



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

May 4, 2012

John F. Sullivan, III
Federal Highway Administration
NC Division Office Administrator
310 New Bern Avenue
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Raleigh, NC 27601-1418

Dear John,

As you are aware the I-40 Regional Partnership has been working on an operational strategy providing a transit advantage by improving arrival predictability and scheduling and lowering cost for transit buses that use the I 40 corridor in/near the Research Triangle Park. This operational strategy is Bus on Shoulders operations (BOSS).

BOSS allows authorized transit buses with trained drivers to operate on the shoulders of selected freeways at low speeds during periods of congestion in order to bypass congested traffic and maintain transit schedules. Bus on shoulder operation is a low-cost treatment that can provide immediate benefits to transit whenever mainline travel is experiencing moderate to heavy degrees of congestion. This use of the shoulder is subservient to the use of the shoulder as a breakdown lane or for emergency operations and buses must yield to everything in the shoulder. In the case of the BOSS program, buses will not be allowed to travel greater than 35 mph on the existing shoulder and will only be allowed when operating speeds drop below 35 mph. Our intention is to pilot this operations strategy that has proven to be very successful in other states.

One of the primary items that remain to be completed is determining how 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise applies to this activity.

We have reviewed Section 772 and believe that operational strategies and activities fall into what is defined as a Type III project and therefore does not require a noise analysis or abatement measures. The following provides supporting information on how we come to this conclusion and the purpose of this letter is to request your concurrence.

It is clear that Section 772 will typically apply to this type of activity based on the 772.7 because we will likely use Federal-aid highway funds to carry out a variety of operational strategies. When reviewing the definition of a Type I project we find the following:

- (1) The construction of a highway on a new location. BOSS will not involve construction of a highway on new locations, only signs installed on u-channel posts will be added.
- (2) The physical alteration of an existing highway that includes a substantial horizontal or vertical alteration. We will not be changing the horizontal or vertical alignment of I 40 and no physical alterations will be made other than adding signs. BOSS will horizontally shift noise sources (buses) no more than 12 feet closer to any noise receptor; therefore, it will not halve the distance between the traffic noise source and any noise receptor. We do not believe BOSS meets the definition or intent of this definition of a Type I project.
- (3) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a HOV lane, HOT lane, Bus Lane, or truck climbing lane. We will not be adding an additional lane. We will allow transit busses with trained drivers to use the existing paved shoulder for subservient use only

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when traffic speeds drop below 35 mph. Since we are not adding a lane, we do not believe BOSS meets the definition or intent of this definition of a Type I project.

- (4) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane. We are not adding an auxiliary lane. Nothing will be added except for signs. BOSS is subservient use of an existing shoulder; therefore, we do not believe BOSS meets this definition of a Type I project.
- (5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange. This is not applicable to the BOSS activities.
- (6) Restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane. We will not be restriping to narrow travel lanes in order to add additional capacity. The number of travel lanes and shoulders will remain constant and the pavement markings will remain in place. We also believe this definition applies where the existing pavement is used to add substantial new capacity. The BOSS program will not add to the overall capacity of the roadway; however, it will provide an operational advantage to mass transit.
- (7) The addition of a new or substantial alteration of a weight station, rest stop, ride-share lot or toll plaza. This is not applicable to the BOSS activities.

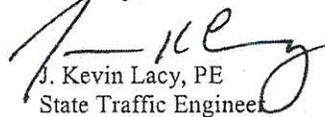
The definition of a Type II project is a Federal or Federal-aid highway project for noise abatement on an existing highway. NCDOT does not have a Type II Traffic Noise Policy and does not participate in Type II projects. This definition is not applicable to the BOSS activities.

In addition to our understanding that BOSS does not meet the definition of a Type I project, we also considered the overall intent of the noise abatement, which we believe is to identify and reduce increased noise impacts resulting from highway projects. In the case of the BOSS program, buses will not be allowed to travel greater than 35 mph on the existing shoulder and will only be allowed when operating speeds drop below 35 mph. Through discussions with Greg Smith, NCDOT's Traffic Noise & Air Quality Group Leader, we understand that the level of traffic noise generated at 35 mph is approximately half of that produced with the same traffic mix at 65 mph. Consequently, when BOSS becomes active, traffic noise levels are approximately half of those under normal traffic operating speeds. Any traffic noise analysis performed for BOSS operational conditions would certainly indicate a significant decrease in predicted noise levels, not a predicted increase, for which 23 CFR 772 was intended to address.

In summary, we believe that the BOSS program is an operational project that does meet the 23 CFR 772 definition or requirements of a Type I project. Therefore, BOSS and other operational projects are Type III projects and do not require a noise analysis or abatement consideration under the same CFR.

Thank you for reviewing our findings. Let me know if you concur or if you need additional information concerning our review of the BOSS program.

Sincerely,


J. Kevin Lacy, PE
State Traffic Engineer

JKL

cc: Wally Bowman, PE,
Deborah M. Barbour, PE
Clarence Coleman, PE,
Meredith McDiarmid, PE,
Greg Smith, PE

5/9/12 Clarence W. Cole Jr.