported herein were taken from the HPMS Database, as discussed subsequently, and may differ from information in other databases.

Exhibit E-1
LATTS STRATEGIC HIGHWAY SYSTEM

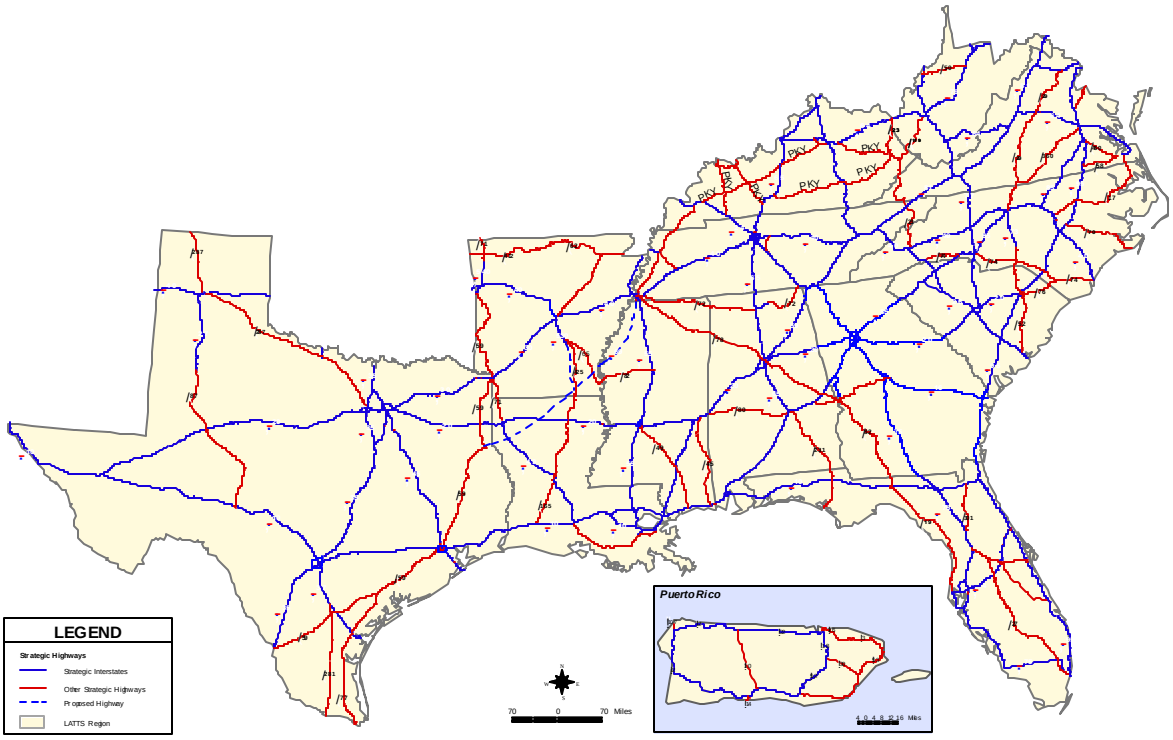
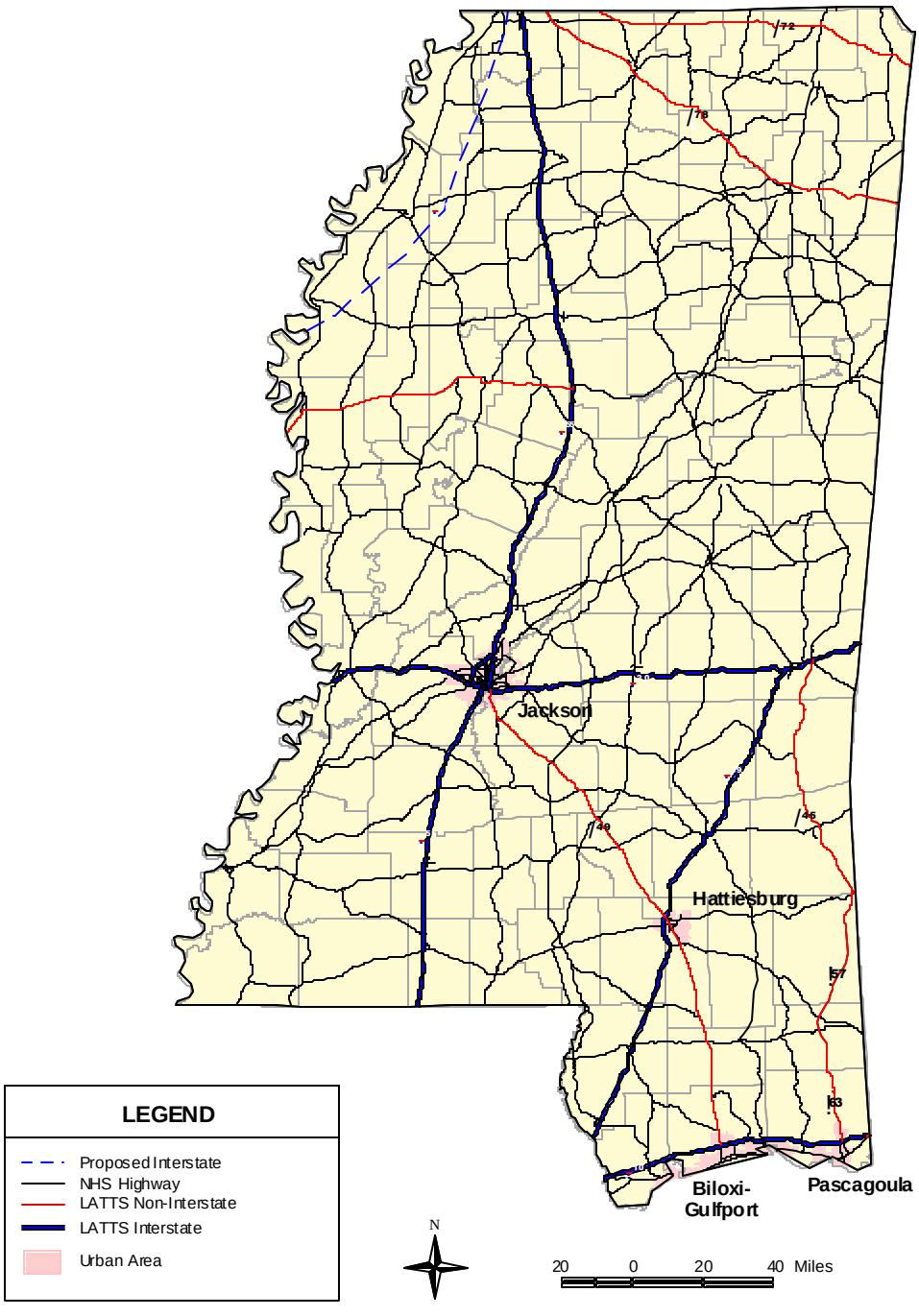


Exhibit E-2
MISSISSIPPI LATTS HIGHWAY SYSTEM

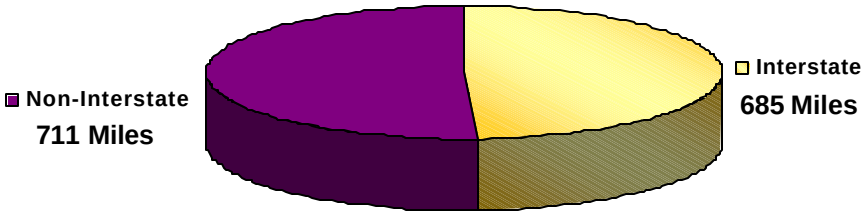


- U.S. 82 from the Arkansas State Line to I-55 (83 miles), part of Corridor 21. This highway is four lanes, with partial access control.
- U.S. 72 from the Tennessee State Line near Memphis to the Alabama State Line (91 miles), part of Corridor 24 (Memphis to Chattanooga). This facility is both two and four lanes, and is also part of Congressional High Priority Corridor 7 (Memphis to Chattanooga).
- Part of new Congressional High Priority Corridor 18 (98 miles) is proposed to be located in Mississippi, crossing the Mississippi River north of Greenville and entering Tennessee south of Memphis.

▶ LATTS connectors linking a LATTS Strategic Highway with a LATTS airport or waterport were included in the Strategic Highway System. However, because of database differences, it was not possible to analyze LATTS connectors in the same manner and to the same level of detail as for mainline highways. LATTS connectors are discussed at the conclusion of Section E.

Exhibit E-3 displays the composition of Mississippi's portion of the LATTS highways by system.

Exhibit E-3
LATTS MAINLINE STRATEGIC HIGHWAY SYSTEM – MISSISSIPPI PORTION



1,396 Miles Total **Excludes LATTS Connectors**

LATTS HIGHWAYS VS. LATTS TRADE CORRIDORS

The 22,859 miles of "mainline" LATTS Strategic Highways were grouped into 25 LATTS Trade Corridors (Exhibit E-4). The Trade Corridors were established using logical origins/destinations and assigning each highway to only one corridor. Each corridor was assigned a number (1-25) and was referred to by the primary highway within the corridor (i.e.,
I-40). Portions of seven LATTS Trade Corridors cross Mississippi, including:

- Corridor 3 (I-59/81) – New Orleans to Washington, D.C. and Pennsylvania
- Corridor 7 (I-55) – St. Louis to New Orleans
- Corridor 13 (I-20) – El Paso to Wilmington, NC
- Corridor 14 (I-10) – West Texas to Jacksonville
- Corridor 20 (U.S. 19/78/220) – Tampa to Memphis
- Corridor 21 (U.S. 65/67/165) – St. Louis to Lake Charles
- Corridor 24 (U.S. 72) – Memphis to Chattanooga

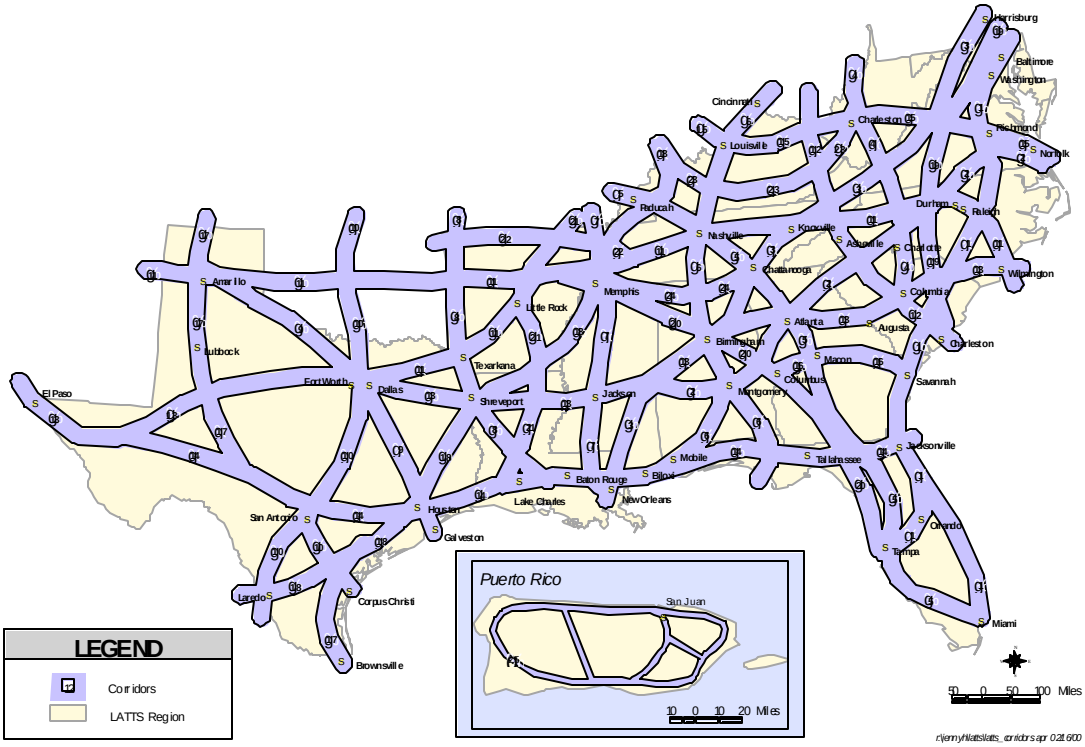
HIGHWAY DATABASES

Two main sources of data were used for the analysis of highway investment. The first one, the Highway Performance Monitoring System (HPMS), includes information about the characteristics and conditions of public highways. The second source of data was the LATTS estimates of current and forecasts of future Latin America trade flows.

HPMS Database

The HPMS database was selected for the LATTS analyses of highway system investment needs because (1) it covered the entire Alliance Region, (2) it employs a consistent format and data definitions and (3) no additional primary data collection was necessary. Nevertheless, it was recognized that (1) the data is time sensitive (i.e., since the latest available information at the time of these analyses was for 1997, it is expected that improvements and additions will have occurred subsequently) (2) the HPMS database may have minor differences relative to other databases that individual Alliance members might use for their own planning and system management purposes and (3) information is not always available for every segment of the LATTS Strategic Highway System.

Exhibit E-4
LATTS TRADE CORRIDORS



For this study, only that portion of the HPMS database corresponding to the selected LATTS Strategic Highway Network was utilized. For Mississippi, the LATTS HPMS database consisted of 1,176 records describing 1,204 miles of highway on the LATTS Strategic Highway Network.

Trade Flows

As explained in the main Alliance report, 1996 and expected 2020 trade volumes with Latin America were estimated and the portion of this trade that would be using highway facilities was translated into truck flows. The truck flows were then assigned to specific highway facilities using GIS generated shortest time paths. The LATTS truck traffic assignment was then merged with the LATTS HPMS database for further analysis.

The LATTS procedure for assigning truck flows is appropriate for a macro-scale study such as LATTS. Nevertheless, it should be noted that the procedure produces approximations which may vary slightly from actual conditions. That is, an all-or-nothing assignment on the basis of shortest time paths favors high speed facilities and likely under estimates flows on facilities with lower speeds. In reality, a modest amount of truck flows could choose a lower speed path for a variety of unique reasons. Also, some LATTS trucks undoubtedly will travel on facilities other than those included in the LATTS Strategic Highway System (e.g., a local road to reach a warehouse or plant). Despite these circumstances, the LATTS procedure is deemed to be sufficiently valid for purposes of a regional transportation study.

As a result of this assignment methodology, 714 miles of the Strategic Highway Network in Mississippi were shown to carry LATTS truck traffic. All but 47 miles are interstate highways.

LATTS TRUCK TRAFFIC IN MISSISSIPPI

The LATTS highway database was used to quantify the LATTS truck traffic in terms of annual Vehicle Miles of Travel (VMT) and to compare LATTS truck traffic to total truck traffic (LATTS and others). Results of this analysis by corridor for 1997 and 2020 are illustrated in Exhibit E-5. More detailed information is presented in Exhibit E-6.

Of the seven LATTS corridors crossing Mississippi, only four were assigned LATTS truck traffic based on study procedures. The three corridors not assigned LATTS traffic in Mississippi, Corridor 20 (U.S.19/U.S.78/U.S.280 from Tampa, FL to Memphis, TN), Corridor 21 (U.S.67/U.S.65/U.S.1 from Lake Charles, LA to St. Louis, MO), and Corridor 24 (U.S.72 from Memphis, TN to Chattanooga, TN), were not assigned any LATTS traffic in any Alliance member. They are comprised mostly of U.S. Routes as opposed to interstates.

Exhibit E-5
LATTS ANNUAL TRUCK VMT IN MISSISSIPPI

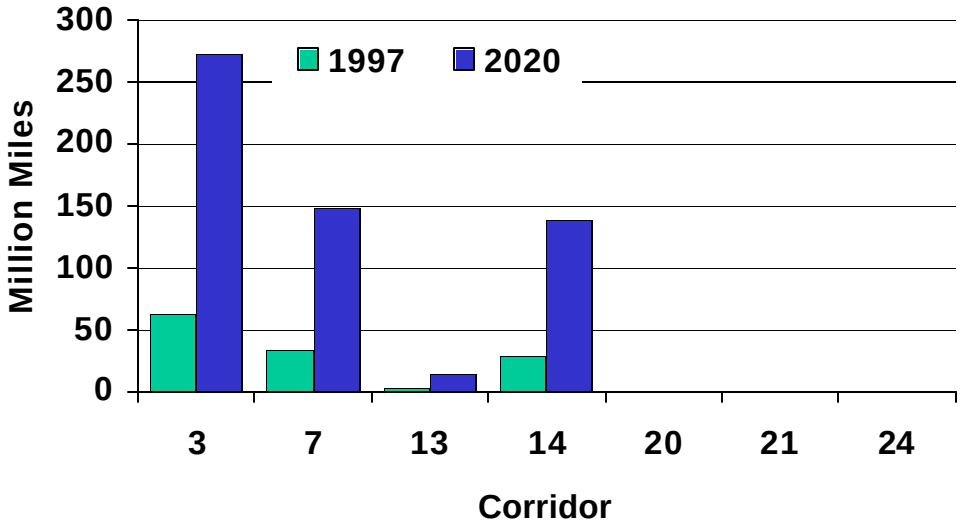


Exhibit E-6
MISSISSIPPI LATTS TRUCK TRAFFIC

Corridor/ Functional Class	Length (Miles)	1997 Annual Truck VMT (Million Miles)				2020 Annual Truck VMT (Million Miles)			
		All Trucks Full Network	All Trucks Part. Network(1)	LATTS Trucks Only	LATTS Percent (2)	All Trucks Full Network	All Trucks Part. Network(1)	LATTS Trucks Only	LATTS Percent (2)
3	**I-59, I-81, I-66**	**New Orleans, LA to DC and Pennsylvania**							
R.Interstate	140.38	223.43	223.43	51.14	22.9%	550.37	550.37	221.81	40.3%
R.Other PA	71.71	15.31	1.35	0.26	19.4%	16.52	2.86	1.09	38.0%
U.Interstate	31.33	73.86	73.86	11.48	15.5%	151.68	151.68	49.83	32.8%
U.Other Fwy.	2.70	1.13	-	-	0.0%	1.87	-	-	0.0%
U.Other PA	9.68	7.92	7.92	0.16	2.1%	15.19	15.19	0.68	4.5%
TOTAL	255.80	321.65	306.56	63.04	20.6%	735.63	720.11	273.40	38.0%
7	**I-55**	**New Orleans, LA to St. Louis, MO**							
R.Interstate	258.01	416.96	416.96	28.53	6.8%	801.63	801.63	126.67	15.8%
R.Other PA	131.57	136.73	9.83	0.96	9.8%	201.54	17.13	4.19	24.5%
U.Interstate	32.21	132.80	127.40	3.45	2.7%	206.51	197.38	15.32	7.8%
U.Other PA	14.11	20.99	9.17	0.49	5.3%	31.06	15.01	2.13	14.2%
TOTAL	435.90	707.48	563.36	33.43	5.9%	1,240.75	1,031.15	148.32	14.4%
13	**I-20, US 76**	**El Paso, TX to Wilmington, NC**							
R.Interstate	97.29	239.09	239.09	2.22	0.9%	372.86	372.86	11.04	3.0%
U.Interstate	43.99	137.98	122.63	0.89	0.7%	212.50	194.47	4.24	2.2%
TOTAL	141.28	377.07	361.72	3.11	0.9%	585.36	567.33	15.27	2.7%
14	**I-10**	**West Texas to Jacksonville, FL**							
R.Interstate	62.36	150.39	150.39	23.13	15.4%	362.00	362.00	111.89	30.9%
U.Interstate	18.92	47.84	44.34	5.55	12.5%	96.68	90.02	26.76	29.7%
TOTAL	81.29	198.22	194.72	28.68	14.7%	458.68	452.02	138.65	30.7%
20	**US 19, US 78, US 280**	**Tampa, FL to Memphis, TN**							
R.Other PA	103.27	137.62	-	-	0.0%	175.05	-	-	0.0%
U.Other Fwy.	13.12	23.23	-	-	0.0%	32.39	-	-	0.0%
TOTAL	116.39	160.85	-	-	0.0%	207.43	-	-	0.0%
21	**US 67, US 65, US 165**	**Lake Charles, LA to St. Louis, MO**							
R.Other PA	65.54	38.27	-	-	0.0%	53.91	-	-	0.0%
U.Other PA	17.46	19.47	-	-	0.0%	22.96	-	-	0.0%
TOTAL	83.00	57.74	-	-	0.0%	76.88	-	-	0.0%
24	**US 72**	**Memphis, TN to Chattanooga, TN**							
R.Other PA	86.36	48.32	-	-	0.0%	68.74	-	-	0.0%
U.Other PA	4.30	2.38	-	-	0.0%	3.30	-	-	0.0%
TOTAL	90.67	50.69	-	-	0.0%	72.04	-	-	0.0%
ALL CORRIDORS									
R.Interstate	558.04	1,029.86	1,029.86	105.03	10.2%	2,086.86	2,086.86	471.41	22.6%
R.Other PA	458.45	376.25	11.18	1.22	10.9%	515.76	19.99	5.28	26.4%
U.Interstate	126.45	392.48	368.23	21.36	5.8%	667.37	633.55	96.14	15.2%
U.Other Fwy.	15.82	24.36	-	-	0.0%	34.25	-	-	0.0%
U.Other PA	45.55	50.76	17.09	0.65	3.8%	72.52	30.20	2.81	9.3%
TOTAL	1,204.32	1,873.70	1,426.36	128.26	9.0%	3,376.77	2,770.60	575.64	20.8%

Notes: (1) Total truck VMT for highways carrying LATTS traffic only.
(2) Percentage calculated based on Partial Network.

Corridor 3 (I-59/I-81/I-66 from New Orleans, LA to Washington D.C. and Pennsylvania) was assigned the most LATTS traffic in terms of VMT (273 million miles in 2020). However, the highest volume of LATTS trucks is found on Corridor 14 (I-10 from West Texas to Jacksonville, FL) with 2020 average annual daily truck volume of 4,673 compared to 2,928 on Corridor 3. Another heavily traveled corridor is Corridor 7 (I-55

from New Orleans, LA to St. Louis, MO) with 148 million miles from LATTS trucks in 2020 (but an average volume of 930 LATTS trucks).

Of LATTS truck traffic in Mississippi, 82 percent is on the rural interstate system and 17 percent is on the urban interstate system. The percentage of LATTS trucks to total trucks is expected to grow from 9 percent in 1997 to 21 percent in 2020 on those highways assigned LATTS traffic (from 7 to 17 percent for the entire LATTS strategic network). This growth in LATTS share of total truck traffic is due to the fact that LATTS truck traffic is expected to increase 4.5 fold between 1997 and 2020 while overall truck traffic would increase by 1.5 fold only without LATTS trucks and 1.8 fold with LATTS trucks. LATTS truck share of total trucks varies from corridor to corridor. The highest shares in Mississippi are 38 percent on Corridor 3 and 31 percent on Corridor 14.

IMPACT MEASURES

The purpose of the highway analysis portion of this study was to quantify the LATTS Strategic Network total investment needs and the incremental investment needs that could be attributed to LATTS truck traffic specifically. Because of the macro-scale nature of this study, the investment needs analysis focused on capacity and pavement resurfacing needs.

In order to identify needs due to expected traffic (cars and trucks) other than LATTS and needs specifically attributable to LATTS traffic, two sets of capacity and pavement needs were estimated. First, future needs were estimated based on the "normal" traffic as defined by the HPMS database which includes AADT, truck percentages, and growth rate. Future needs were estimated a second time with the same HPMS traffic plus the "additional" LATTS truck traffic above and beyond the traffic that would be estimated using the "normal" growth. The difference in needs between the two was considered the incremental needs due to growth in LATTS traffic.

Minimum tolerable conditions (MTCs) for both congestion (capacity) and pavement conditions were applied uniformly to all segments of the LATTS Strategic Highway System. These MTCs are described in more detail in the main Alliance report and are summarized below.

- Capacity needs were based on Level of Service (LOS) not exceeding:
  - LOS C for rural highways
  - LOS D for urban highways
- Pavement resurfacing needs were based on the following minimum pavement condition rating:
  - Interstate type facilities: PSR 3.0
  - Other facilities: PSR 2.5

The LATTS minimum tolerable conditions are in no way intended to replicate or replace values that individual members of the Alliance might consider to be more appropriate for their circumstances. The LATTS MTCs were established for this study so as to be consistent for all the Alliance members.

To price the identified capacity or pavement needs, the same unit costs were used consistently throughout the Alliance Region. These unit costs were provided by the

FHWA and correspond to 1997 national averages. To maintain consistency throughout the Region, no attempt was made to tailor these unit costs to each state beyond the stratification provided by the FHWA.

CAPACITY NEEDS

A needs analysis model was developed to analyze capacity needs for 1997 and 2020. For the year 2020, capacity needs with and without the "additional" LATTS traffic were estimated. The model was then applied to every one of the HPMS records comprising the Mississippi LATTS highway database and the results were summarized. This model applied the same methodology, outlined in the main Alliance report, and found in the HPMS Analytical Package, to calculate capacity needs. The results reflect the information contained in the HPMS Database and do not consider any improvements that may have occurred subsequently or any planned improvements.

Detailed results for Mississippi are presented in Exhibit E-7. The total number of Mississippi LATTS Strategic Highway Network road miles with capacity deficiencies in 1997 and 2020 are shown in columns 4 through 6. For 2020, the amount of capacity deficiencies with and without the "additional" LATTS traffic is shown.

These analyses indicate that while only 40 of the LATTS roadway miles in Mississippi, or 3.2 percent of the Mississippi portion of the LATTS Strategic Network, have existing capacity problems. The analyses also show that the majority of the capacity deficiencies will occur in the next 20 years unless capacity is added.

LATTS truck will increase congested miles of roadway by about 5 percent and the number of needed lane miles by 19 percent. The difference between the percentages of deficient miles and the number of needed lane miles is due to the fact that LATTS traffic uses some facilities which will be already congested with the normal traffic growth. LATTS additional traffic simply increases the amount of capacity needed to relieve the congestion. These percentages are significant but they also indicate that the majority of the congestion problems in Mississippi are not due to LATTS traffic but expected overall growth in total traffic. However, unless these capacity needs are met, LATTS truck traffic will be affected by all the capacity deficiencies regardless of the source. As congestion increases, LATTS trucks like other traffic, will experience lower operating speeds, frequent speed changes, lower reliability, and increased operating costs.

Exhibit E-7
MISSISSIPPI CAPACITY INVESTMENT NEEDS

Corridor/ Functional Class	Length (Miles)	Existing Lane Miles	Capacity Analysis							
			Deficient Mileage			2020 Needed Lane Miles		2020 Cost in $Million		
			1997	2020 W/O LATTS Added Traffic	2020 With LATTS Added Traffic	Base	With LATTS Added Traffic	Base	With LATTS Added Traffic	% Increase Due to LATTS
3	**I-59, I-81, I-66**		**New Orleans, LA to DC and Pennsylvania**							
R.Interstate	140.38	561.51	-	-	0.75	-	1.51	-	2	0.0%
R.Other PA	71.71	240.61	-	1.46	1.46	2.93	2.93	2	-	0.0%
U.Interstate	31.33	125.30	-	-	2.67	-	5.35	-	19	0.0%
U.Other Fwy.	2.70	10.82	-	-	-	-	-	-	-	0.0%
U.Other PA	9.68	38.72	-	-	-	-	-	-	-	0.0%
TOTAL	255.80	976.97	-	1.46	4.89	2.93	9.78	2	20	858.1%
7	**I-55**		**New Orleans, LA to St. Louis, MO**							
R.Interstate	258.01	1,032.06	-	15.86	15.86	31.73	31.73	36	36	0.0%
R.Other PA	131.57	520.52	2.87	4.86	4.86	9.73	9.73	9	9	0.0%
U.Interstate	32.21	147.50	5.20	11.54	13.85	39.55	44.17	137	153	11.7%
U.Other PA	14.11	63.28	2.19	9.04	9.04	18.08	18.08	39	39	0.0%
TOTAL	435.90	1,763.36	10.26	41.31	43.62	99.08	103.71	221	237	7.3%
13	**I-20, US 76**		**El Paso, TX to Wilmington, NC**							
R.Interstate	97.29	389.15	-	4.44	4.44	8.89	8.89	10	10	0.0%
U.Interstate	43.99	175.96	2.81	10.58	10.58	26.77	26.77	93	93	0.0%
TOTAL	141.28	565.12	2.81	15.02	15.02	35.66	35.66	103	103	0.0%
14	**I-10**		**West Texas to Jacksonville, FL**							
R.Interstate	62.36	249.45	4.33	62.36	62.36	153.74	206.70	149	168	13.3%
U.Interstate	18.92	75.70	1.00	12.58	16.59	29.16	39.97	101	139	37.1%
TOTAL	81.29	325.15	5.33	74.94	78.96	182.90	246.67	250	307	22.9%
20	**US 19, US 78, US 280**		**Tampa, FL to Memphis, TN**							
R.Other PA	103.27	395.92	8.59	8.59	8.59	17.18	17.18	14	14	0.0%
U.Other Fwy.	13.12	52.46	-	-	-	-	-	-	-	0.0%
TOTAL	116.39	448.38	8.59	8.59	8.59	17.18	17.18	14	14	0.0%
21	**US 67, US 65, US 165**		**Lake Charles, LA to St. Louis, MO**							
R.Other PA	65.54	261.01	0.47	0.47	0.47	0.93	0.93	1	1	0.0%
U.Other PA	17.46	70.15	0.16	0.39	0.39	0.78	0.78	2	2	0.0%
TOTAL	83.00	331.16	0.63	0.86	0.86	1.71	1.71	2	2	0.0%
24	**US 72**		**Memphis, TN to Chattanooga, TN**							
R.Other PA	86.36	245.84	12.05	27.83	26.52	55.34	55.34	45	45	0.0%
U.Other PA	4.30	17.51	-	-	-	-	-	-	-	0.0%
TOTAL	90.67	263.36	12.05	27.83	26.52	55.34	55.34	45	45	0.0%
ALL CORRIDORS										
R.Interstate	558.04	2,232.17	4.33	82.67	83.42	194.36	248.82	194	216	11.0%
R.Other PA	458.45	1,663.90	23.97	43.22	41.90	86.10	86.10	71	71	0.0%
U.Interstate	126.45	524.47	9.01	34.69	43.70	95.48	116.26	331	404	21.8%
U.Other Fwy.	15.82	63.28	-	-	-	-	-	-	-	0.0%
U.Other PA	45.55	189.67	2.35	9.43	9.43	18.86	18.86	41	41	0.0%
TOTAL	1,204.32	4,673.50	39.66	170.01	178.45	394.80	470.04	637	731	14.7%

As noted in Exhibit E-8, based on the HPMS expected growth in traffic, about $0.6 billion will be required in the next 20 years to address congestion problems on the Mississippi portion of the LATTS Strategic Network. The "additional" LATTS traffic will bring that total to $0.7 billion, a 1.5 percent increase. The dollar increase in terms of capacity needs due to LATTS traffic is lower than the corresponding increase in terms of needed lane miles because a majority of LATTS truck traffic occurs on rural highways which are less expensive to improve than urban highways.

Exhibit E-8
MISSISSIPPI 2020 CAPACITY NEEDS
LATTS Strategic Network

	Deficient Miles	% of Total Miles	Needs (Billion)
"Normal" Growth	170	14%	$0.6
"Additional" LATTS Traffic	8	1%	$0.1
Total	178	15%	$0.7

Capacity needs by corridor are illustrated in Exhibit E-9. Corridor 14 (I-10 from West Texas to Jacksonville, FL) has the highest capacity needs both in terms of total and average per lane mile. Corridor 7 (I-55 from New Orleans, LA to St. Louis, MO) has the second highest capacity needs in terms of total needs because it is the longest corridor in Mississippi.

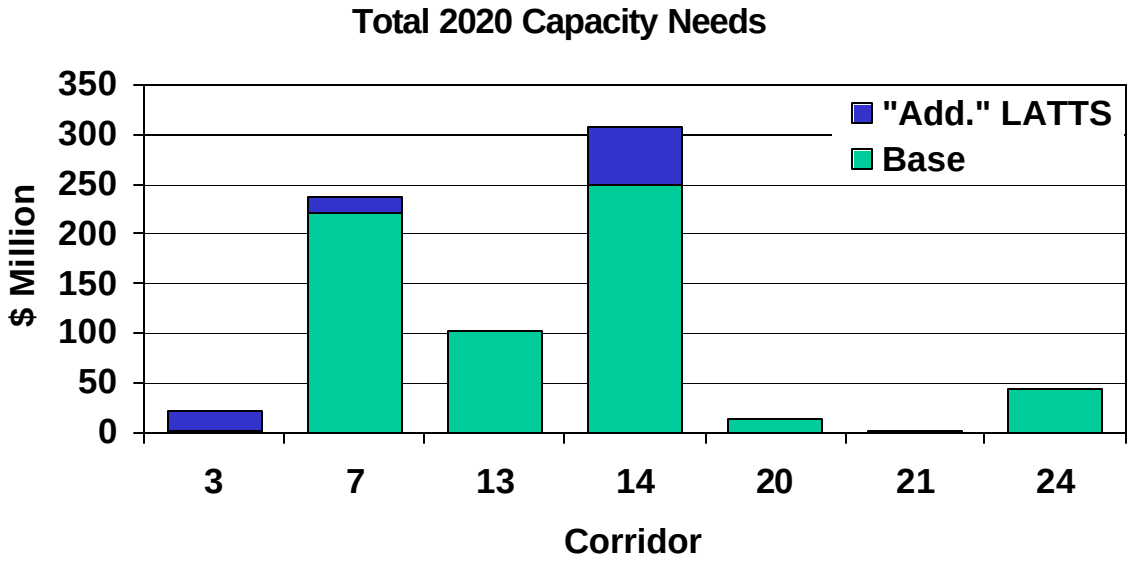
It should be noted that by 2020, 97 percent of Corridor 14 in Mississippi will require capacity improvements.

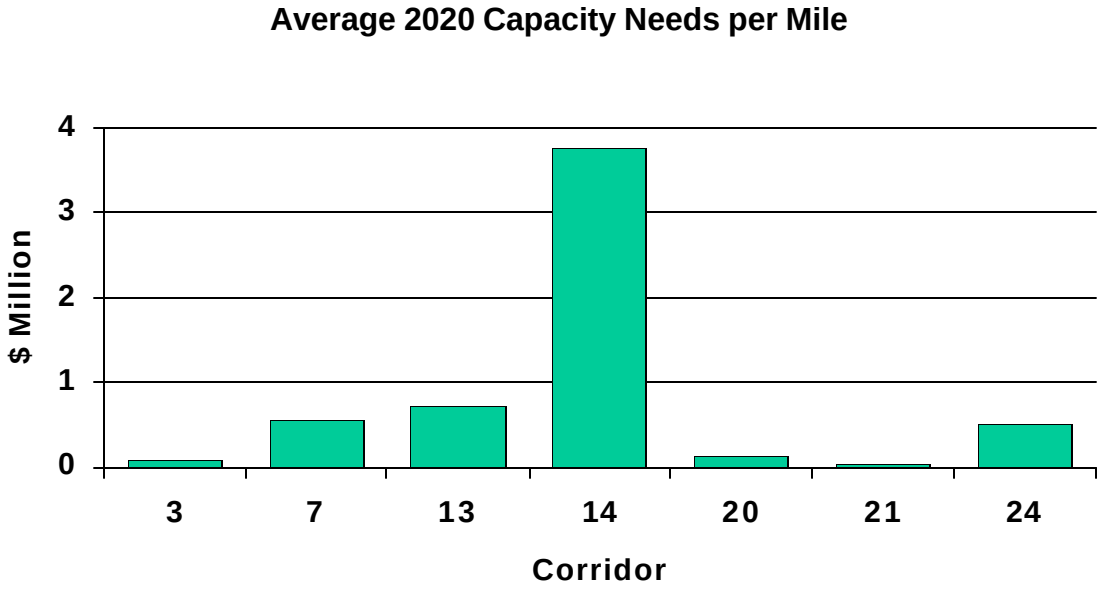
PAVEMENT NEEDS

For purposes of this study, average annual pavement needs in 2020 were estimated. The number of years it would take for the pavement to deteriorate from new in 2020 to a deficient PSR rating (as defined by the minimum tolerable conditions presented earlier) was calculated for each highway segment. As an indicator of the existing condition of the network, pavement deficiencies were identified for 1997.

Pavements typically are designed to last for a fairly long time. However, as they age and are subjected to traffic loads, they deteriorate. The pavement life measure used in these analyses is dependent on the amount of traffic using the highway and, more specifically, truck traffic (car traffic is a factor in the pavement deterioration rate but it has far less impact). The type of pavement (for example high flexible versus high rigid) is also an important factor affecting pavement deterioration rates. The pavement type on each highway segment, as indicated by the 1997 HPMS database, was used in the estimation of the deterioration rates. The number of lanes indicated for 1997 was used in the calculation of pavement deterioration rate and resurfacing costs. No attempt was made to measure the impact on pavement needs of adding lanes to address the congestion problems identified earlier. Finally, the HPMS-AP methodology for deteriorating pavement was applied in this study. It is based on the concept of 18Kip Equivalent Single Axle Loads. Weather condition or type of subsoil can also influence

Exhibit E-9
MISSISSIPPI STRATEGIC HIGHWAY NETWORK
Capacity Needs by Corridor





pavement deterioration rates but, for this study, no other factors beyond traffic and pavement type were used to differentiate pavement deterioration rates between sections.

Each highway segment pavement life was calculated twice. An initial calculation was made using the "base" car and truck traffic from the Mississippi HPMS database. The second calculation was made with the "additional" LATTS traffic added to it. The difference in the two pavement lives is a measure of the impact of LATTS traffic.

Results of Mississippi pavement needs for the LATTS Strategic Highway Network are presented in Exhibit E-10. Based on the HPMS data, Mississippi had only 9 miles with existing pavement deficiencies on the LATTS Strategic Highway System

One would expect that the corridors with the highest concentration of LATTS truck traffic would show the largest impact from LATTS. Exhibit E-10 confirms this expectation to some degree.

- Corridor 3 (I-59/I-81/I-66 from New Orleans, LA to Washington, D.C. and Pennsylvania) has the second highest concentration of LATTS trucks in terms of daily traffic and the highest reduction in pavement life from 8.2 years to 7.0 years.
- Corridor 14 (I-10 from West Texas to Jacksonville, FL) has the highest daily LATTS truck volume and reduction in 2020 pavement life, from 3.9 years to 3.7 years.
- Corridor 7 (I-55 from New Orleans, LA to St. Louis, MO), which also carries many LATTS trucks will experience a reduction in average pavement life from 5.7 years to 5.3 years.

Total resurfacing costs are a function of the average pavement life and the length of the highways. Corridor 7, the longest corridor in Mississippi, has the highest average annual resurfacing needs, $ 22.1 million with LATTS traffic. With the largest reduction in average pavement life due to LATTS, Corridor 3 (I-59/I-81/I-66 from New Orleans, LA to Washington, D.C. and Pennsylvania) has the largest incremental resurfacing needs due to LATTS trucks, $3.5 million annually or a 19 percent increase.

Exhibit E-10
MISSISSIPPI PAVEMENT RESURFACING INVESTMENT NEEDS

Corridor/ Functional Class	Length (Miles)	Existing Lane Miles	Pavement Analysis					
			1997	2020 Pavement Life (Years)		2020 Average Annual Cost ($1,000)		
			Deficient Mileage	W/O LATTS Added Traffic	With LATTS Added Traffic	W/O LATTS Added Traffic	With LATTS Added Traffic	% Increase Due to LATTS
3	**I-59, I-81, I-66**		**New Orleans, LA to DC and Pennsylvania**					
R.Interstate	140.38	561.51	-	6.8	4.8	9,797	12,920	31.9%
R.Other PA	71.71	240.61	-	13.4	13.4	1,271	1,275	0.3%
U.Interstate	31.33	125.30	2.13	3.9	3.6	6,635	7,017	5.8%
U.Other Fwy.	2.70	10.82	-	6.3	6.3	351	351	0.0%
U.Other PA	9.68	38.72	-	10.7	10.7	549	550	0.2%
TOTAL	255.80	976.97	2.13	8.2	7.0	18,603	22,112	18.9%
7	**I-55**		**New Orleans, LA to St. Louis, MO**					
R.Interstate	258.01	1,032.06	4.79	5.6	5.0	21,013	23,330	11.0%
R.Other PA	131.57	520.52	-	6.2	6.1	6,867	6,882	0.2%
U.Interstate	32.21	147.50	0.49	3.7	3.6	8,169	8,250	1.0%
U.Other PA	14.11	63.28	-	7.0	6.5	1,299	1,363	4.9%
TOTAL	435.90	1,763.36	5.28	5.7	5.3	37,348	39,825	6.6%
13	**I-20, US 76**		**El Paso, TX to Wilmington, NC**					
R.Interstate	97.29	389.15	-	4.3	4.3	9,841	9,887	0.5%
U.Interstate	43.99	175.96	0.40	4.5	4.5	8,566	8,570	0.0%
TOTAL	141.28	565.12	0.40	4.4	4.4	18,407	18,457	0.3%
14	**I-10**		**West Texas to Jacksonville, FL**					
R.Interstate	62.36	249.45	-	3.9	3.8	6,782	7,079	4.4%
U.Interstate	18.92	75.70	-	3.6	3.6	4,205	4,268	1.5%
TOTAL	81.29	325.15	-	3.9	3.7	10,987	11,347	3.3%
20	**US 19. US 78. US 280**		**Tampa, FL to Memphis, TN**					
R.Other PA	103.27	395.92	0.67	5.9	5.9	4,969	4,969	0.0%
U.Other Fwy.	13.12	52.46	-	3.8	3.8	2,808	2,808	0.0%
TOTAL	116.39	448.38	0.67	5.6	5.6	7,777	7,777	0.0%
21	**US 67. US 65. US 165**		**Lake Charles, LA to St. Louis, MO**					
R.Other PA	65.54	261.01	-	11.2	11.2	1,762	1,762	0.0%
U.Other PA	17.46	70.15	-	10.4	10.4	1,035	1,035	0.0%
TOTAL	83.00	331.16	-	11.0	11.0	2,797	2,797	0.0%
24	**US 72**		**Memphis, TN to Chattanooga, TN**					
R.Other PA	86.36	245.84	-	8.2	8.2	2,216	2,216	0.0%
U.Other PA	4.30	17.51	-	12.6	12.6	213	213	0.0%
TOTAL	90.67	263.36	-	8.5	8.5	2,429	2,429	0.0%
ALL CORRIDORS								
R.Interstate	558.04	2,232.17	4.79	5.5	4.7	47,433	53,215	12.2%
R.Other PA	458.45	1,663.90	0.67	8.3	8.2	17,086	17,105	0.1%
U.Interstate	126.45	524.47	3.02	4.0	3.9	27,576	28,105	1.9%
U.Other Fwy.	15.82	63.28	-	4.2	4.2	3,159	3,159	0.0%
U.Other PA	45.55	189.67	-	9.5	9.4	3,095	3,160	2.1%
TOTAL	1,204.32	4,673.50	8.48	6.5	6.0	98,348	104,745	6.5%

Future (2020) pavement needs are summarized in Exhibit E-11. Pavement life for the Mississippi portion of the LATTS Strategic Highway Network will average 6.0 years in 2020 without the "additional" LATTS truck traffic and 6.0 years with it. The annual resurfacing costs for the Mississippi portion of the LATTS Strategic Highway Network are estimated to exceed $98 million without LATTS "additional" truck traffic and $105 million with it, an increase of 6.5 percent.

Exhibit E-11
MISSISSIPPI 2020 PAVEMENT NEEDS
LATTS Strategic Network

	Pavement Life (Years)	Annual Resurfacing Cost ($Million)
"Normal" Growth	6.5	$96
With "Additional" LATTS Traffic	6.0	$105

OPERATING SPEEDS

Truck operating speed was chosen as a key study performance measure for the LATTS Strategic Highway Network. Truck operating speeds were estimated for each LATTS roadway segment based on the conditions of the roadway, including roadway geometry and alignment, pavement condition, speed limit and traffic volumes. The operating speed calculation for each sample segment or link was based on the methodology of the HPMS Analytical Package used by FHWA to estimate highway needs.

Two types of operating speeds were calculated. One was the average daily operating speed and the other was the peak hour operating speed as defined by the peak hour factor or "K" factor for each road segment. Because it is not known when a truck would travel over a specific highway section during the peak hour, the peak hour operating speed assumed that every section was traveled during peak hour. As a result, the calculated peak hour speed and travel time for an entire corridor is probably somewhat overstated, as it is unlikely that a truck would travel every section during peak hour conditions.

Truck operating speeds were calculated for each LATTS roadway section. Operating speeds over a combination of segments were then calculated by adding travel time and distance for each segment and calculating the new speed.

Truck operating speeds on the Mississippi portion of the LATTS Strategic Highway Network are presented on Exhibit E-12. In this exhibit, Mississippi truck operating speeds estimates are presented by functional class. The total lengths of all the segments, which were used in the analysis of the corridor, are listed first. This is followed by these items explaining the characteristics of the segments, including average number of lanes, speed limit, and AADT. The purpose of listing these items is to facilitate better understanding of the calculated operating speeds. For example, two/three-lane highways have lower operating speeds than equivalent four-lane highways because of passing difficulties. Similarly, low speed limits will result in low operating speeds on facilities no matter what the road conditions are.

Exhibit E-12
MISSISSIPPI TRUCK OPERATING SPEEDS

Corridor/ Functional Class	Length (Miles)	Average No. Lane	Speed Limit (MPH)	Average 1997 AADT	1997 Truck Speed (MPH)		2020 Truck Speed (MPH) W/O Added LATTS Traffic		2020 Truck Speed (MPH) With Added LATTS Traffic	
					Daily Average	Peak Hour	Daily Average	Peak Hour	Daily Average	Peak Hour
3	**I-59, I-81, I-66**		**New Orleans, LA to DC and Pennsylvania**							
R.Interstate	140.40	4.0	65.0	14,991	61.4	61.4	61.4	61.2	61.4	61.0
R.Other PA	71.70	3.4	55.0	5,558	50.0	48.7	49.9	48.6	49.9	48.6
U.Interstate	31.30	4.0	59.4	26,127	58.0	58.0	58.0	57.1	57.9	55.5
U.Other Fwy.	2.70	4.0	55.0	7,137	55.0	55.0	55.0	55.0	55.0	55.0
U.Other PA	9.70	4.0	55.0	17,327	39.1	39.1	39.1	39.1	39.1	39.1
TOTAL	**255.80**	**3.8**	**60.7**	**13,716**	**56.1**	**55.7**	**56.1**	**55.5**	**56.1**	**55.2**
Time (HR)					**4.6**	**4.6**	**4.6**	**4.6**	**4.6**	**4.6**
7	**I-55**		**New Orleans, LA to St. Louis, MO**							
R.Interstate	258.00	4.0	64.9	16,820	60.4	60.4	60.4	59.2	60.4	59.1
R.Other PA	131.60	4.0	54.9	16,129	55.8	55.5	55.8	53.4	55.8	53.4
U.Interstate	32.20	4.6	55.0	53,120	52.8	38.0	48.3	24.7	48.0	24.2
U.Other PA	14.10	4.5	42.6	37,123	39.2	30.3	39.2	20.1	39.2	20.1
TOTAL	**435.90**	**4.0**	**59.8**	**19,951**	**57.3**	**54.8**	**56.9**	**49.4**	**56.9**	**49.2**
Time (HR)					**7.6**	**8.0**	**7.7**	**8.8**	**7.7**	**8.9**
13	**I-20, US 76**		**El Paso, TX to Wilmington, NC**							
R.Interstate	97.30	4.0	65.0	20,146	61.0	60.9	61.0	60.2	61.0	60.2
U.Interstate	44.00	4.0	56.4	37,581	55.4	46.9	53.1	36.2	53.1	36.2
TOTAL	**141.30**	**4.0**	**62.1**	**25,575**	**59.1**	**55.7**	**58.3**	**49.9**	**58.3**	**49.9**
Time (HR)					**2.4**	**2.5**	**2.4**	**2.8**	**2.4**	**2.8**
14	**I-10**		**West Texas to Jacksonville, FL**							
R.Interstate	62.40	4.0	65.1	32,806	64.1	62.3	63.6	29.9	63.4	26.6
U.Interstate	18.90	4.0	56.0	39,143	58.4	52.4	58.1	20.6	57.9	17.9
TOTAL	**81.30**	**4.0**	**62.7**	**34,281**	**62.7**	**59.7**	**62.2**	**27.1**	**62.0**	**23.9**
Time (HR)					**1.3**	**1.4**	**1.3**	**3.0**	**1.3**	**3.4**
20	**US 19, US 78, US 280**		**Tampa, FL to Memphis, TN**							
R.Other PA	103.30	3.8	55.0	15,181	56.4	55.7	56.2	55.5	56.2	55.5
U.Other Fwy.	13.10	4.0	55.0	18,437	52.3	52.3	52.3	52.3	52.3	52.3
TOTAL	**116.40**	**3.9**	**55.0**	**15,548**	**55.9**	**55.3**	**55.7**	**55.1**	**55.7**	**55.1**
Time (HR)					**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**
21	**US 67, US 65, US 165**		**Lake Charles, LA to St. Louis, MO**							
R.Other PA	65.50	4.0	55.0	8,356	56.1	56.0	56.1	56.0	56.1	56.0
U.Other PA	17.50	4.0	49.8	15,118	39.0	38.3	38.7	37.2	38.7	37.2
TOTAL	**83.00**	**4.0**	**53.8**	**9,779**	**51.3**	**51.0**	**51.2**	**50.6**	**51.2**	**50.6**
Time (HR)					**1.6**	**1.6**	**1.6**	**1.6**	**1.6**	**1.6**
24	**US 72**		**Memphis, TN to Chattanooga, TN**							
R.Other PA	86.40	2.8	55.0	7,374	49.2	48.0	49.0	46.3	49.0	46.3
U.Other PA	4.30	4.1	37.5	18,891	27.2	27.2	27.2	27.2	27.2	27.2
TOTAL	**90.70**	**2.9**	**53.8**	**7,921**	**47.4**	**46.3**	**47.2**	**44.8**	**47.2**	**44.8**
Time (HR)					**1.9**	**2.0**	**1.9**	**2.0**	**1.9**	**2.0**

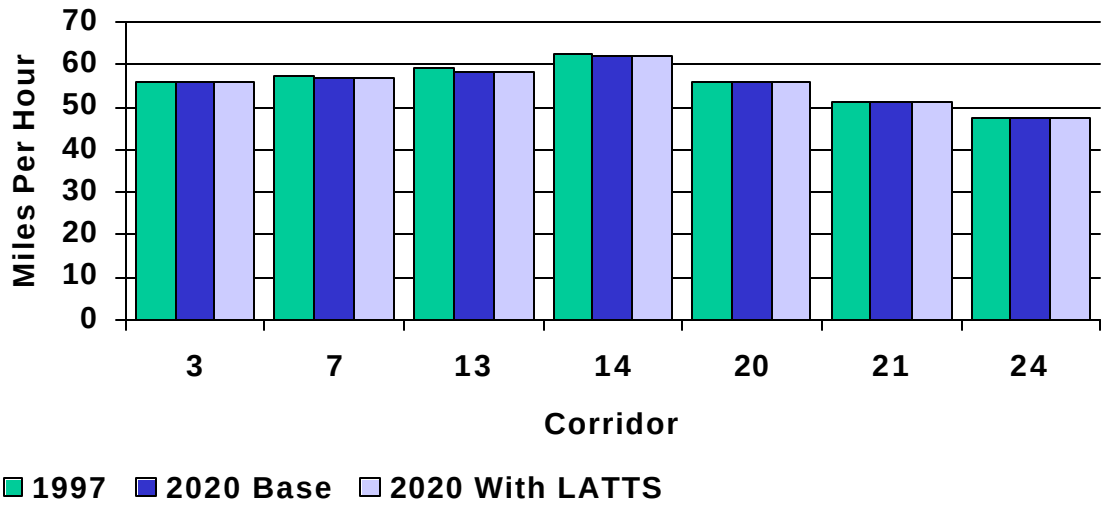
Average daily and peak period speeds/travel times for trucks also are presented for the base year (1997). Further, truck operating speeds are listed twice for year 2020. The first time, truck operating speeds were calculated assuming the base growth rate, i.e. the growth rate indicated by the HPMS database. The second time, truck operating speeds were calculated with the LATTS "additional" traffic. Overall results for the entire corridor

within Mississippi are then listed, as well as the overall time required to travel the entire corridor. By comparing these speed and travel time values (based on present conditions), it is possible to determine which facilities are most efficient today, which facilities are going to experience deteriorating conditions due to traffic growth regardless of LATTS impact, and finally which facilities are going to be most affected by LATTS traffic.

As depicted in Exhibit E-13, all corridors with a majority of interstate facilities (Corridors 3, 7, 13 and 14) have average daily operating speeds above 55 MPH in 1997. Corridor 24 has lower average daily speeds in the 45 to 50 MPH ranges because it is comprised of lower type facilities.

The projected growth in traffic between 1997 and 2020 will not affect this measure of performance significantly. The average daily speed in all of Mississippi LATTS corridors will be reduced by less than 1 MPH.

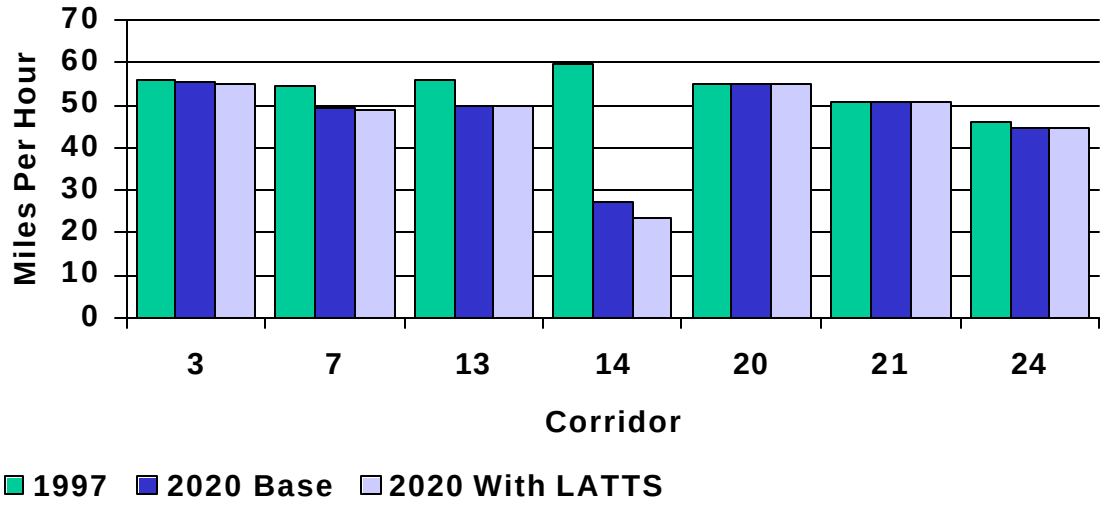
Exhibit E-13
MISSISSIPPI STRATEGIC HIGHWAY NETWORK
Average Daily Truck Operating Speeds



The impact of the "additional" LATTS traffic on average daily truck travel speed appears very small too. Even the worse case, Corridor 14, will only experience an additional reduction in average daily speed of 0.2 MPH. One may wonder why there would be such an apparent small impact on average speeds when the impact of LATTS traffic on capacity appeared much more significant. The reason is due to the selected minimum tolerable standards used to identify capacity needs. The capacity needs are based on not exceeding LOS C on rural highways and LOS D on urban highways during peak hour. However, traveling speeds are most affected (change rapidly) when the LOS reaches E and F. In other words, capacity needs are based on explicit standards that are higher than those used implicitly in the LATTS speed calculation.

As depicted in Exhibit E-14, the expected traffic growth in Mississippi LATTS corridor will affect "peak hour" speeds more significantly, up to 36 MPH, for Corridor 14 (I-10 from West Texas to Jacksonville, FL).

Exhibit E-14
MISSISSIPPI STRATEGIC HIGHWAY NETWORK
"Peak-Hour" Truck Operating Speeds



As mentioned earlier, these travel speeds are estimated assuming no change in capacity on any section of the LATTS highway network and traffic peaking patterns the same as they are today. This is unlikely given the severity of the estimated resulting congestion on some highways.

The impact of LATTS "additional traffic" is slightly more pronounced on "peak hour" speeds than on average daily speeds but still very mild compared to the impact of overall growth

CONCLUSIONS FOR LATTS MAINLINE HIGHWAYS

(1) LATTS truck traffic in Mississippi is expected to grow at a much higher rate than the rest of the traffic in the state. From 1997 to 2020, LATTS truck traffic will increase by 349 percent while all other traffic is expected to increase by only 50 percent.

(2) About 15 percent of the LATTS Strategic Highway Network in Mississippi will require additional capacity by 2020 at a cost of $ 0.7 billion. Nearly 85 percent of these capacity needs are for the interstate system (55 percent for the urban interstate system alone). The majority of these needs are due to expected growth in the state and not to LATTS trucks only.

(3) However, LATTS truck traffic will have an increasing impact on the state highway investment needs for the Strategic Highway Network. By 2020, LATTS "additional" truck traffic will have resulted in:

- 5% more highway miles needing capacity improvements.
- 15% additional costs to address these capacity needs.
- 6.5% increase in annual pavement resurfacing costs.

(4) In Mississippi, Corridor 3 (I-59/I-81/I-66 from New Orleans, LA to Washington D.C. and Pennsylvania), Corridor 7 (I-55 from New Orleans, LA to St. Louis, MO), and Corridor 14 (I-10 from West Texas to Jacksonville, FL) will be proportionally most affected by LATTS trucks because of the higher volume of LATTS trucks using these corridors.

WATERPORT AND AIRPORT INTERMODAL CONNECTORS

The focus of the highway analysis was, appropriately, on the mainline portion of the LATTS Strategic Highway System. This is the portion of the highway network carrying the vast majority of truck travel (vehicle miles) and has "needs" that could be quantified using existing databases. Additionally, the portion of the highway system connecting the LATTS mainline system with the LATTS waterports and airports also were assessed. While these highway intermodal connectors sometimes are overlooked, their deficiencies can significantly impact the efficient movement of vehicles, especially large trucks.

LATTS intermodal connectors are the highways that link the mainline LATTS Strategic System with LATTS intermodal facilities (waterports and airports). To avoid costly new data collection activities, a recently compiled database was used to conduct the connectors analysis. This database, the *NHS Connectors*, was populated by the state DOTs and compiled by the Federal Highway Administration. It includes a high quality sample of the LATTS intermodal connectors. However, it does not contain information for every LATTS intermodal connector. These analyses utilized information for those LATTS intermodal connectors for which information was available in the NHS connectors database at the time the analyzes were performed.

As noted in Exhibit E-15, Mississippi has five LATTS connectors for which information was available in the NHS Connectors Inventory Database. The state of Mississippi has partial ownership of the Port of Beinville (MS10P) connector. The state also has direct planning authority over the Port of Pascagoula (MS1P) connector, and both Port of Gulfport (MS5P) connectors.

Exhibit E-15
LATTS INTERMODAL CONNECTORS

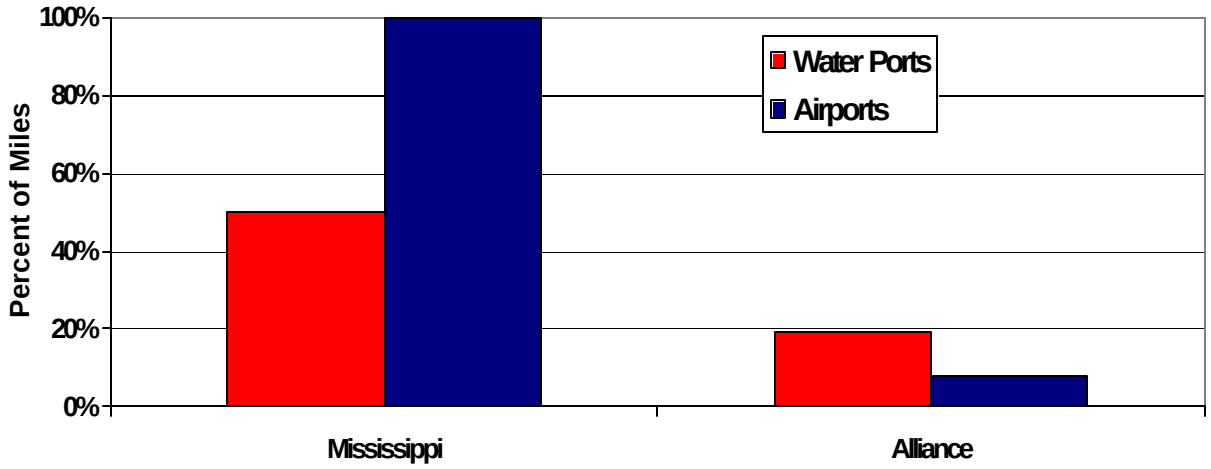
FACILITY ID	FACILITY NAME	LINK MILES	RURAL/URBAN DESIGNATION	OWNERSHIP	AGENCY
MS10P	Port of Bienville	9.8	Rural	State Highway-Municipal Highway	Hancock County Board of Supervisors
MS13A	Jackson International Airport	2.8	Urbanized (>200k)	County Highway	City of Jackson
MS1P	Port of Pascagoula (east)	3.8	Small Urban (5k to 49k)	County Highway-Municipal Highway	MS DOT
MS5P	Port of Gulfport	8.1	Small Urban (5k to 49k)	Town or Township Highway	MS DOT
MS5P	Port of Gulfport	0.6	Small Urban (5k to 49k)	Town or Township Highway	MS DOT

Information regarding the Gulfport-Biloxi Regional Airport connector was not contained in the inventory database.

Pavement Problems

Based upon the inventory database, Mississippi's connectors rated significantly higher than the Alliance average in pavement deficiencies. As noted in Exhibit E-16, all of Mississippi's connectors, save one (MS1P), reported over 50 percent of the connector length in poor or very poor pavement condition.

Exhibit E-16
CONNECTORS WITH PAVEMENT PROBLEMS



Mississippi vs. Alliance Local/Other

Geometric/Physical Problems

Two connectors reported more than three geometric/physical deficiencies. MS13A, Jackson International Airport connector, reported deficient shoulders and turning movements. The Port of Bienville connector, MS10P, reported problems with travel way conditions, as well as shoulder and turning movement deficiencies.

At-Grade Railroad Crossing Problems

Pascagoula, MS1P, reported deficiencies in six of seven areas in this category. Problems with delays, switches, devices, rough crossings, lack of alternate routes and sight distance were all noted. Rough crossings were common to all connectors in Mississippi.

Traffic Operations and Safety Problems

All of Mississippi's connectors reported congestion problems associated with the junction with the NHS mainline.

State Summary

Based upon the available information, the rail crossing problems with the Pascagoula connector and the poor pavement conditions reported on all but one connector are the two major issues facing Mississippi's connectors. Additionally, there were geometric and physical deficiencies reported that are common to Alliance connectors.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

While it is clear that improvements in highway infrastructure are required to achieve an economically efficient transportation system, truck operations also can be improved by the implementation of ITS. Transportation technologies help freight transport become more productive and more responsive to the needs of business enterprises, including those which are engaged in Latin American trade. Fortunately, a large portion of current work in the ITS arena is with commercial vehicle operations (CVO). Of significant relevance to LATTS is the Commercial Vehicle Information Systems and Networks (CVISN) that embodies a collection of information systems and communications networks that provide support to CVO.

The national ITS/CVO program encompasses numerous projects undertaken by the individual states. The national program is designed to encourage the development and implementation of technology to enhance the safe movement of commercial vehicles across the United States. There are four main areas within the national program and each of the individual states are striving to meet these goals:

- Safety Assurance – Programs and projects that are designed to assure the safety of commercial drivers, vehicles, and cargo.
- Credentials Administration – Programs and projects that are designed to improve the procedures and systems for managing motor carrier regulation.
- Electronic Screening – Programs and projects that are designed to facilitate the verification of size, weight, safety, and credentials information.

- Carrier Operations – Programs and projects that are designed to reduce congestion and manage the flow of commercial vehicle traffic.

Most of the Alliance member states have completed some type of ITS/CVO Business Plan. Many of these documents are living documents and are continually being updated and revised. Since state's ITS/CVO plans are changing frequently, the information contained below is only a snapshot of ITS information available in early 2001.

Mississippi ITS/CVO Plan

As part of MDOT's multi-year effort to update its statewide transportation plan (MULTIPLAN), the Department is developing an ITS Strategic Plan. This effort will result in a statewide framework for ITS deployment, including definition of a statewide architecture with regional components (traffic, transit, and information service providers), definition of specific "Early Start" activities, ITS elements that could be incorporated into other non-ITS projects (e.g., road construction or widening), and definition of statewide and regional ITS programs to be implemented.

In the interim, Mississippi is utilizing the document entitled *Mississippi ITC/CVO Project* that was completed in July 1999. The existing report outlines those projects that the State hopes to undertake in order to implement ITS technologies within the existing CVO environment.

The existing CVO environment provides a number of different CVO systems. However, many of these systems do not have an ITS component. They are strictly concerned with commercial vehicle operations. The existing CVO structure is broken down into responsible agencies and outlined below:

- Mississippi Department of Transportation (MDOT) - The Law Enforcement division of MDOT currently operates 32 permanent inspection stations and 34 portable units operated from patrol units. The enforcement officers electronically record and issue citations, but there is no electronic link between the officers and the agencies. Therefore, all data must be downloaded from the individual PCs.
- Mississippi Public Service Commission (MPSC) - This agency is responsible for motor carrier safety and motor carrier registration.
  - Motor Carrier Safety - MPSC officers utilize ASPEN software to enforce the Motor Carrier Safety Regulations and Hazardous Materials Regulations. Information is uploaded to the SAFER system on a monthly basis. Enforcement officers also carry out the Motor Carrier Safety Assistance Program (MSCAP). This program aims at reducing the number and severity of commercial vehicle accidents through inspections, safety reviews, and greater enforcement.
  - Motor Carrier Registration - Mississippi is a member of the Single State Registration Plan (SSRP). This plan directs motor carriers to register in their base state. The base state then collects the necessary fees on behalf of the participating states and distributes them accordingly.
- Mississippi State Tax Commission (MSTC) - The Commission is responsible for tax administration and the registration of intrastate vehicles.
  - International Fuel Tax Agreement (IFTA) – This project has been implemented by many states within the LATTS region. It allows for motor carriers to register in a

home/base state. The home/base state is responsible for collecting the necessary taxes and then dispersing them to the participating states.
- International Registration Plan (IRP) – This project allows motor carriers to register in a home/base state. The motor carrier then pays the necessary taxes and the home/base state is responsible for paying the participating states.
- Intrastate Commercial Vehicles - The various County Tax Collectors assist in the process of registering these vehicles. The application is filed with the county's office and the information is then entered into the State Title-Registration Network, a payment is made and a temporary license plate is issued. Upon receipt of the information and payment to the State Tax Commission, a cab card and license plate are issued.

- Mississippi Department of Environmental Quality (DEQ) - The DEQ issues permits for the transportation of hazardous cargo.
- Mississippi Department of Public Safety (DPS) - The DPS is responsible for the testing for and issuing of Commercial Driver Licenses (CDL).

The Business Plan was developed under the coordination of the Mississippi State Tax Commission with aid from the Mississippi Department of Transportation and the Mississippi Public Services Commission. In addition to these agencies, many other agencies are helping with regulation and safety of motor carriers. Each of the agencies involved is currently responsible for some aspect of commercial vehicle operations.

The goals that were developed by the team are as follows: 1) enhance the efficiency of motor carriers within the state, 2) increase highway safety, and 3) reduce the administrative costs for the state and motor carriers while increasing motor carrier compliances[2]. There are specific projects associated with each of these goals, so that each may be accomplished in a timely manner. The projects as set forth by the Business Plan are within the four program areas of Safety Assurance, Credentials Administration, Electronic Screening and Carrier Operations. The projects are as follows:

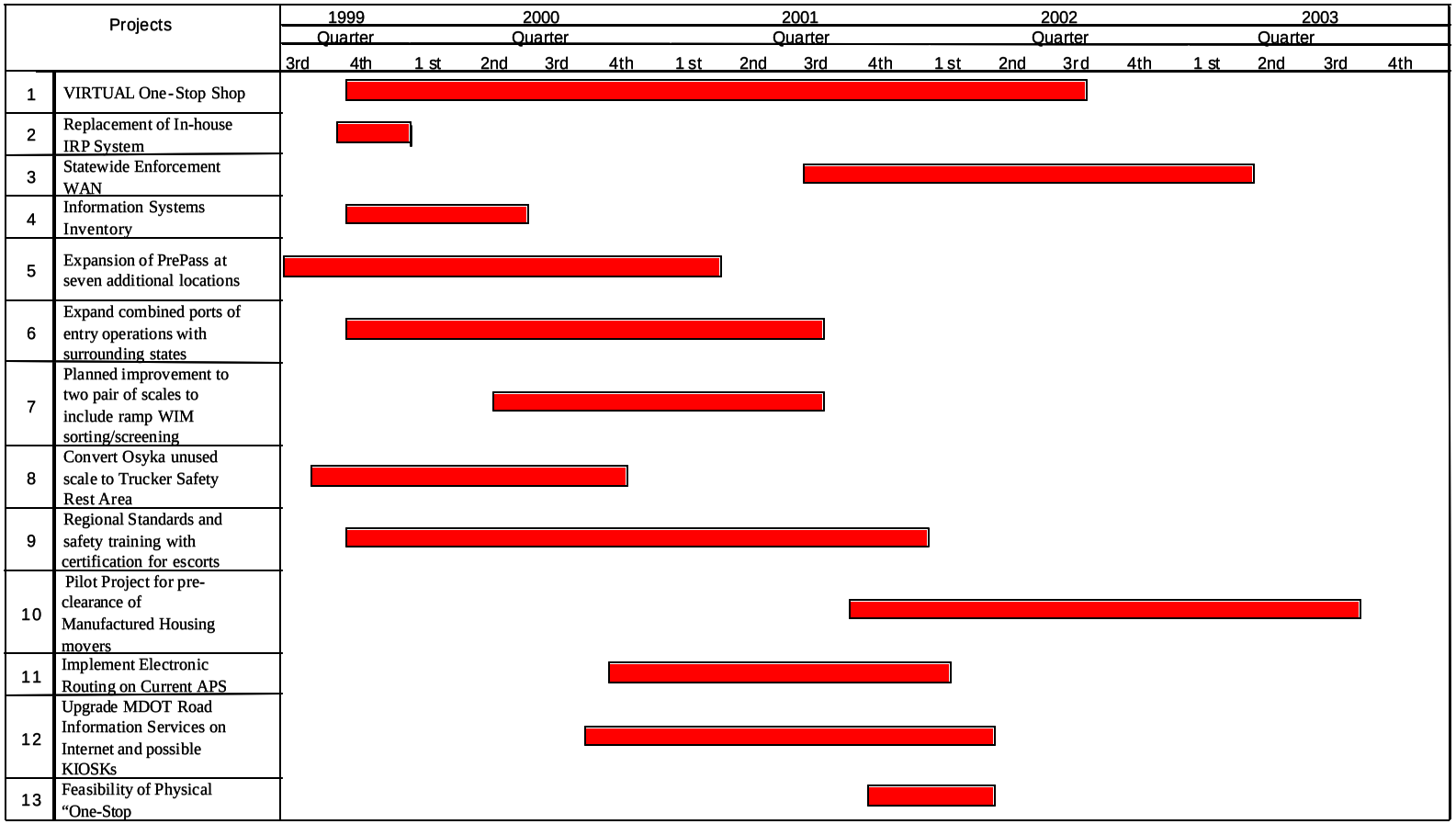
- Credentials Administration
  - CVISN Compliant VIRTUAL One-Stop - This would allow motor carriers to exchange regulatory and safety information with all state agencies.
  - Replacement of In-house IRP System - This would replace the current International Registration Plan (IRP) Computer Support System that is outdated.
  - Statewide Enforcement WAN – This project allows for the connection of the central and all permanent weigh stations with on-line access to enforcement information from both the state and national systems
  - Implement Electronic Routing on Current APS - A GIS application will be added to the permit issuance system that will ensure motor carriers subject to special permits will be routed correctly through the state.
  - Feasibility of Physical "One-Stop" - Once the VIRTUAL One-Stop has been implemented, a study will be conducted to determine the feasibility of physically combining all operations for the benefit of the motor carriers.

[2] *Mississippi ITS/CVO Project*, Mississippi State Tax Commission, Mississippi Department of Transportation, Mississippi Public Service Commission, July 1999

- Safety Assurance
  - Combined ports of entry will be expanded with the surrounding states. This program will allow neighboring states to combine ports of entry stops so states and motor carriers save time and money.
  - Convert the unused scale at the Osyka site into a larger trucker safety rest area. Truck drivers will have a specific area where they can park and rest with facilities for their needs.
  - Mississippi will participate in a training and certification program for motor carrier escorts. This program will set regional standards and include safety training with certification for these escorts. This will provide a safer environment for those carriers needing escorts within the state.
- Electronic Screening
  - PrePass operations have been expanded and now include a total of ten locations.
  - Planned improvements will be made at two pair of existing scales to include ramp WIM sorting/screening.
  - A pilot project that allows selected manufactured housing movers to by-pass scales.
- Carrier Operations
  - Upgrade MDOT Road Information Services on Internet Web sites and possible KIOSKs locations.

Exhibit E-17 depicts the anticipated time frame for the completion of the Mississippi projects.

Exhibit E-17
SCHEDULE OF ITS/CVO EVENT FOR THE STATE OF MISSISSIPPI[1]



[1]*Mississippi ITS/CVO Project*, Mississippi State Tax Commission, Mississippi Department of Transportation, Mississippi Public Service Commission, July 1999