

## 8. CONCLUSIONS AND FUTURE DIRECTION

This report provides a detailed evaluation of the noise mitigation measures that may be available to mitigate for noise impacts which result from highway corridors in the state of Ohio. The evaluation considered all potentially feasible and reasonable noise mitigation that may be available at the source, in the path, and at the receiver; as well as any planning initiatives that can be implemented to avoid future impacts. The evaluation of mitigation measures also considered Federal and State Procedures and Guidelines, including 23 CFR, Part 772 and ODOT Standard Procedures No. 417-001(SP).

**Section 6 - Summary of Noise Mitigation Options and Recommendations** provides a complete summary of the mitigation options that have been evaluated, and identifies those measures that have the greatest potential for feasible and reasonable implementation. As discussed, and presented in **Table 8**, noise barriers and earth berms are clearly the most effective form of noise mitigation to reduce noise impacts on both existing and proposed highway corridors. Alternate pavement types can also provide noticeable noise reductions along highway corridors, when compared to standard PCC pavement. Noise compatible land use planning is another strategy that can effectively reduce noise impacts (and the need to mitigate for those impacts) by proactively planning to avoid non-compatible land uses adjacent to highway corridors. While noise barriers, berms, and alternate pavement types are generally responsive forms of mitigation, noise compatible land use planning is a proactive planning measure that can eliminate future noise impacts before they occur.

ODOT is currently considering and incorporating many of these (and other) strategies into highway planning and design to feasibly and reasonably reduce noise impacts, where warranted. Additionally, ODOT is also promoting and participating in noise compatible land use planning activities in a pilot program with the Miami Valley Regional Planning Commission.

Based on current direction and policy, it seems that the best options for ODOT to further address noise impacts and noise mitigation options is to continue to develop and promote the concepts of noise compatible land use planning, ultimately developing this program on a state-wide basis. Unfortunately, this program is voluntary for local municipalities, and requires significant cooperation and communication between ODOT and local jurisdictions. The development of a state wide program would also require additional man-power, funding, and analysis at both the state and local levels to effectively promote and implement this form of mitigation.

Alternate pavement types (other than PCC pavement) can also provide effective noise reductions. Unfortunately, for FHWA to support this technique as an effective form of noise mitigation, the state must enter into Quiet Pavement Research and/or a Quiet Pavement Pilot Program (QPPP). These programs require varying levels of involvement and research by the state DOT to ensure that any potential benefits associated with alternate pavements are real, long-lasting, and accepted by the public. QPPP requires long term evaluations of alternate pavements, including follow-up noise monitoring for up to 10 year durations, to ensure any perceived benefits are not short-lived or situational.

Following review and approval of the information contained herein, ODOT can consider the noise mitigation measures presented above, either alone or in combination, on a case-by-case/site-by-site basis, as warranted in response to existing or predicted highway-related noise impacts. Where appropriate and if supported by ODOT and the Ohio Legislature, additional studies can be conducted to expand on any or all of the techniques addressed throughout this report.