

**ISSUE GROUP
MEETING #1 REPORT**

**KNOXVILLE
PARKWAY
CONTEXT SENSITIVE
SOLUTIONS**

**AIR QUALITY AND
TRAFFIC NOISE ISSUE GROUP**



**October 18, 2004
Cedar Bluff Holiday Inn Select
Knoxville, TN**

&

**November 15, 2004
National Transportation Research Center
Knoxville, TN**

Eric Fischer, Facilitator

Eric Fischer opened the meeting by introducing himself and then asking presenters and issue group members to introduce themselves. Mike Conger with the Knoxville Regional Transportation Planning Organization gave a presentation about Knoxville Air Quality and Non-Attainment. Elizabeth Bullock with Palmer Engineering gave a presentation about Air Quality and Transportation. Tim Selover with Parsons gave a summary of Highway Noise Analysis.

Following the presentations the group began discussing Air and Noise issues on this project. *(Note: Because the time needed by the Air and Noise group was underestimated, it was decided by TDOT after the meeting that a follow-up meeting for Air and Noise would be held at the conclusion of the Nov. 15th Seminar Fair to complete the group's discussion and recommendations. This report includes the discussion from both meetings.)*

QUESTIONS TO BE ANSWERED

- Can the Regional Air Quality model be run both with and without the Parkway so we can see the difference the Parkway makes?
- Can we get more detailed air models run that will predict the change in air quality due to the Parkway at locations throughout the study corridor?
- What is the difference in both air and noise pollution between 60 mph and 70 mph?
At the November 15, 2004 meeting a table showing the comparison of noise from trucks and cars was handed out.
- Can we have an Ozone monitoring station in Hardin Valley?
- What are the impacts of construction equipment and activity on air/noise levels?
- What is the effect of induced traffic? How is that estimated?

SENSITIVE AREAS

Any area with groups of homes such as, but not limited to, Couch Mill/Sam Lee Road, Solway, Wexgate Subdivision, Emory Vista Subdivision, and Bull Run Ridge.

RECOMMENDATIONS

The group discussed the following recommendations for the design consultants to keep in mind while developing alternatives.

- Put the road in a cut if possible when near homes.
- Use natural terrain features where practical to block the line of sight between the Parkway and surrounding homes.
- To minimize congestion, consider keeping crossroads open by bridging over or under.
- Use earth berms to reduce the noise instead of concrete walls.
- Eliminate the interchange between the Parkway and SR 62 (Oak Ridge Highway).
- Minimize the number of interchanges in order to minimize noise from decelerating and accelerating trucks.
- The groups also recommended avoiding maximum grades to minimize truck engine and brake noise.

ATTENDEES

13 people attended the original meeting on October 18. The names and organizations of the people who attended the meeting are presented as follows.

Issue Group	Organization
Carolyn Greenwood	Resource Team - Karns Community
Bob Shaw	Resource Team - Citizens Against the Beltway Orange Location
Nancy Bond	Section 2 – Sub-Committee Member
Jennifer Green	Section 4 – Sub-Committee Member
Mike Fleming	Section 1 – Sub-Committee Member
P.J. Halvorsen	Section 1 – Sub-Committee Member
Mark Stephens	Section 3 – Sub-Committee Member
Larry Smith	TDOT – Environmental
Mike Conger	Knoxville Regional Transportation Planning Organization
Fred Frank	Knoxville Regional Transportation Planning Organization
Tim Selover	Parsons
Elizabeth Bullock	Palmer Engineering
Eric Fischer	Palmer Engineering

9 people attended the follow up meeting on November 15. The names and organizations of the people who attended the meeting are presented as follows.

Issue Group	Organization
Carolyn Greenwood	Resource Team - Karns Community
Bob Shaw	Resource Team - Citizens Against the Beltway Orange Location
Nancy Bond	Section 2 – Sub-Committee Member
Stephen Doyle	Section 4– Sub-Committee Member
P.J. Halvorsen	Section 1 – Sub-Committee Member
Larry Smith	TDOT – Environmental
Tom Love	TDOT - Environmental
Mike Russell	TDOT- Project Management
Eric Fischer	Palmer Engineering
Stephen Sewell	Palmer Engineering
David Lindeman	Palmer Engineering

Equivalency of Heavy Trucks and Cars at Four Different Speeds

Receptor Location	55 mph		60 mph		65 mph		70 mph	
	1 HT	12 Cars	1 HT	11 Cars	1 HT	10 Cars	1 HT	10 Cars
100 ft from roadway	42.8	42.8	43.6	43.7	44.5	44.4	45.3	45.5
200 ft from roadway	37.7	35.5	38.5	36.2	39.3	36.8	40.0	37.8
300 ft from roadway	34.5	30.9	35.2	31.6	35.9	32.1	36.7	33.0
400 ft from roadway	31.9	27.7	32.6	28.2	33.3	28.7	34.0	29.6
500 ft from roadway	29.8	25.2	30.4	25.7	31.3	26.1	31.7	26.9
	10 HT	120 Cars	10 HT	108 Cars	10 HT	102 Cars	10 HT	97 Cars
100 ft from roadway	52.8	52.8	53.6	53.6	54.5	54.5	55.3	55.3
200 ft from roadway	47.7	45.5	48.5	46.1	49.3	46.9	50.0	47.7
300 ft from roadway	44.5	40.9	45.2	41.5	45.9	42.2	46.7	42.9
400 ft from roadway	41.9	37.7	42.6	38.2	43.3	38.8	44.0	39.4
500 ft from roadway	39.8	35.2	40.4	35.6	41.1	36.2	41.7	36.8
	100 HT	1200 Cars	100 HT	1090 Cars	100 HT	1015 Cars	100 HT	960 Cars
100 ft from roadway	62.8	62.8	63.6	63.6	64.5	64.5	65.3	65.3
200 ft from roadway	57.7	55.5	58.5	56.2	59.3	56.9	60.0	57.7
300 ft from roadway	54.5	50.9	55.2	51.5	55.9	52.2	56.7	52.9
400 ft from roadway	51.9	47.7	52.6	48.2	53.3	48.8	54.0	49.4
500 ft from roadway	49.8	45.2	50.4	45.7	51.1	46.2	51.7	46.7

*HT is Heavy Trucks

NOTE: Noise Analysis performed with FHWA TNM 2.5
 Roadway segment and all receptors were evaluated at the same elevation. Traffic is vehicles per hour.
 Noise level readings are in dBA L_{eq} .