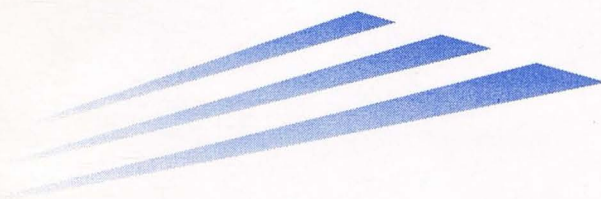


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KTC-99-18

Truck Route Access Evaluation:
Paducah-McCracken County US 60
Business Route and Locust Drive
Site # 14



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TRUCK ROUTE ACCESS EVALUATION

KTC-99-18

Paducah - McCracken County

US 60 Business Route and Locust Drive

Site # 14

“Freight Movement and Intermodal Access in Kentucky”

SPR 98-189

David H. Cain

with

Ken Agent

Brian Aldridge

Lisa Aultman-Hall

Nicole Lefever

Nick Stamatiadis

Joel Weber



Kentucky Transportation Center and the Department of Civil Engineering
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1.0 Introduction

There are two main objectives of the Freight Movement and Intermodal Access in Kentucky Study (SPR 98-189) undertaken by the Kentucky Transportation Center for the Kentucky Transportation Cabinet: evaluation of the access for trucks between intermodal or other truck generating sites and the National Highway System (NHS); and furthering the understanding of freight commodity flows throughout the state. This report summarizes the access evaluation for one cluster of facilities located in McCracken county in the Purchase Area Development District (ADD) and KYTC Highway District # 1. The location of the site in Paducah is shown in Figure 1. Work on other specific sites as well as the freight commodity flow task are on-going and are documented elsewhere.

The sites to be evaluated were selected from two existing databases (a truck facility survey from 1994 and the intermodal facility inventory) based on ADD and KYTC Highway District planner recommendations, geographic location, distance to the national highway system, and the number of trucks accessing the site. Consideration was also made for the freight type handled and transportation modes used. One facility was recommended for study by the Purchase ADD planners and others were added from the Kentucky Transportation Center database. The National Highway System routes present in the area are I-24, US 60 west of I-24, and US 45 south of I-24 as shown in Figure 1. The sites are located along Wayne Sullivan Drive (US 60X or US 60 Business, also know as the I-24 Downtown Loop) and 4th Street in McCracken county as shown in Figure 2.

The site was visited several times for data collection and video recording as listed in Appendix A. A phone survey was conducted with facility truck routing personnel early in the study process. Phone surveys were conducted with industries in the pre-existing intermodal or truck databases or the major industries observed during the sites visits. Due to limited resources available for the project not all smaller facilities with lower truck volumes could be contacted. The following facilities were contacted: Paducah-McCracken County Riverport Authority, ITAPCO, Lone Star Industries, and Consolidated Grain Co. Other facilities not contacted are: TBI Steel, Federal Materials, Martin Marietta Aggregates, and Duke & Long Distributing Company. ITAPCO, Lone Star Industries, Paducah-McCracken County Riverport Authority, Duke & Long Distributing Company and Federal Materials are located on Wayne Sullivan Drive, while Consolidated Grain, Martin Marietta Aggregates, and TBI Steel are located on 4th Street. Approximate locations are shown in Figure 2. The surrounding area is generally commercial and industrial. The phone survey found approximately 586 trucks per day accessing these clustered sites (in and out), while HIS data indicates 635 trucks per day travel along Wayne Sullivan Drive (US 60 Business). The site trucks are generally semi tanker trailers with a maximum length of 48 feet, tri-axle ready-mixed cement trucks and tri-axle dump trucks. The phone survey information can be found in Appendix B.

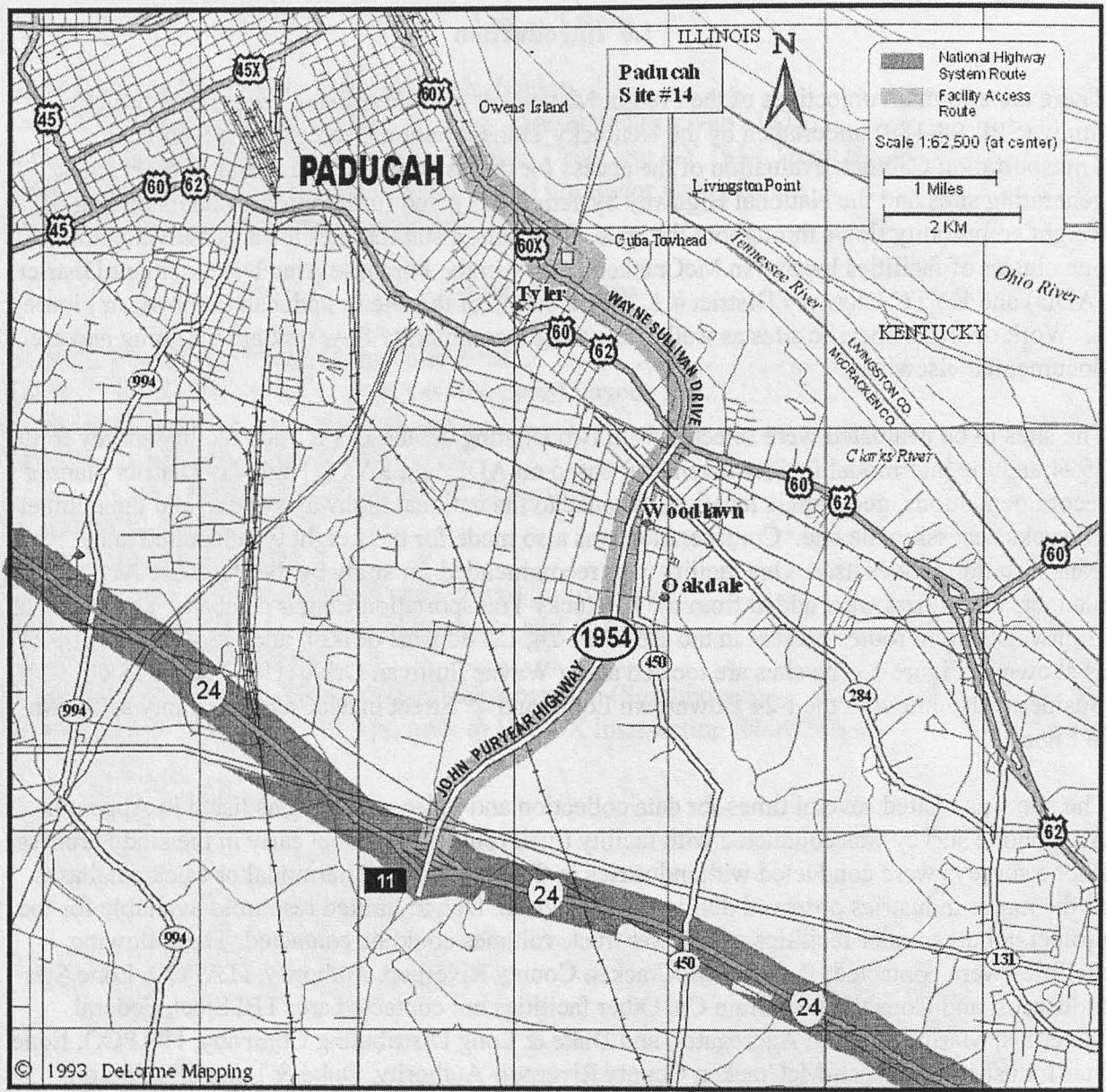


Figure 1: Location of Truck Generating Sites

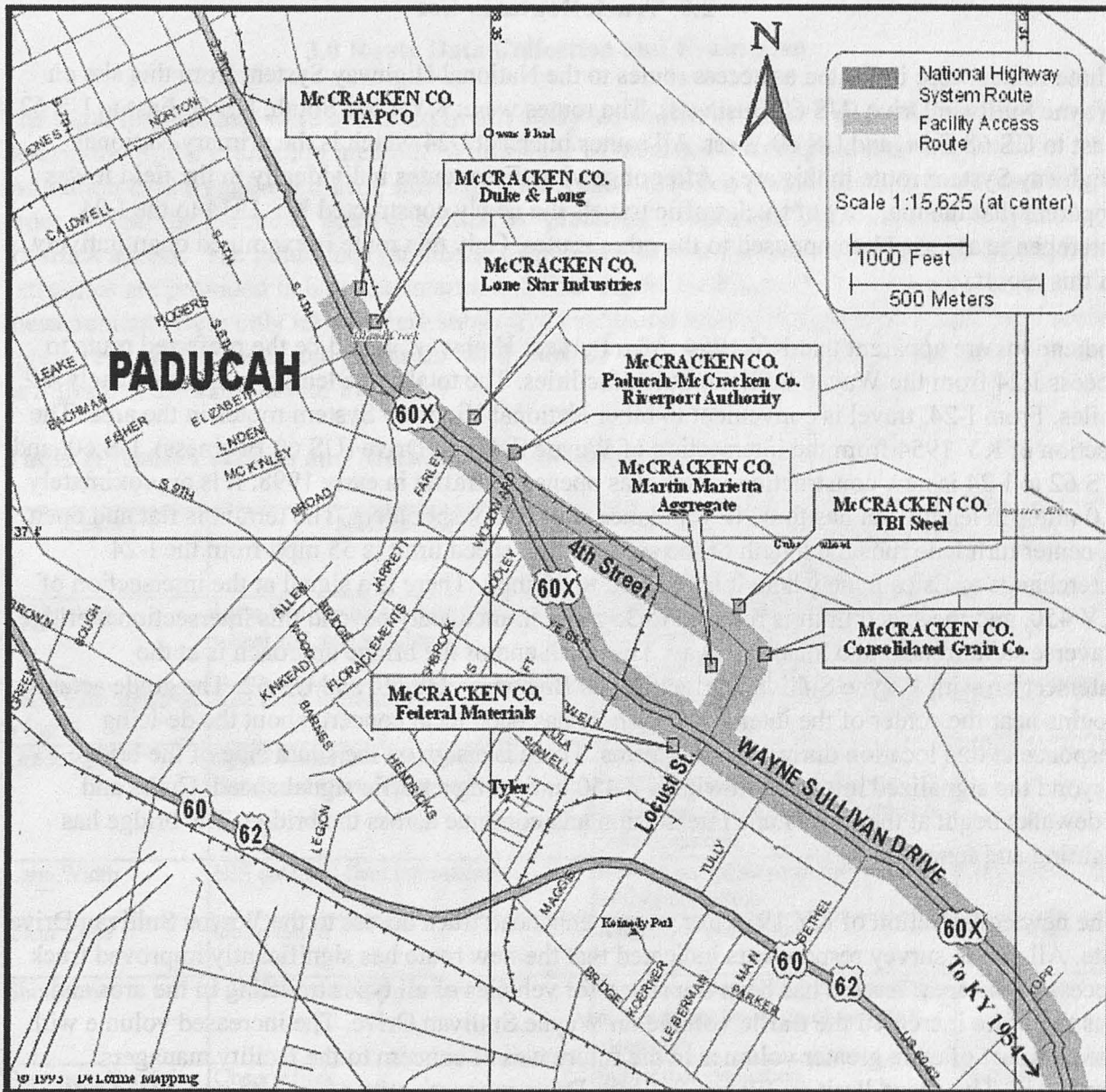


Figure 2: Wayne Sullivan Drive (US 60 Business) Layout

2.0 Truck Routes in Use

Three routes were indicated as access routes to the National Highway System from this site on Wayne Sullivan Drive (US 60 Business). The routes were: KY 1954 South, US 60 East to US 62 East to US 68 East, and US 60 West. All routes intersect I-24 which is the primary National Highway System route in this area. After observing these routes individually in the field it was apparent that the majority of truck traffic travels the newly constructed KY 1954 to the I-24 interchange at Exit 11 as opposed to the other routes. Only this route is examined quantitatively in this report.

Indications are apparent that KY 1954, John Puryear Highway, would be the preferred route to access I-24 from the Wayne Sullivan Drive facilities. The total route length is approximately 4.2 miles. From I-24, travel is convenient to other National Highway System routes in the area. The section of KY 1954 from the intersection of Wayne Sullivan Drive (US 60 Business), US 60, and US 62 to I-24 is new construction which was opened to traffic in early 1998. It is approximately 3.0 miles in length and has four, 12 foot lanes with 9 foot shoulders. The terrain is flat and open. A center turn lane runs the length of the section. The speed limit is 55 mph from the I-24 interchange to Estes Lane where it is reduced to 45 mph. There is a signal at the intersection of KY 450, and the speed limit is reduced to 35 mph. Immediately beyond this intersection a bridge traverses a railroad and a local roadway. The north end of the bridge approach is at the intersection with Wayne Sullivan Drive (US 60 Business), US 60, and US 62. The grade actually begins near the center of the intersection. There has been local concern about the de-icing response at this location during winter storms. There is a sign on the south side of the bridge beyond the signalized intersection with KY 450 indicating a traffic signal ahead. Curbs and sidewalks begin at the Estes Lane intersection and continue across the bridge. The bridge has lighting and fencing.

The new construction of KY 1954 has greatly enhanced truck access to the Wayne Sullivan Drive site. All phone survey respondents indicated that the new route has significantly improved truck access to the area. Access has been improved for vehicles of all types traveling in the area and has therefore increased the traffic volume on Wayne Sullivan Drive. The increased volume with the prospect of even greater volumes in the future was of concern to the facility managers contacted. The speed limit on Wayne Sullivan Drive in the vicinity of the site was raised from 35 mph to 45 mph within the last two years. The only signalized intersections along the route is at Bethel St. approximately 0.3 miles east of the site. The signal was installed in early 1998. A fire station is situated directly across Wayne Sullivan Drive from Bethel Street. Several commercial firms are located on Bethel Street. The most common concern among all the facility managers at this site was the need for a signal at the Locust Drive intersection and lowering of the speed limit to 35 mph. Trucks have considerable difficulty making left turns across traffic at this intersection most of the day. Most streets intersect perpendicularly on the south side of the roadway, whereas most of the facilities are located on the north side between Wayne Sullivan Drive and the Tennessee River. Due to the narrow available land, some facilities are situated directly on the roadway separated by a sidewalk.

3.0 Route Data Collection and Evaluation

The route features that were evaluated in this study are shown in Table 1 along with a brief description of the evaluation method. While some of these features require only subjective evaluation by the engineer during site inspection, others required quantitative measurement in order to label the particular point or section as “preferred”, “adequate”, or “less than adequate” for truck access. The guidelines for labeling a point or section into one of these three descriptive categories are provided in both the interim and final report for this project. In several cases measurements were only taken where subjective evaluation indicated a problem might exist since “preferred” type sections and points do not contribute to an increase in the problem truck points or miles that are summed for the route.

Table 1: Route Features and Method of Evaluation

Feature	Methodology	Team Consensus based on Committee Meeting and Draft Report Feedback	Feature Type
Offtracking	Lane Width with formula based on wheel and axle spacing	Evaluate where observation of trucks indicates possible offtracking - use HIS data and collect in field	Point
Max. Safe Speed on a Curve	Ball Bank Indicator Reading	Evaluate complete route due to ease of data collection	Point
Grade	Speed Reduction Tables with Percent Grade and Direct Observation	Evaluate where observation of trucks indicates speed reduction occurs using HIS data and collect in field as needed	Continuous
Lane Width	HIS data and field measurement	Review complete route due to ease of data collection	Continuous
Clear Zone	Observation	Subjective evaluation	Subjective
Shoulders	HIS data and field measurement	Evaluate where HIS data is available and estimate based on observation elsewhere	Continuous
Pavement Condition	Observation	Subjective evaluation	Subjective
Truck Stopping Sight Distance	Field measurements	Measure only when observation indicates possible problem	Point
Turning Radii	Field measurements and observations of trucks	Measure only when observation indicates possible problem	Point
Accident History	Accident data files and KTC High Truck Accident Report	Do for entire route	Subjective
Intersection LOS	Traffic counts	Only where problems are indicated by facility managers	Point
Route LOS	Traffic counts and travel time studies	Only where problems are indicated by managers	Continuous
RR Crossings	Field Observation	Evaluate all level crossings	Point
Bridges	KYTC Sufficiency Rating	Evaluate all bridges	Point

3.1 Traffic Operations and Level of Service

The problem areas identified in the surveys were congestion along Wayne Sullivan Drive and the possible need for a signal at the intersection of Locust Drive and Wayne Sullivan Drive. Therefore, the signalized intersections were analyzed using a three step process: 1. Level of Service (LOS) using the Highway Capacity Software for each intersection; 2. Overall arterial LOS using a travel time study; and 3. Traffic signal warrant analysis. These signalized intersections have actuated signals, an issue that HCS does not address adequately in the existing software version. Basic assumptions for all intersections is the lack of signal coordination, the absence of pedestrians (note that during the field counts very few were noted), and the use of three seconds as lost time per phase. To resolve the actuated signal problem and since the period examined is the p.m. peak, it was assumed that the demand is high enough to force the signals to operate as fixed time signals with the maximum allowable green times. The lane use diagrams and volume counts for each intersection are shown in Appendix C.

The results for both signalized and unsignalized intersections using the HCS analysis are shown in Table 2. The LOS for all intersections analyzed was at acceptable levels, A and B, with very low delays and no approach had any significant delays.

A travel time study was conducted where an observer traveled along the possible path to access I-24 in both directions while maintaining the speed of the traffic. Six passes were made for each direction (field data is shown in Appendix C) and the average time for each direction was computed (eastbound route 366.7 seconds, and westbound 375 seconds. Given the length of the route, 3.105 miles, the average travel speeds were computed (to I-24 30.5 mph and from I-24 29.8 mph). Using the Highway Capacity Manual and for a type II arterial (urban with medium development and 45 mph speed limit) the LOS was B for both directions. Therefore, no significant delays or operational problems were experienced along either route, since the arterial operates at a high LOS during the peak period.

Finally, given the volumes counted during the peak period, a traffic signal is not warranted given the Manual of Uniform Traffic Control Device Guidelines at the Locust Drive and Wayne Sullivan Drive intersection. However, a traffic signal warrant study may be needed in the future.

Table 2. Summary of LOS analysis for each intersection (sec/veh / LOS)

Intersection	East-bound			West-bound			North-bound		South-bound		Inters.
	L	T+R	App	L	T+R	App	LTR	App	LTR	App	
W. Sullivan @ Yopp	3.8/A	4.1/A	4.1/A	3.7/A	4.0/A	4.0/A	11.9/B	11.9/B	11.8/B	11.8/B	5.5/B
W. Sullivan @ Bethel	--	1.3/A	1.3/A		1.3/A	1.3/A	18.3/C	18.3/C	--	--	2.1/A
W. Sullivan @ Locust ¹	4.7/A	--	4.7/A	4.8/A	--	4.8/A	24.1/D	24.1/D	25.5/D	25.5/D	1.2/A

Note: ¹ Unsignalized intersection

3.2 Accident History

In 1997 the Kentucky Transportation Center studied all state-maintained roads throughout Kentucky and determined average truck accident rates for different types of road sections. A critical accident rate was then calculated using the average accident rate for a specific highway type along with an assumed level of statistical significance and exposure (vehicles miles traveled).

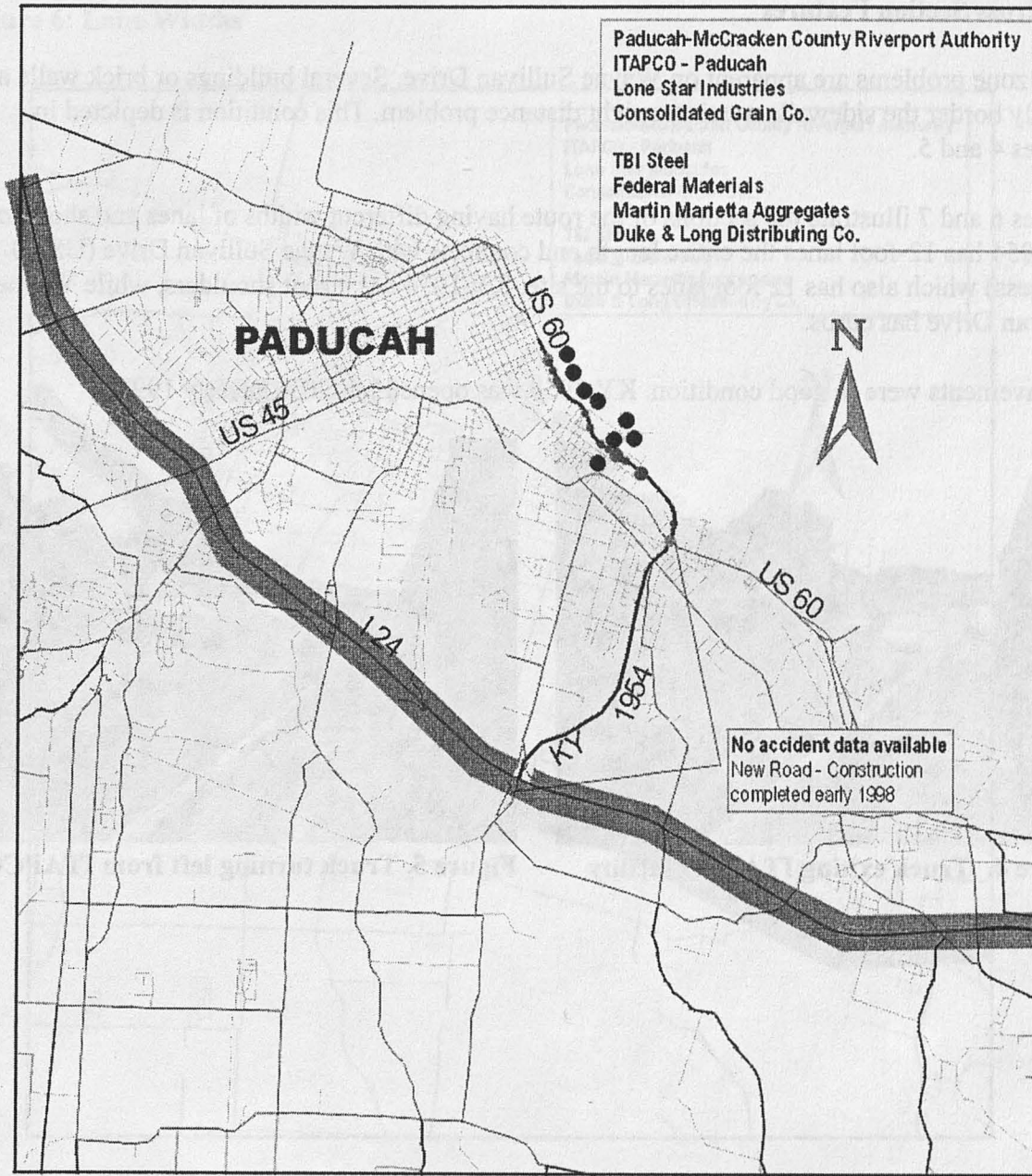
No segment of US 60X has a critical accident rate for trucks. Due to the recent construction of KY 1954 information relating to accident rates is currently unavailable.

Figure 3 shows the locations of accidents during the years 1995, 1996 and 1997. The figure clearly illustrates that accidents are occurring at intersections as would be expected. A summary of the accidents along the entire truck route is shown in Table 3 for the same three year period. Truck accidents represent a significant portion of the overall accidents along this route. The 7.1% of accidents involving trucks is higher than the percent trucks along US 60X (4.6%). This suggests there are some safety concerns from an accident history point of view that must be addressed along this route.

Table 3: Accident Types along Wayne Sullivan Drive in the vicinity of the truck facilities.

	<i>Non-Truck Accidents</i>	<i>Truck Accidents</i>	<i>Percent Trucks</i>
Total	237	18	7.1
Fatal Accidents	0	0	0
Injury	81	3	3.6
Intersection	121	12	9.0

Figure 3: Accident Locations (1995-1997)



LEGEND

- Facilities
- Accidents: 1 - 3
- Accidents: 4 - 6
- Accidents: 7 - 10
- National Highway System
- Access Route
- Other Roads

Scale - 1:98,500

0.5 0 1 2 Miles

1000 0 2000 4000 Meters

3.3 Cross Section Features

Clear zone problems are apparent on Wayne Sullivan Drive. Several buildings or brick walls are directly border the sidewalk creating a sight distance problem. This condition is depicted in Figures 4 and 5.

Figures 6 and 7 illustrate the sections of the route having different widths of lanes and shoulders. KY 1954 has 12-foot lanes the entire length and connects with Wayne Sullivan Drive (US 60 Business) which also has 12 foot lanes to the site. KY 1954 has 9 foot shoulders, while Wayne Sullivan Drive has curbs.

All pavements were in good condition. KY 1954 was opened to traffic in early 1998.

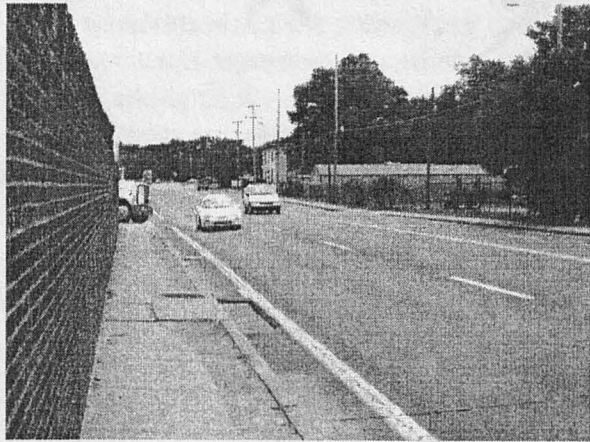
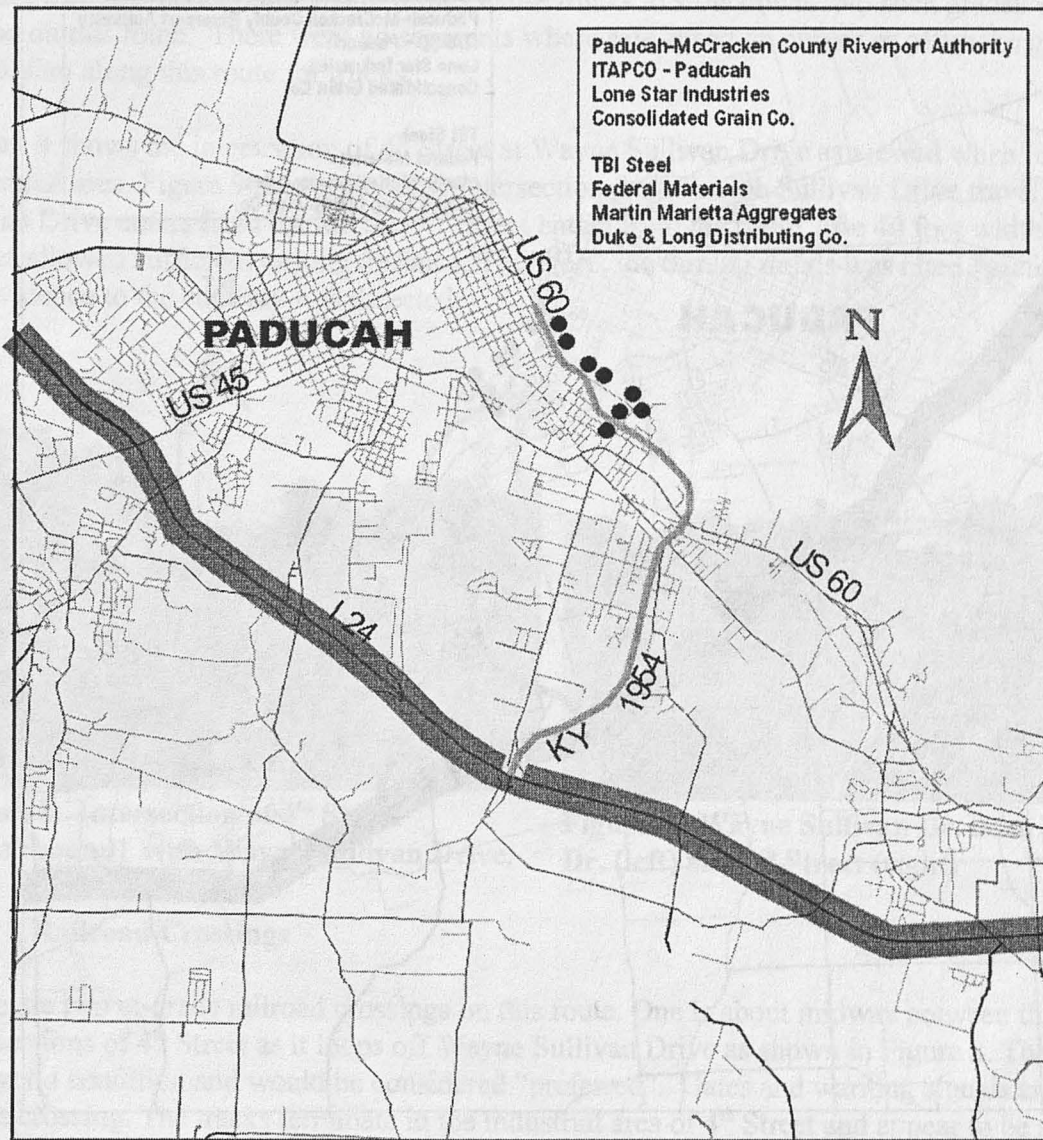


Figure 4. Truck exiting ITAPCO facility



Figure 5. Truck turning left from ITAPCO

Figure 6: Lane Widths



LEGEND

- Facilities
- Lane Width: 12 Feet
- Other Roads
- National Highway System Access Route

Scale - 1:98,500

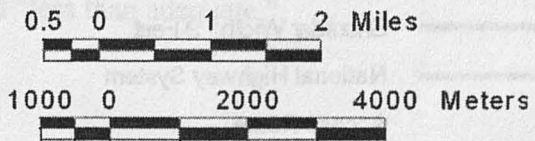
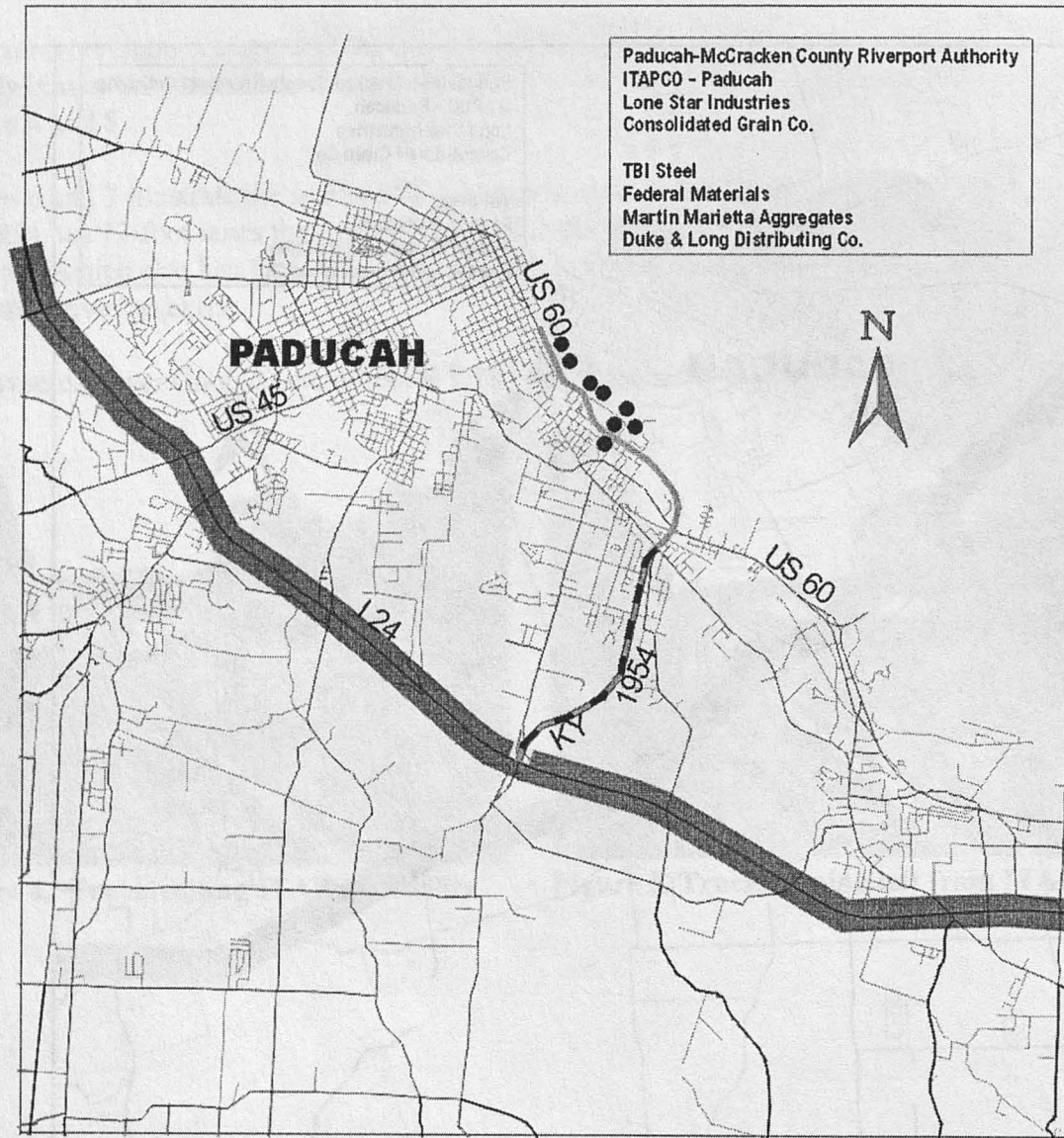


Figure 7: Shoulder Widths



LEGEND

- Facilities
- Shoulder Width: 1 - 2 Feet
- Shoulder Width: 9 Feet
- National Highway System
- Access Route
- Other Roads

Scale - 1:98,500

0.5 0 1 2 Miles

1000 0 2000 4000 Meters

3.4 Curvature Features

Grades are considered problematic if they cause trucks to slow down. No such grades were found on this route. There were no segments where safe speed on curves or offtracking would be a problem along this route for trucks.

Figure 8 shows the intersection of 4th Street at Wayne Sullivan Drive as viewed when leaving the industrial area. Figure 9 shows the same intersection from Wayne Sullivan Drive traveling west. Locust Drive enters from the left and 4th Street enters from the right. The 40 foot width of 4th Street allowed sufficient turning distance. Therefore, the turning radius was rated "preferred" and no evidence to the contrary was detected.

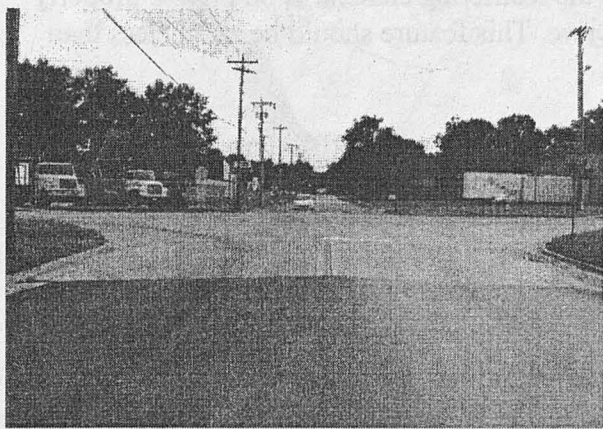


Figure 8. Intersection of 4th Street (Southbound) with Wayne Sullivan Drive.

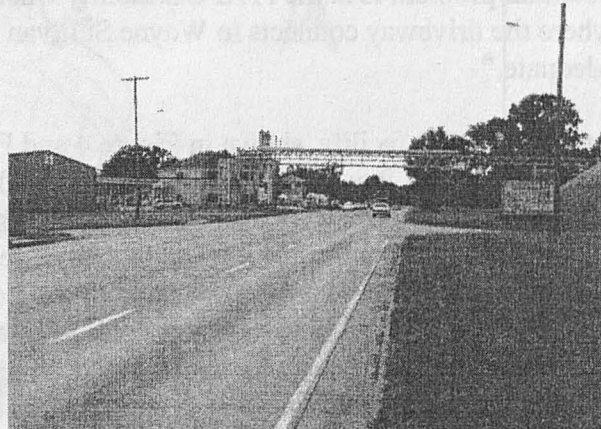


Figure 9. Wayne Sullivan Dr. near Locust Dr. (left) and 4th Street (right)

3.5 Railroad Crossings

There are two at-grade railroad crossings on this route. One is about midway between the intersections of 4th Street as it loops off Wayne Sullivan Drive as shown in Figure 2. The crossing is in good condition and would be considered "preferred". Gates and warning signals are present at this crossing. The tracks terminate in the industrial area of 4th Street and appear to be seldom used. These second set of crossings on 4th Street, are also shown in Figure 2. The tracks split and terminate at the facilities along 4th Street. The three crossings are rough and worn and no gates or warning signals are present. These crossings are located in the industrial area where traffic speeds are low. However, the crossings are rated "less than adequate."

3.6 Bridges

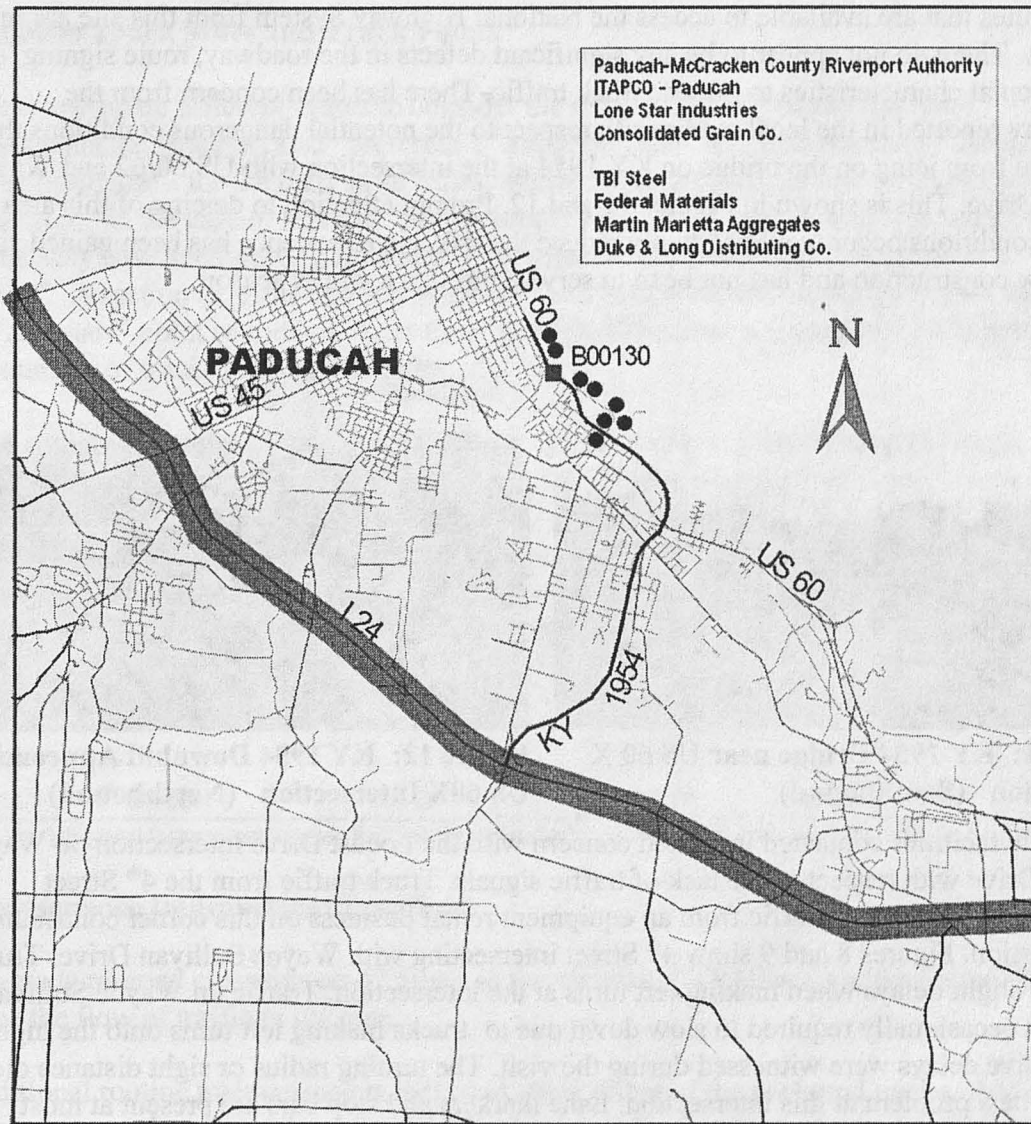
The location of bridges along the routes are shown in Figure 10. The bridge on KY 1954 near the intersection with US 60/62 and Wayne Sullivan Drive was opened to traffic in early 1998 and no information is yet available. It is a new bridge and can be assumed to have a "preferred" rating. The proximity of the downgrade of the bridge on KY 1954 to the intersection could present some difficulty during icing conditions. Since the bridge had not been opened to traffic during a winter season at the time of visit, no experience has been gained with regard to winter operations.

3.7 Sight Distance

No sight distance problems exist along KY 1954. The only area where sight distance could be a potential problem is at the ITAPCO facility where the restricting element is on private property where the driveway connects to Wayne Sullivan Drive. This feature should be rated "less than adequate."

At the ITAPCO facility, shown in Figure 4 and Figure 5, trucks enter off Wayne Sullivan Drive and travel only a few feet to the loading area. After the vehicles are loaded, they continue in a semi circle path to the exit. There are several large aboveground storage tanks on the property which provides the need for a seven foot brick retention wall along the front of the property. The wall abuts the sidewalk and is open across the front of the loading area. Trucks enter and exit in a semi circle path. As a truck proceeds to the exit area the vehicle must pull slightly into the westbound lane to permit adequate sight distance in both directions. The roadway is straight in the westbound direction but curves to the left in the eastbound direction (approximately 0.15 mile from the facility). The route to I-24 via KY 1954 leads to the left from the facility which necessitates a left turn across traffic in a 45 mph speed zone. Several loaded tanker trucks were observed turning left into the traffic flow causing traffic to slow. The problem appears to be the location of the wall on private property, but a lower speed limit could potentially improve this situation. "Trucks Entering Highway" warning signs are located approximately 0.15 mile in each direction from this facility. Both have flashing warning lights attached to the signs. Preceding these signs are "Congested Area" signs.

Figure 10: Bridge Locations



LEGEND

- Facilities
- B00000 Bridges - Bridge Number
- National Highway System
- Access Route
- Other Roads

Scale - 1:98,500

0.5 0 1 2 Miles

1000 0 2000 4000 Meters

3.8 Other Route Features

All the routes that are available to access the National Highway System from this site are in good condition. There do not appear to be any significant defects in the roadway, route signing, or environmental characteristics to impede truck traffic. There has been concern from the community reported in the local media with respect to the potential dangerous conditions that could arise from icing on the bridge on KY 1954 at the intersection with US 60/62 and Wayne Sullivan Drive. This is shown in Figures 11 and 12. Prompt attention to deicing of this area when freezing conditions occur would certainly reduce the risk. No experience has been gained since this is new construction and has not been in service through a winter season.



Figure 11: KY 1954 Bridge near US 60 X Intersection (Southbound)



Figure 12: KY 1954 Downhill Approach to US 60X Intersection (Northbound)

Most of the facilities contacted indicated concern with the Locust Drive intersection on Wayne Sullivan Drive with respect to the lack of traffic signals. Truck traffic from the 4th Street industrial area and mixed traffic from an equipment rental business on this corner contribute to the congestion. Figures 8 and 9 show 4th Street intersecting with Wayne Sullivan Drive. Trucks encounter slight delays when making left turns at the intersection. Traffic on Wayne Sullivan Drive was occasionally required to slow down due to trucks making left turns onto the highway. No excessive delays were witnessed during the visit. The turning radius or sight distance did not appear to be a problem at this intersection. Lane markers and stop bars are present at most intersections with Wayne Sullivan Drive.

The 45 mph speed limit on Wayne Sullivan Drive may be high given the level of development in this urban area. The limit was raised to 45 mph within the previous two years.

4.0 Composite Route Evaluation and Recommendations

4.1 Problem Truck Miles and Truck Points

In order to compare different routes to consider the relative urgency of needed route improvements the features rated "preferred", "adequate" and "less than adequate" along a route are to be normalized for the number of miles, number of points and number of trucks using the route section. In the case of this McCracken county route, the three features that were evaluated quantitatively have sections or points that are considered only "adequate" or "less than adequate". A section or point that is considered "less than adequate" is weighted two times that of an "adequate" point or section. Less than "preferred" sections are weighted by length as well as the number of trucks passing that point.

Table 4 contains the total problem truck miles and total problem points along this route. The rating of this route relative to others evaluated will be reported in the final report.

Table 4: Summary of Problem Truck Miles and Problem Truck Points for Entire Route

Feature	Road	Location	Points*	Length (miles)	Trucks (/day)	Truck-points	Truck-miles
Shoulders	US 60X	curbed	1	1.8	635		1143
	4 th Street	curbed	1	1	180		180
Total							1,323
Railroad	4 th Street		2		180	360	

*1 point for "adequate" features and 2 points for "less than adequate" features (0 points for "preferred" features not shown)

4.2 Maintenance Improvement Locations

The at-grade railroad crossings on 4th Street in the vicinity of TBI Steel could be repaired to enhance the flow of traffic in the area.

No additional routine maintenance is indicated along either of the preferred routes. Additional warning signs on the approach to the KY 1954 bridge in the northbound direction near the intersection with Wayne Sullivan Drive might be beneficial to traffic unfamiliar with the geometrics of the intersection.

4.3 Overall Route Rating

In order to account for both the subjectively and objectively evaluated route features along truck routes throughout the state, a panel of UK engineers who studied the route and its features either during a site visit or by viewing a video of trucks using the routes scored the overall access on a scale of 1 through 10. The interpretation for these ratings is shown in Table 5. The route in McCracken County traversing KY 1954 and US 60X to the Wayne Sullivan Drive/Fourth Street industrial area was given an overall rating of 9 indicating that trucks are served with reasonable access.

4.4 Conclusions and Recommendations

In conclusion, the following problems were identified along the truck access routes to the Paducah US 60 Business Route and Locust Drive area.

- Clear zone problem on Wayne Sullivan Drive (US 60X) at the ITAPCO facility;
- Rough railroad crossing on Locust Street near TBI Steel;

Table 5: Interpretation of the Overall Route Rating

Overall Route Rating	Qualitative Interpretation of Rating
1	Trucks should not be using this route
2	Major construction is required to improve this route
3-5	Minor improvements are <u>required</u> on this route
6-8	Minor improvements could <u>improve</u> this route
9	Minor problems exist that do not seriously impede truck access
10	Trucks are served with reasonable access

Table 2: Interpretation of the Overall Grade Rating

Overall Grade Rating	Qualitative Interpretation of Rating
1	Teacher should not be away the student's work for improvement. Teacher should
2	Student's behavior is very poor. Teacher should
3-5	Minor improvements are required on the part
4-8	Minor improvements could make a
9	There is no need for any further work on the part
10	Student is doing very well. No further work

Appendices

Appendix A: Field Site Visit Dates and Activities

- April 17, 20 1998 - site visit and layout, facility identification, photographs
- May 21, 1998 - traffic counts and geometric measurements
- May 21, 1998 - traffic counts and travel time survey
- June 15, 1998 - final data collection

Appendix B: Phone Surveys Conducted with Facilities

PHONE SURVEY RESULTS

<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
14	LONESTAR IND.	PADUCAH	McCRACKEN	PURCHASE

<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>
BOB CARPENTER		502-442-5480	502-443-9248

1. Is the location of your facility on the map correct?
2. Our information shows about 16-17 trucks per day access your facility. Is that correct? *If not, fill in correct volume.*
3. Is the truck traffic to and from your facility seasonal or mostly constant?
SEASONAL 9 MONTHS OFF SEASON 11/15 - 2/28
4. *(If truck traffic is seasonal)* Is the trucks/day for the peak season? YES
5. What is the most common size truck operating at your facility? VARIED SEMITRAILER
6. What is the largest truck operating at your facility? 45' CEMENT TRUCK W/ BOOM
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different?
(one may be an empty truck) IN - CEMENT BLENDED
OUT - REDISTRIBUTED
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) CONSTANT, SLOW MID MORNING PICKS UP EARLY AFTERNOON
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Time and Day of Week
TRAFFIC CONGESTION IN VICINITY OF KY OAKS MALL ON US 60 NEAR I-24 AREA (HOLT RD.)
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) DYERSBURG, NASHVILLE, EVANSVILLE, ST. LOUIS
11. Do you have any other problems or concerns along the route you would like us to consider?
NEW HUSBAND RD. EXTENSION - ROUGH SURFACE WATER POOLING NEAR I-24 INTERCHANGE ON NEW CONSTRUCTION, HUSBAND RD. EXTENSION RECENTLY COMPLETED WILL HELP
12. Would you like a copy of the final report (roadway/route evaluation ???) NO

NOTES/COMMENTS:

PHONE SURVEY RESULTS

<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
14	PADUCAH- McCracken	PADUCAH	McCracken	PURCHASE
	RIVERPORT AUTHORITY			
<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>	
WAYNE MEUNIER	PORT DIRECTOR	502-442-9326	502-442-0598	

1. Is the location of your facility on the map correct?
2. Our information shows about 170 trucks per day access your facility. Is that correct?
If not, fill in correct volume.
3. Is the truck traffic to and from your facility seasonal or mostly constant?
CONSTANT
4. *(If truck traffic is seasonal)* Is the trucks/day for the peak season?
5. What is the most common size truck operating at your facility? 35' DUMP
6. What is the largest truck operating at your facility? 40' DUMP
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different?
(one may be an empty truck) FERTILIZER, SAND, ROCK, PETROLEUM COKE
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) GATE OPEN - 7A-11:30A - 1:30 P - 4P
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Time and Day of Week
15 -20 MINUTE WAIT GETTING OUT
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) I-24 HUSBAND RD
11. Do you have any other problems or concerns along the route you would like us to consider?
SIGNAL AT LOCUST/ US 60 (I-24 LOOP)
12. Would you like a copy of the final report (roadway/route evaluation ???) YES

NOTES/COMMENTS:

PHONE SURVEY RESULTS

<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
14	CONSOLIDATED GRAIN CO.	PADUCAH	McCRACKEN	PURCHASE

<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>
ALLEN WADE		502-443-2100	502-443-0806

1. Is the location of your facility on the map correct? YES
2. Our information shows about 20 trucks per day access your facility. Is that correct? *If not, fill in correct volume.* YES
3. Is the truck traffic to and from your facility seasonal or mostly constant?
SEASONAL 100 HARVEST SEASON 70-80 JAN/FEB.
4. *(If truck traffic is seasonal)* Is the _____ trucks/day for the peak season? NO OFF SEASON
5. What is the most common size truck operating at your facility? 45' SEMITRAILER
6. What is the largest truck operating at your facility? HOPPER BOTTOM
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different?
(one may be an empty truck) IN - 90% (CORN, GRAIN, BEANS, MILO)
OUT - 10% (WHEN NEED TO CLEAN GRAIN BINS (SHIP OUT)
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) 11 A.M. - 1 P.M.
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Time and Day of Week
HUSBAND RD. IMPROVEMENT HELPS A LOT SIGNAL NEEDED AT LOCUST/
WAYNE SULLIVAN DR.
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) TO BARGE, FROM - SO. ILL. I-24 TO HUSBAND RD.
FROM - MAYFIELD TO US 45 TO I-24 TO HUSBAND RD.
FROM - W. PADUCAH US 60 TO I-24 LOOP RO HUSBAND RD.
11. Do you have any other problems or concerns along the route you would like us to consider?
NEED SIGNAL AT LOCUST/ WAYNE SULLIVAN DR. DIFFICULT GETTING OUT,
TRAFFIC SPEEDS GENERALLY HIGHER THAN POSTED LIMIT
12. Would you like a copy of the final report (roadway/route evaluation ???) YES

NOTES/COMMENTS:

PHONE SURVEY RESULTS

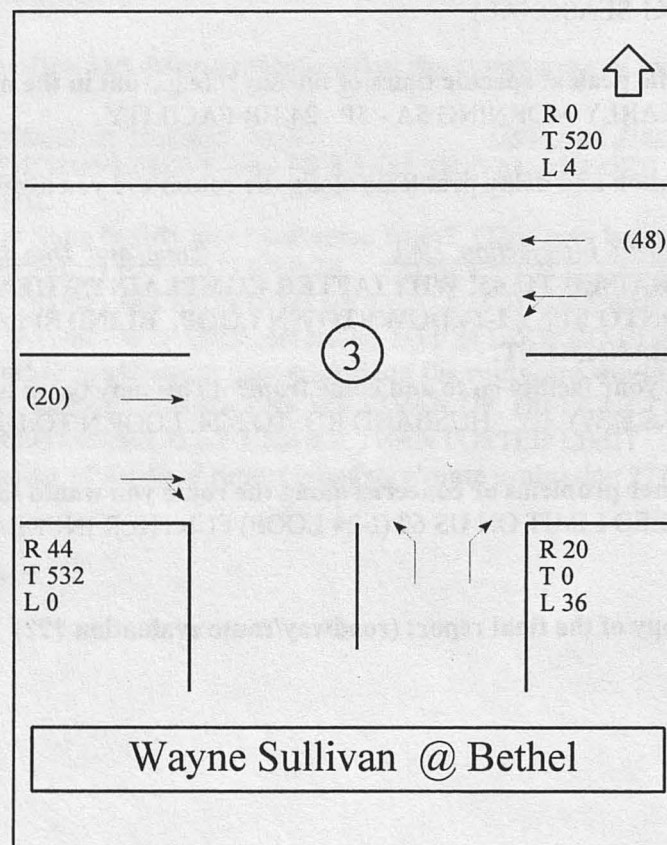
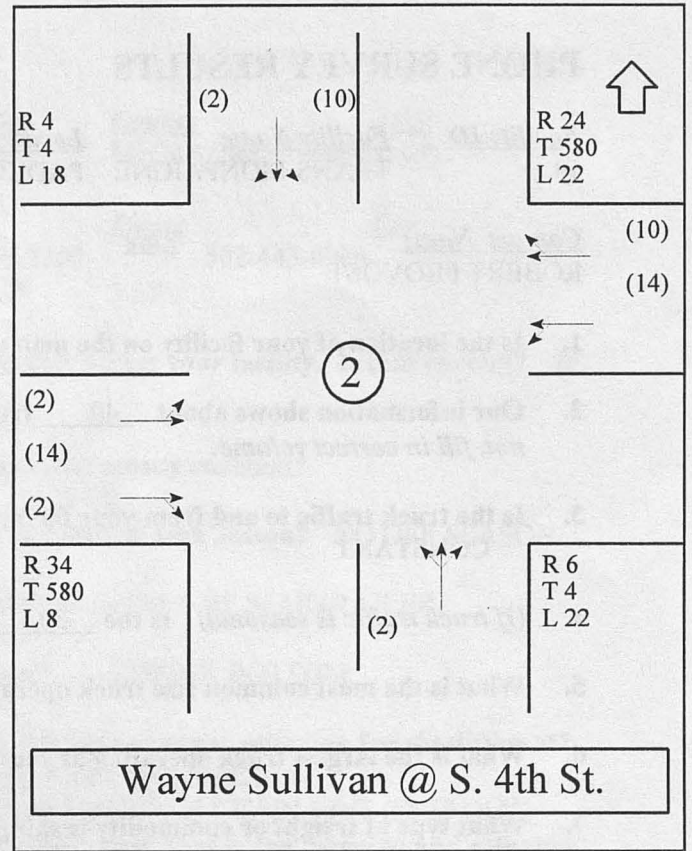
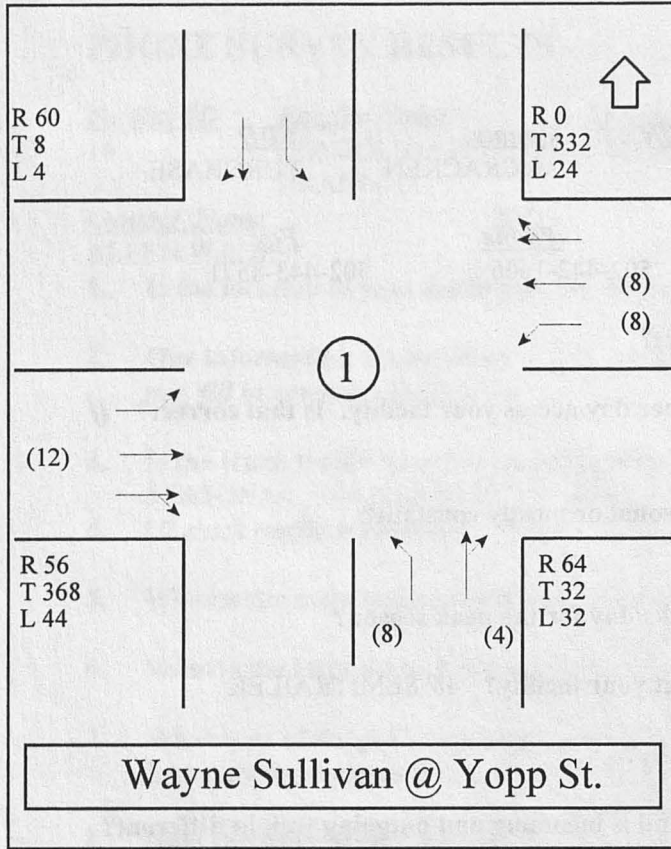
<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
14	TRANS-MONPAIGNE	PADUCAH	McCRACKEN	PURCHASE

<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>
ROBERT PROVOST		502-442-1606	502-443-8571

1. Is the location of your facility on the map correct?
2. Our information shows about 49 trucks per day access your facility. Is that correct? *If not, fill in correct volume.*
3. Is the truck traffic to and from your facility seasonal or mostly constant?
CONSTANT
4. *(If truck traffic is seasonal)* Is the 50 trucks/day for the peak season?
5. What is the most common size truck operating at your facility? 48' SEMITRAILER
6. What is the largest truck operating at your facility?
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different? *(one may be an empty truck)* IN - BY BARGE, OUT - GASOLINE, DIESEL, RESIN OIL AND FORMER RESIN (K1 SEASONAL)
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) EARLY MORNING 5A - 5P 24 HR FACILITY
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Time and Day of Week
SPEED LIMIT 35 RAISED TO 45! WHY (AFTER COMPLAINTS) HEAVY TRUCK TRAFFIC TURNING ONTO BUSY I-24 DOWNTOWN LOOP. BLIND SPOT ONTO US 60 DUE TO FLOODWALL EMBANKMENT.
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) HUSBAND RD. TO I-24, LOOP N TO I-24 THROUGH CITY
11. Do you have any other problems or concerns along the route you would like us to consider?
INCREASED SPEED LIMIT ON US 60 (I-24 LOOP) FURTHER INCREASED TRAFFIC HAZARD
12. Would you like a copy of the final report (roadway/route evaluation ???) YES

NOTES/COMMENTS:

Appendix C: Traffic Counts, Intersection Layout and Travel Time Data



Travel Time Data

East-bound		West-bound	
Pass	Time (min)	Pass	Time (min)
1	6.77	1	5.23
2	5.8	2	6.47
3	5.4	3	6.72
4	7	4	6.43
5	5.73	5	5.8
6	5.97	6	6.85
Avg (sec)	366.7		375

