



US 202-700 Pennsylvania Department of Transportation

Baker

De La Salle Neighborhood Noise Analysis





Introduction

- ❖ Madeleine Fausto, Project Manager
PennDOT District 6-0
- ❖ Bob Keller, Environmental Manager
PennDOT District 6-0
- ❖ Eric Frary, Project Manager
Michael Baker Jr., Inc.
- ❖ Andy Kuchta, Noise Specialist
Michael Baker Jr., Inc.



Tonight's Presentation

- ❖ Present findings of final design noise analysis.
- ❖ Discuss the results of the analysis and how the inclusion of earth berms lowers the predicted sound levels.



Background

- ❖ Preliminary Noise Analysis (2006)
- ❖ Context Sensitive Design (2006/2007)
 - ❖ CAC Meetings/Public Involvement
 - ❖ Earth Berm Placement
 - ❖ Horizontal and Vertical Design Changes
 - ❖ Minimizing the Taking of Trees
- ❖ Final Design Noise Analysis (2007)

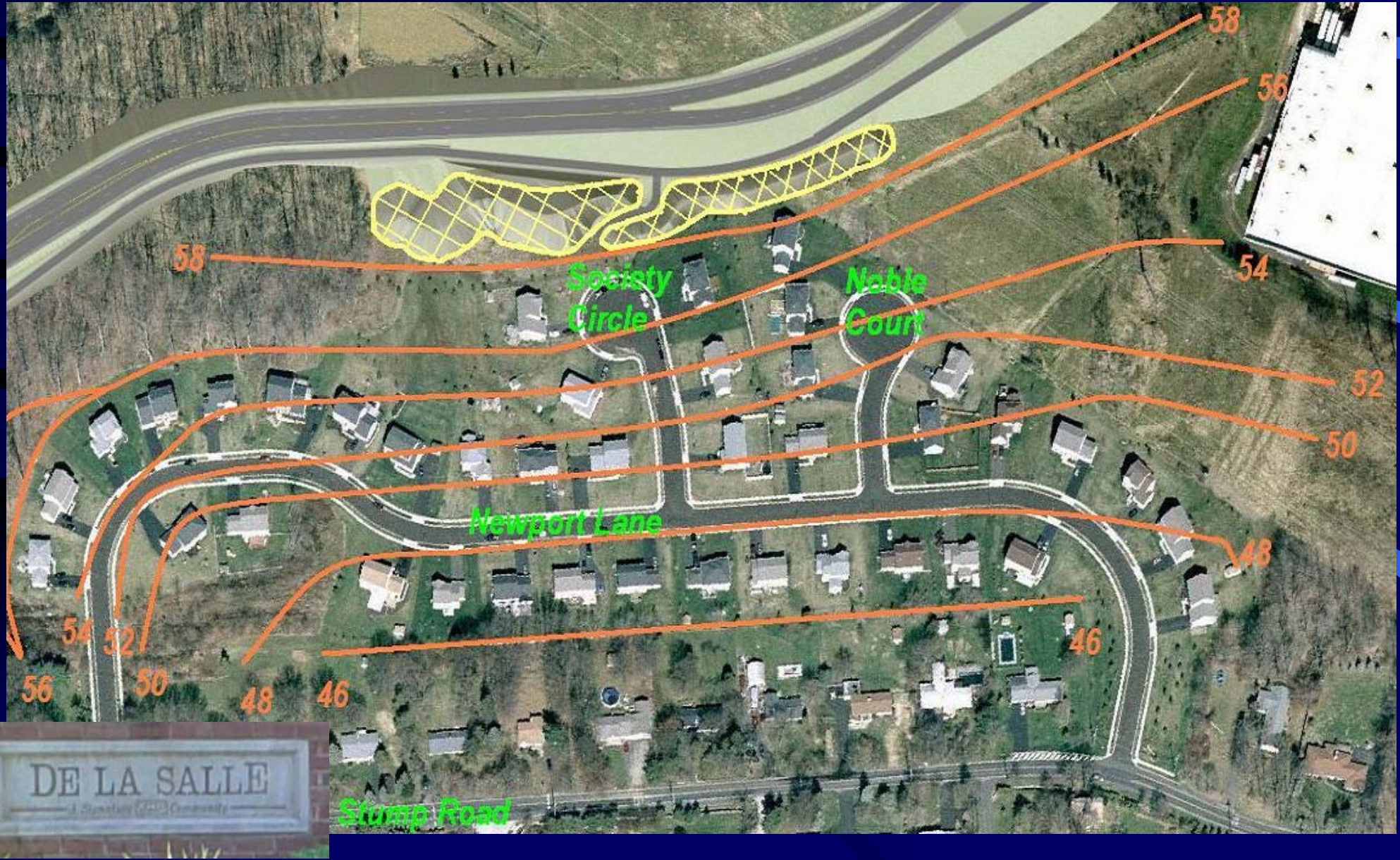
Final Design Results: First, the Residences That Were Modeled



Next, the Existing Sound Levels



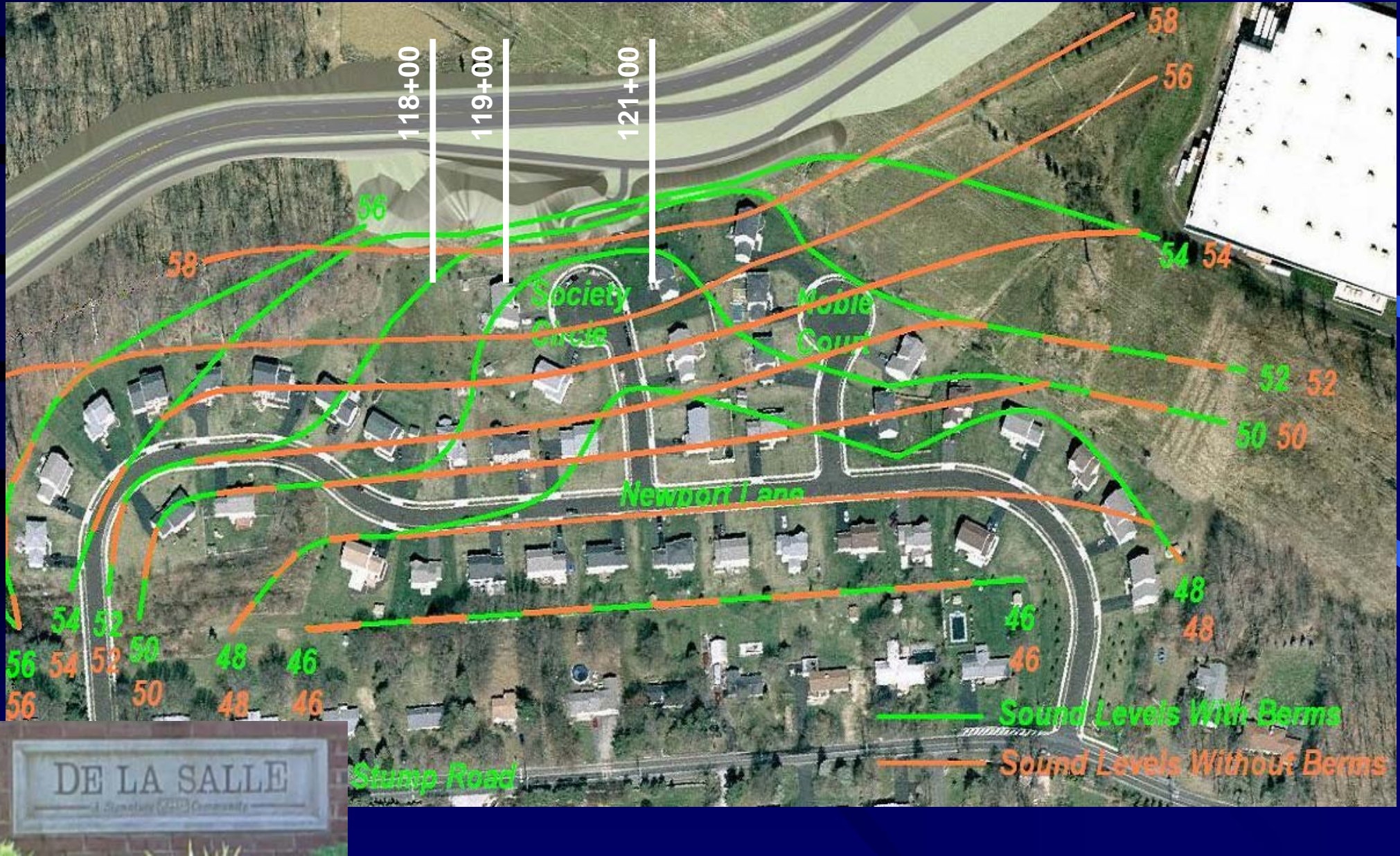
Then, the Future Sound Levels with no berms



Then, the Future Sound Levels with berms



Finally, the Future Sound Levels with AND without berms



General Results

- ❖ The use of earth berms and other context sensitive design features in the final design analysis provided sound level reductions of up to seven (7) decibels.
- ❖ Length and height of berms were maximized based on available right-of-way, drainage concerns and preservation of existing woodland areas.

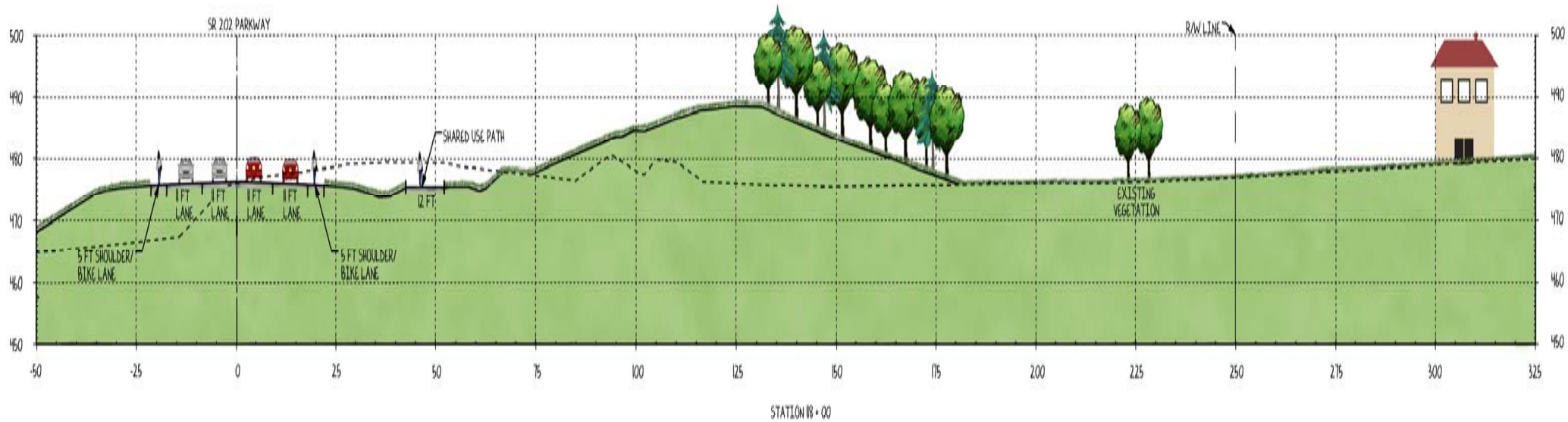


Post-Construction Sections of De La Salle Neighborhood



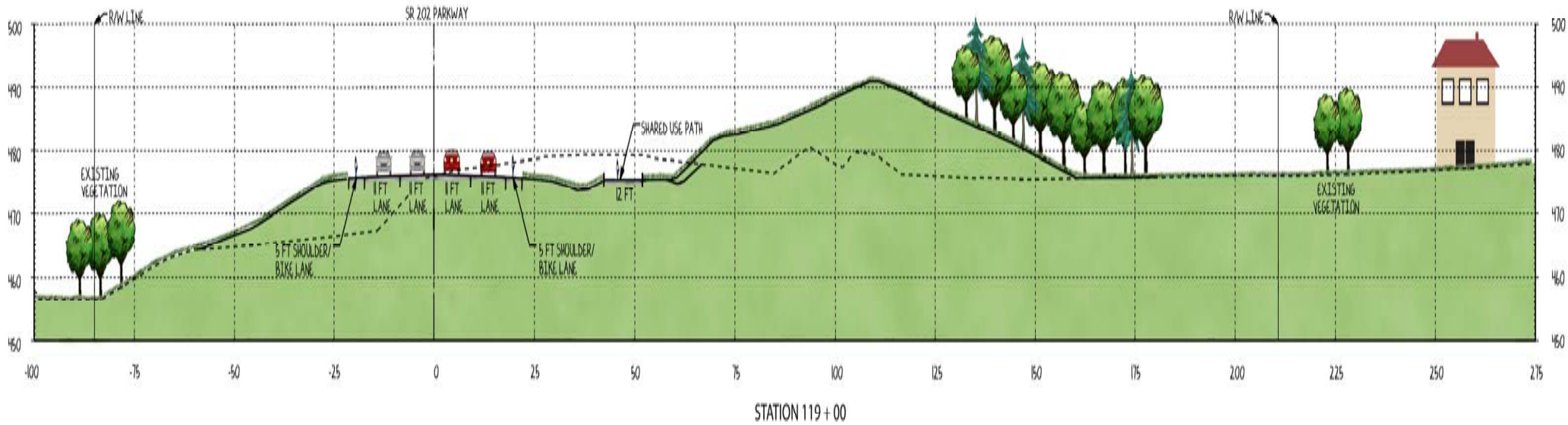


De La Salle - Southern Area Berm [~118+00]



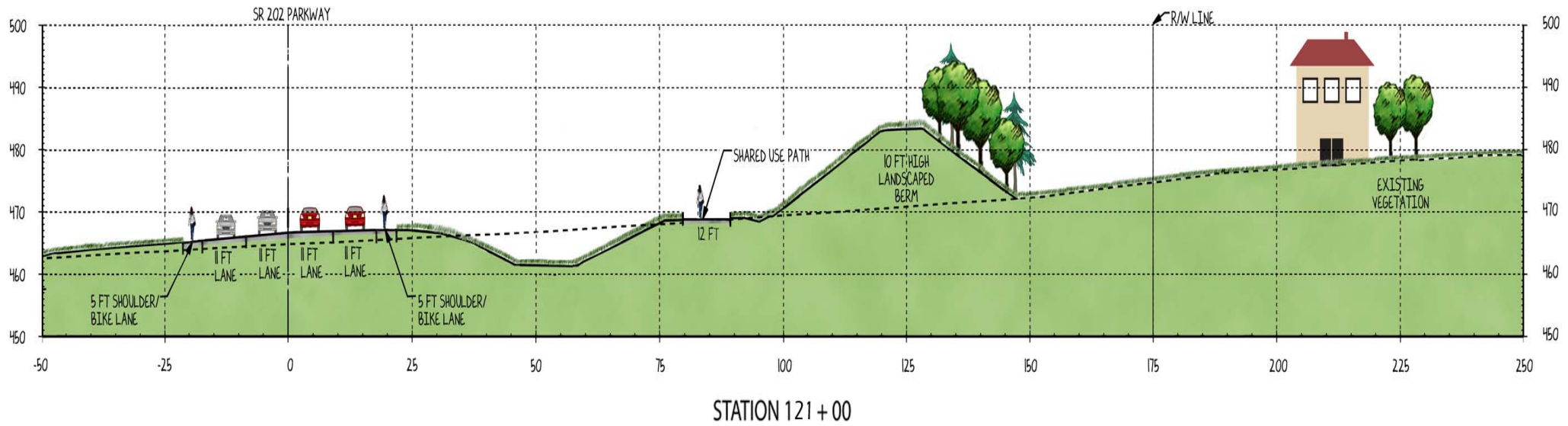


De La Salle - Southern Area Berm [~119+00]





De La Salle - Southern Area Berm [~121+00]





Post-Construction Renderings of De La Salle Neighborhood





Looking North From the Trail Entrance

Baker





Looking South Toward the Trail Entrance

Baker





Another View Looking South - Toward the Trail Entrance

Baker





Looking North - De La Salle on the Right

Baker





Another View Looking North - De La Salle on the Right

Baker





Summary

- ❖ As mentioned, the use of earth berms and other context sensitive design features as part of the final design provided sound level reductions of up to seven (7) decibels.
- ❖ Also, the use of earth berms decreases the predicted neighborhood sound levels more than if a solid wall were in place.

Summary (2)

- ❖ A concrete wall with the same relative dimensions as the earth berms would be less effective in reducing sound levels by at least three (3) decibels.
- ❖ Additionally, landscaping the berms with trees and/or shrubs and/or other vegetation will provide extra visual blockage on top of the berm height.



US 202-700

Baker

Pennsylvania Department of Transportation

De La Salle Noise Analysis Summary

❖ Questions.....

