Interstate Access Improves Log Truck Safety and Efficiency: Augusta, GA Case Study

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Summary: In Georgia and the US South, weight limits for log trucks (including tolerances) are higher on state roads and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight tolerances to interstate highways would reduce accident risk, fuel consumption, carbon dioxide emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Warren County, GA to a mill in Augusta, GA. To comply with current regulations, the log truck would travel along US Hwy 278 rather than utilizing I-20/520. Traveling on I-20/520 would reduce fatal crash risk by 55%, travel time by 43%, travel costs by 33%, and pavement costs by 49% on this delivery.

Table 1: Safety, cost, and environmental impact of interstate and non-interstate route in eastern Georgia.

Variable	I-20/520	US Hwy 278	Interstate Benefit
Travel Time	1 hr 0 min	1 hr 46 min	43%
Distance	59 miles	65 miles	9%
Average Travel Speed	59 mph	37 mph	61%
Number of Intersections	9	125	93%
Stop Signs/Lights	7	27	74%
Towns/Cities	1	3	67%
School Zones	0	1	100%
Fatal Crash Risk (per 100 million miles)	1.31 crashes	3.90 crashes	55%
Travel Cost (One-Way)	$90	$136	33%
Pavement Cost	$9	$17	49%
Fuel Consumption	12.9 gal	14.7 gal	12%
Carbon Dioxide Emissions	290 lbs	329 lbs	12%

Figure 1: Log truck being loaded in Georgia.

Figure 2: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in the Augusta, GA wood basket.

Interstate Access Improves Log Truck Safety and Efficiency: Macon, GA Case Study

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Summary: In Georgia and the US South, weight limits (including tolerances) for log trucks are higher on state and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight tolerances to interstate highways would reduce accident risk, fuel consumption, CO_2 emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Laurens County, GA to a mill in Macon, GA. To comply with current regulations, the log truck would travel along US Hwy 80 rather than I-16. Following I-16 allows the state-legal, loaded log truck to bypass Dublin, Dudley, Montrose, Allentown, Danville, and Jeffersonville. The I-16 route has 65% fewer intersections, 53% lower fatal crash risk, and 26% shorter travel time.

Table 1: Safety, cost, and environmental impact of an interstate and current route in central Georgia.

Variable	I-16	US Hwy 80	Interstate Benefit
Travel Time	1 hr 13 min	1 hr 39 min	26%
Distance	71 miles	76 miles	6%
Average Travel Speed	58 mph	46 mph	27%
Number of Intersections	76	218	65%
Stop Signs/Lights	23	36	36%
Towns/Cities	1	7	86%
Fatal Crash Risk (per 100 million miles)	1.99 crashes	4.22 crashes	53%
Travel Cost (One-Way)	$103	$134	23%
Pavement Cost	$22	$31	29%
Fuel Consumption	13.5 gal	16.1 gal	16%
Carbon Dioxide Emissions	303 lbs	361 lbs	16%

Figure 1: Log truck preparing for loading in Georgia.

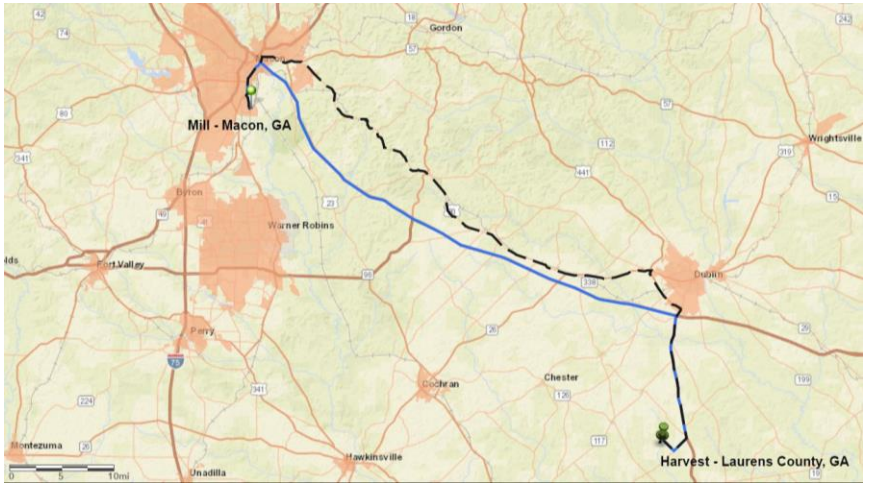

Figure 2: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in central Georgia.

Interstate Access Improves Log Truck Safety and Efficiency: Savannah, GA Case Study

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Summary: In Georgia and the US South, weight limits (including tolerances) for log trucks are higher on state and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight tolerances to interstate highways would reduce accident risk, fuel consumption, CO_2 emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Johnson County, GA to a mill in Port Wentworth, GA. To comply with current regulations, the log truck would travel US Hwy 80 rather than I-16 and I-95. Traveling on I-16 and I-95 allows the state-legal, loaded log truck to bypass Statesboro and Swainsboro. The interstate route has 75% fewer intersections, 46% lower fatal crash risk, and avoids 3 school zones.

Table 1: Safety, cost, and environmental impact of interstate and current route in eastern Georgia.

Variable	I-16/I-95	US Hwy 80	Interstate Benefit
Travel Time	1 hr 46 min	2 hrs 6 min	16%
Distance	106 miles	99 miles	-8%
Average Travel Speed	60 mph	47 mph	28%
Number of Intersections	77	307	75%
Stop Signs/Lights	11	30	63%
Towns/Cities	2	7	71%
School Zones	0	3	100%
Fatal Crash Risk (per 100 million miles)	2.29 crashes	4.26 crashes	46%
Travel Cost (One-Way)	$152	$172	12%
Pavement Cost	$28	$37	23%
Fuel Consumption	20.1 gal	21.1 gal	5%
Carbon Dioxide Emissions	450 lbs	472 lbs	5%

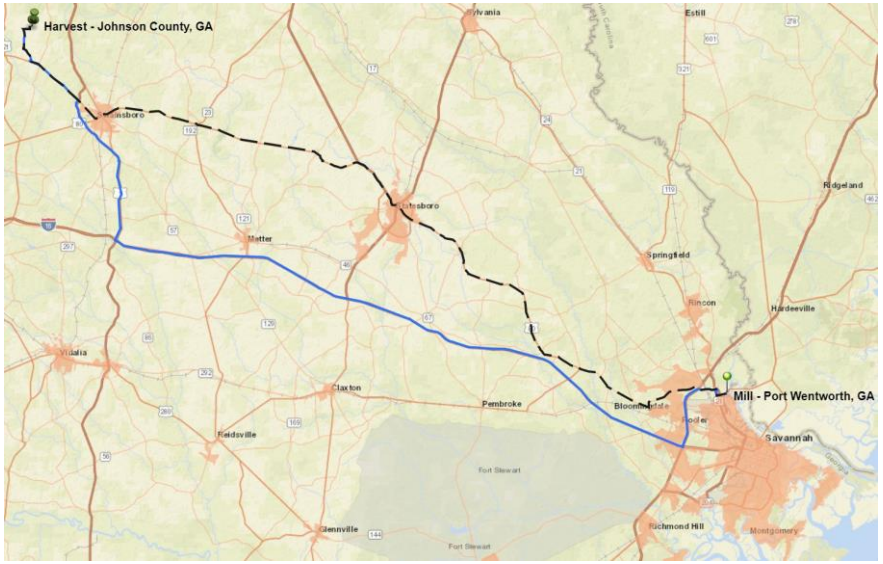

Figure 1: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in eastern Georgia.

Interstate Access Improves Log Truck Safety and Efficiency: Brunswick, GA Case Study

Prepared by: Joe Conrad, Assistant Professor of Forest Operations

Summary: In Georgia and the US South, weight limits for log trucks (including tolerances) are higher on state roads and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight tolerances to interstate highways would reduce accident risk, fuel consumption, carbon dioxide emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Long County, GA to a mill in Brunswick, GA. To comply with current regulations, the log truck would travel US Hwy 17 rather than utilize I-95. Allowing state-legal, loaded log trucks to operate on I-95 would eliminate travel through Darien and part of Brunswick. Traveling along I-95 reduces intersections encountered by 76%, fatal crash risk by 44%, travel time by 30%, and pavement costs by 22% on this delivery.

Table 1: Safety, cost, and environmental impact of interstate and current route in southeastern Georgia.

Variable	I-95	US Hwy 17	Interstate Benefit
Travel Time	39 min	56 min	30%
Distance	37 miles	42 miles	12%
Average Travel Speed	57 mph	45 mph	26%
Number of Intersections	40	169	76%
Stop Signs/Lights	4	9	56%
Towns/Cities	2	3	33%
School Zones	0	3	100%
Fatal Crash Risk (per 100 million miles)	2.20	3.90	44%
Travel Cost (One-Way)	$55	$76	28%
Pavement Cost	$16	$21	22%
Fuel Consumption	7.1 gal	9.3 gal	23%
Carbon Dioxide Emissions	160 lbs	208 lbs	23%

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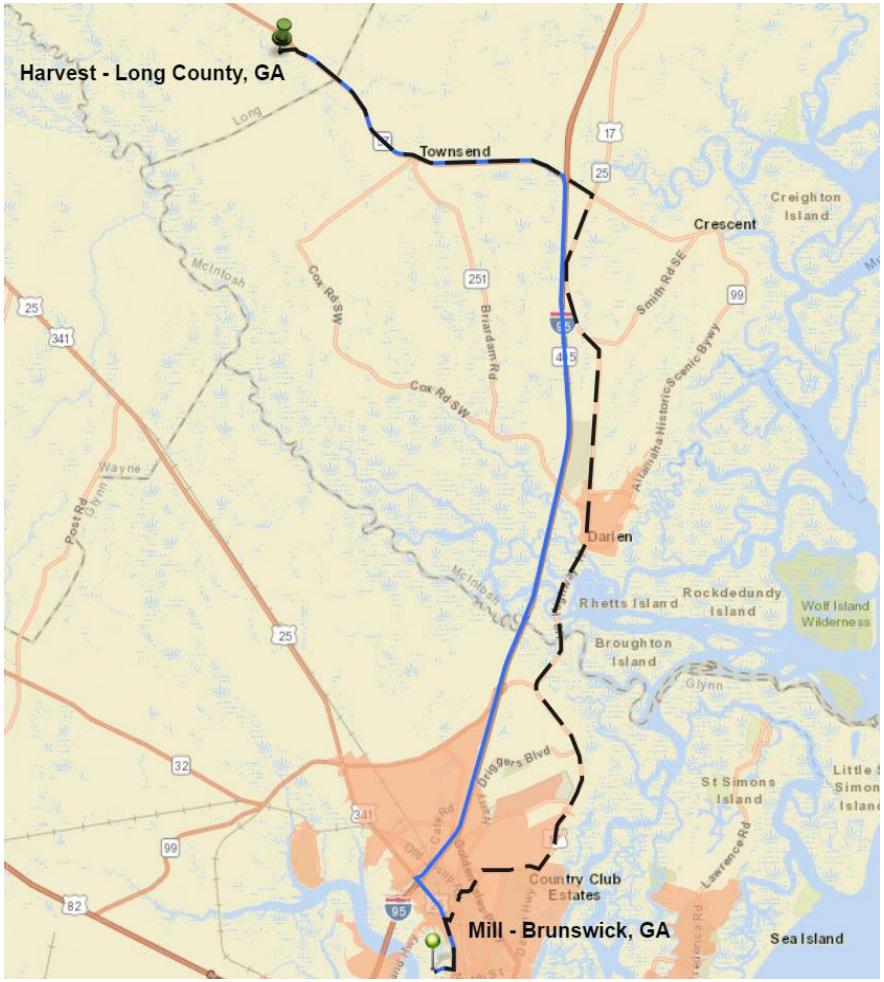

Figure 1: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in the Brunswick, GA wood basket.

Interstate Access Improves Log Truck Safety and Efficiency: Brewton, AL Case Study

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Summary: In Alabama and the US South, weight limits for log trucks (including tolerances) are higher on state roads and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight limits to interstate highways would reduce accident risk, fuel consumption, carbon dioxide emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Conecuh County, AL to a mill in Brewton, AL. To comply with current regulations, the log truck would travel along US Hwy 31 rather than utilizing I-65. Allowing state-legal, loaded log trucks to operate on I-65 would reduce intersections encountered by 67%, stop signs/lights by 79%, fatal crash risk by 39%, travel time by 29%, and travel costs by 26% on this delivery.

Table 1: Safety, cost, and environmental impact of an interstate and non-interstate route in Alabama.

Variable	I-65	US Hwy 31	Interstate Benefit
Travel Time	1 hr 0 min	1 hr 25 min	29%
Distance	57 miles	66 miles	13%
Average Travel Speed	57 mph	46 mph	24%
Number of Intersections	42	129	67%
Stop signs and stop lights	3	14	79%
Towns/Cities	1	3	67%
School Zones	1	2	50%
Fatal Crash Risk (per 100 million miles)	2.55 crashes	4.16 crashes	39%
Travel Cost (One-Way)	$85	$115	26%
Pavement Cost	$31	$59	47%
Fuel Consumption	11.2 gal	13.8 gal	19%
Carbon Dioxide Emissions	250 lbs	310 lbs	19%

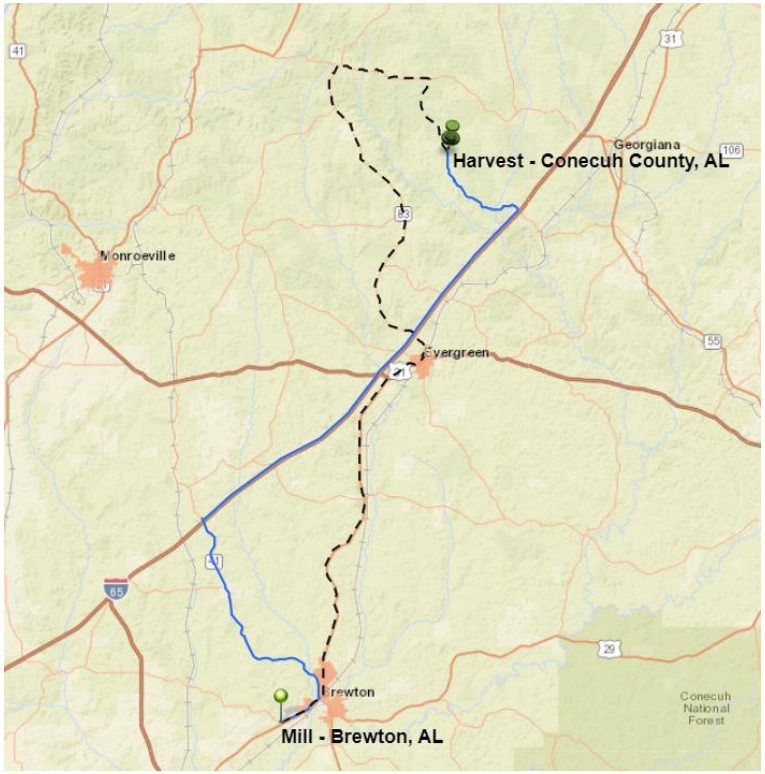

Figure 1: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in the Brewton, AL wood basket.

Interstate Access Improves Log Truck Safety and Efficiency: Eastover, SC Case Study

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Summary: In South Carolina and the US South, weight limits for log trucks (including tolerances) are higher on state roads and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight limits to interstate highways would reduce accident risk, fuel consumption, carbon dioxide emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Chester County, SC to a mill in Eastover, SC. To comply with current regulations, the log truck would travel along US Hwy 21 and 601 rather than utilizing I-77. Allowing state-legal, loaded log trucks to operate on I-77 would reduce intersections encountered by 59%, fatal crash risk by 51%, travel time by 18%, and travel costs by 16% on this delivery.

Table 1: Safety, cost, and environmental impact of an interstate route and current route in South Carolina.

Variable	I-77	US Hwy 21 & 601	Interstate Benefit
Travel Time	1 hr 35 min	1 hr 56 min	18%
Distance	90 miles	86 miles	4%
Average Travel Speed	54 mph	46 mph	17%
Number of Intersections	87	211	59%
Towns/Cities	1	4	75%
School Zones	1	1	--
Fatal Crash Risk (per 100 million miles)	2.19 crashes	4.44 crashes	51%
Travel Cost (One-Way)	$131	$156	16%
Pavement Cost	$33	$33	--
Fuel Consumption	16.3 gal	18.6 gal	13%
Carbon Dioxide Emissions	364 lbs	416 lbs	13%

Figure 1: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in the Eastover, SC wood basket.

Interstate Access Improves Log Truck Safety and Efficiency: Prattville, AL Case Study

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Summary: In Alabama and the US South, weight limits for log trucks (including tolerances) are higher on state roads and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. Applying state weight limits to interstate highways would reduce accident risk, fuel consumption, carbon dioxide emissions, and transportation costs. The example below is from an actual timber delivery from a harvest in Butler County, AL to a mill in Prattville, AL. To comply with current regulations, the log truck would travel along US Hwy 31 rather than utilizing I-65. Nearly 40% of accidents occur at intersections. Allowing state-legal, loaded log trucks to operate on I-65 would reduce intersections encountered by 70% and stop lights/signs by 54%. Likewise, travel time would be reduced by 26% and travel costs by 22% on this delivery.

Table 1: Safety, cost, and environmental impact of interstate and non-interstate route in the Prattville, AL wood basket.

Variable	I-65	US Hwy 31	Interstate Benefit
Travel Time	0 hr 55 min	1 hr 14 min	26%
Distance	56 miles	59 miles	5%
Average Travel Speed	61 mph	47 mph	28%
Number of Intersections	47	156	70%
Stop lights/signs	11	24	54%
School Zones	0	2	100%
Fatal Crash Risk (per 100 million miles)	1.74 crashes	4.06 crashes	57%
Travel Cost (One-Way)	$80	$102	22%
Pavement Cost	$11	$18	38%
Fuel Consumption	10.9 gal	12.8 gal	15%
Carbon Dioxide Emissions	245 lbs	288 lbs	15%

Figure 1: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in the Prattville, AL wood basket.

Interstate Access Improves Log Truck Safety and Efficiency: NC/VA Case Study

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Summary: In North Carolina, Virginia, and across the US South, weight limits for log trucks (including tolerances) are higher on state roads and US highways than on interstate highways. Consequently, loaded log trucks must avoid traveling on interstate highways. The example below is from an actual timber delivery from a harvest in Greensville County, VA to a mill in Roanoke Rapids, NC. To comply with current federal weight regulations, the log truck would travel along US Hwy 301 through Emporia, VA rather than bypass the city on I-95. The City of Emporia prohibits through trucks; however, they currently provide an exemption for forest products. Allowing state-legal, loaded log trucks to operate on I-95 would alleviate conflicts with the City of Emporia and reduce intersections encountered by 64%, stop signs/lights by 67%, fatal crash risk by 52%, travel time by 28%, and travel costs by 25% on this delivery.

Table 1: Safety, cost, and environmental impact of an interstate route and current route in Virginia and North Carolina.

Variable	I-95	US Hwy 301	Interstate Benefit
Travel Time	36 min	50 min	28%
Distance	31 miles	33 miles	5%
Average Travel Speed	52 mph	39 mph	32%
Number of Intersections	31	85	64%
Stop signs and stop lights	3	9	67%
Towns/Cities	3	4	25%
School Zones	1	2	50%
Fatal Crash Risk (per 100 million miles)	1.94 crashes	4.06 crashes	52%
Travel Cost (One-Way)	$49	$65	25%
Pavement Cost	$11	$14	21%
Fuel Consumption	5.9 gal	7.2 gal	17%
Carbon Dioxide Emissions	133 lbs	161 lbs	17%

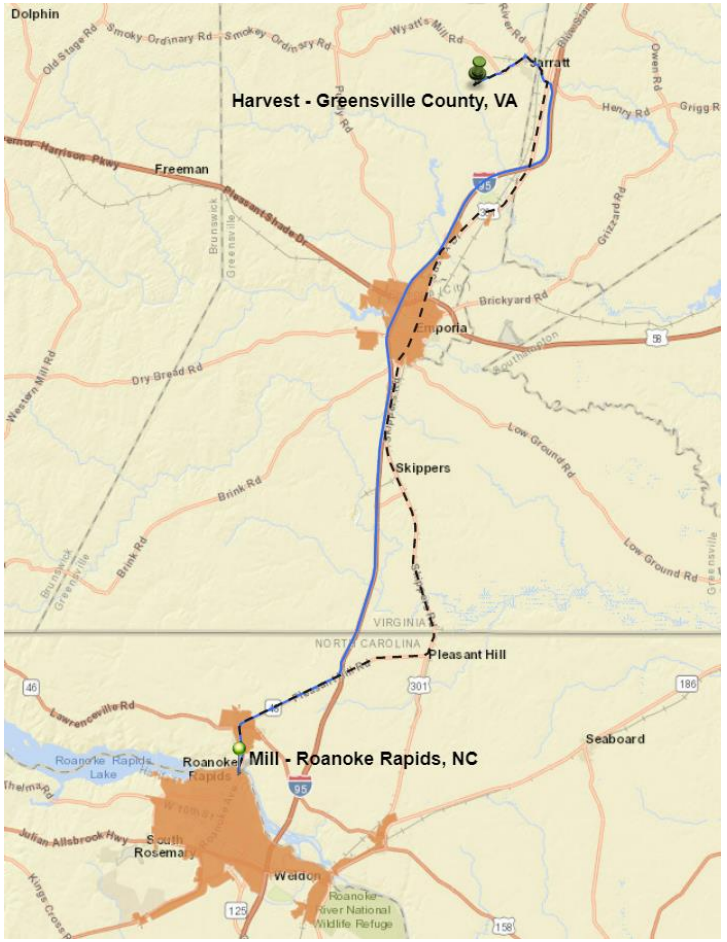

Figure 1: Timber delivery contrasting an interstate route (solid blue) and current route (dashed black) in northcentral North Carolina and southcentral Virginia.