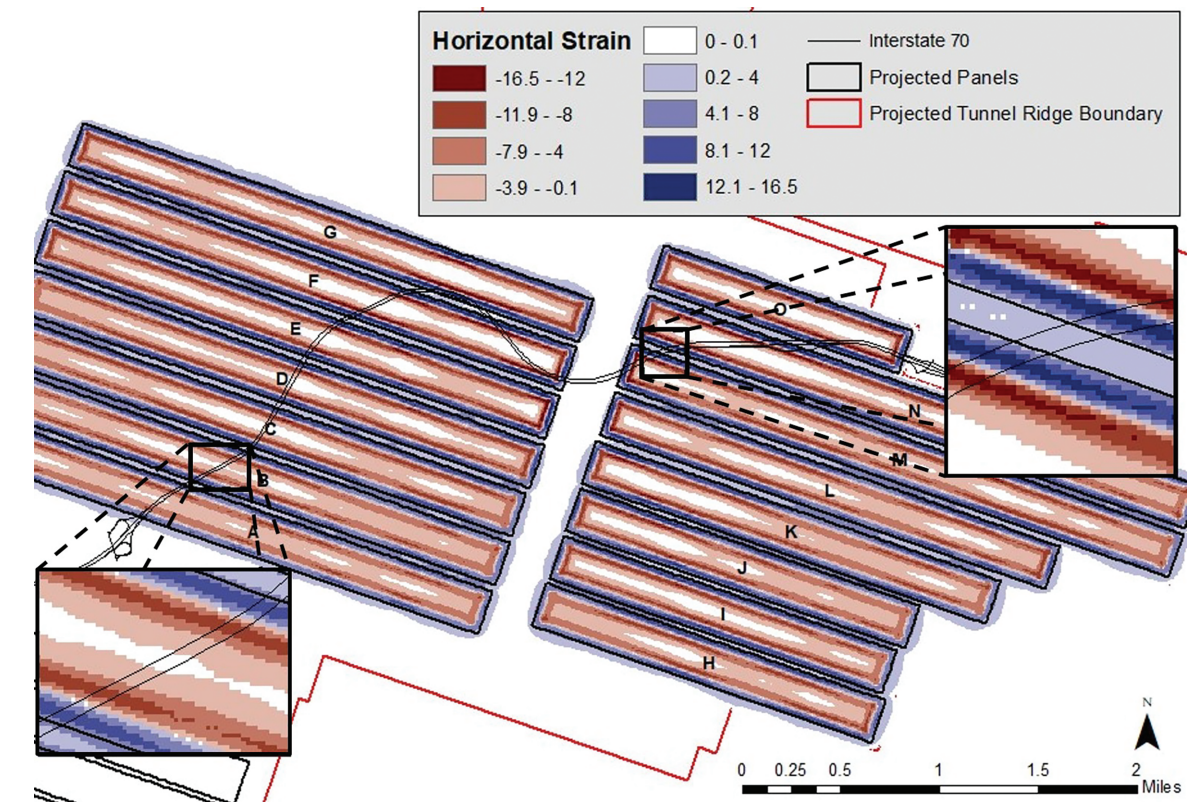


# Identification of Factors Controlling the Development of Subsidence Impacts Forecasting Methodology of the I-70 Alignment over Longwall Mining of the Tunnel Ridge Mine, Washington County, Pennsylvania

Final Report for Contract #4400018535, Work Order #PIT 016  
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On the Cover – Predicted horizontal strain patterns caused by potential longwall mining under I-70 throughout the extended study area. Excessive levels of horizontal strains have the potential to damage assets along the I-70 highway alignment in western Washington County, Pennsylvania. Values shown represent the magnitude of horizontal strain in 1/1000-in/in (Figure IIIb.8, Task 3 Report).

### Acknowledgement

The project team would like to thank members of PennDOT’s staff, the administrators, engineers, scientists, geologists, and maintenance workers, for making this activity a rewarding experience for all those connected with it. In particular, we are grateful to Joseph Szczur and William Kovach, former and current District 12 Executives, for articulating the vision and need for the project. It was impressive to see how their staff prepared for the undermining of a major transportation artery and later brought this same section of highway back to normal operations. This was a large and complex effort and it came off in an admirable fashion. It is notable that these same individuals were always ready to search out answers for our inquiries. The one person we must personally recognize is Mr. Roy Painter, Geotechnical Engineer for District 12. Roy was our technical contact for this project and was invaluable to the project’s success.

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To all of these individuals and organizations, you have our thanks and gratitude.

Anthony Iannacchione, Principal Investigator, University of Pittsburgh