

# Contents

## Abstract

## List of Figures

## List of Tables

## Executive Summary

ES.1	Major Findings .....	ES-1
ES.1.1	Background .....	ES-1
ES.1.2	Purpose and Need .....	ES-3
ES.1.3	Alternatives .....	ES-4
ES.1.4	Affected Environment .....	ES-9
ES.1.5	Environmental Impacts .....	ES-12
ES.2	Relationship to Environmental Protection Statutes and Other Environmental Requirements.....	ES-23

## Section 1 – Project Purpose and Need

1.1	Background .....	1-1
1.2	Description of the New Jersey Turnpike Authority Proposal.....	1-6
1.3	Project Purpose .....	1-7
1.4	Transportation Issues in the Project Area .....	1-10
1.4.1	Existing Roadway Network.....	1-10
1.4.2	Roadway Network Performance.....	1-11

## Section 2 – Alternatives Evaluation

2.1	Alternatives Examined .....	2-2
2.2	No Action Alternative.....	2-4
2.3	Transportation Demand Management .....	2-6
2.4	Existing Local and County Roadway Capacity Improvements.....	2-10
2.4.1	USEPA Modified No-Build Alternative .....	2-11
2.4.2	Route 522 Widening and Extension.....	2-13
2.4.3	Dey Road Widening.....	2-15
2.4.4	Plainsboro – Cranbury Road Widening .....	2-16
2.4.5	Cranbury Neck Road Widening.....	2-17
2.4.6	Composite Local Roadway Improvements Program .....	2-18
2.5	Existing Regional Highway System Improvements.....	2-20
2.5.1	US Route 1 Widening to Six Lanes.....	2-20
2.5.2	US Route 1 Widening to Six Lanes with Signal Removal .....	2-25
2.6	New Roadway Facilities .....	2-29
2.6.1	Proposed Route 92.....	2-29
2.6.2	USEPA Suggested Alignment .....	2-44
2.6.3	Dey Road Parallel Alignment .....	2-45

2.6.4	Plainsboro–Cranbury Road Parallel Alignments (PCPA) .....	2-46
2.6.5	South Brunswick Alignment – Modified .....	2-48
2.7	Screening of Alternatives.....	2-49
2.8	Summary.....	2-54

### **Section 3 – Characterization of the Affected Environment**

3.1	General Environment.....	3-1
3.2	Topography, Geology and Soils .....	3-1
3.2.1	Topography .....	3-1
3.2.2	Geology .....	3-2
3.2.3	Soils .....	3-4
3.3	Natural Resources .....	3-10
3.3.1	Surface Water .....	3-10
3.3.2	Groundwater.....	3-18
3.3.3	Public Water Supply .....	3-23
3.3.4	Wetlands .....	3-28
3.3.5	Fish and Wildlife .....	3-38
3.4	Farmland.....	3-55
3.5	Historic and Cultural Resources .....	3-56
3.6	Air Quality .....	3-57
3.6.1	Standards and Attainment Status .....	3-57
3.6.2	Existing Air Quality .....	3-61
3.7	Transportation.....	3-61
3.7.1	Roadway System .....	3-61
3.7.2	Existing Traffic Patterns and Levels of Service .....	3-64
3.7.3	Projected Year 2028 Traffic Conditions .....	3-64
3.8	Noise.....	3-66
3.8.1	Noise Descriptors and Criteria for Assessment .....	3-66
3.8.2	Existing Noise Monitoring Program.....	3-68
3.9	Aesthetics.....	3-71
3.10	Known Contaminated Sites.....	3-72
3.11	Human Health .....	3-74
3.11.1	Air Quality.....	3-74
3.11.2	Noise.....	3-74
3.11.3	Water Quality.....	3-75
3.12	Socioeconomics .....	3-75
3.12.1	Population .....	3-75
3.12.2	Housing .....	3-78
3.12.3	Income.....	3-78
3.12.4	Educational Attainment .....	3-79
3.12.5	Employment.....	3-79
3.12.6	Community Services .....	3-80

3.13	Land Use and Zoning.....	3-83
3.13.1	Land Use.....	3-84
3.13.2	Zoning and Land Use Planning .....	3-89
3.14	Environmental Justice .....	3-95
3.14.1	Minority Groups.....	3-95
3.14.2	Economic Status.....	3-97

## **Section 4 – Direct, Indirect, and Cumulative Impacts of the Proposed Project and Alternatives**

4.1	No Action.....	4-1
4.1.1	Air Quality.....	4-2
4.1.2	Transportation .....	4-4
4.2	Proposed Route 92 Project.....	4-5
4.2.1	Integrated Impacts Analysis .....	4-5
4.2.2	Topography, Geology and Soils .....	4-12
4.2.3	Natural Resources .....	4-15
4.2.4	Farmland.....	4-37
4.2.5	Historic and Cultural Resources .....	4-37
4.2.6	Air Quality.....	4-38
4.2.7	Transportation .....	4-41
4.2.8	Noise.....	4-54
4.2.9	Aesthetics.....	4-59
4.2.10	Known Contaminated Sites .....	4-61
4.2.11	Human Health .....	4-62
4.2.12	Socioeconomics .....	4-63
4.2.13	Land Use.....	4-64
4.2.14	Environmental Justice.....	4-70
4.2.15	Cumulative Impacts.....	4-71
4.2.16	Phased Route 92 Sub-alternative.....	4-74
4.3	US Route 1 Widening and Signal Removal.....	4-75
4.3.1	Topography, Geology and Soils .....	4-75
4.3.2	Natural Resources .....	4-76
4.3.3	Farmland.....	4-81
4.3.4	Historic and Cultural Resources .....	4-82
4.3.5	Air Quality.....	4-83
4.3.6	Transportation .....	4-83
4.3.7	Noise.....	4-96
4.3.8	Aesthetics.....	4-99
4.3.9	Known Contaminated Sites .....	4-100
4.3.10	Human Health .....	4-100
4.3.11	Socioeconomics .....	4-101
4.3.12	Land Use.....	4-102
4.3.13	Environmental Justice.....	4-104

## **Section 5 – Mitigation Actions**

5.1	Goals of Mitigation Actions .....	5-1
5.2	Construction-Related Impacts .....	5-1
5.2.1	Soils .....	5-1
5.2.2	Fugitive Dust.....	5-3
5.2.3	Noise.....	5-3
5.3	Route 92 Mitigation Actions.....	5-3
5.3.1	Acid-Producing Deposits .....	5-3
5.3.2	Streams and Floodplains .....	5-4
5.3.3	Water Quality.....	5-5
5.3.4	Wetlands .....	5-10
5.3.5	Wildlife .....	5-12
5.3.6	State Endangered Species - Southern Arrowhead .....	5-12
5.3.7	Noise .....	5-14
5.3.8	Land Use and Zoning .....	5-17
5.3.9	Socioeconomics.....	5-17
5.3.10	Transportation .....	5-17
5.3.11	Air Quality.....	5-17
5.4	Route 1 Mitigation Actions .....	5-20
5.4.1	Acid-Producing Deposits .....	5-20
5.4.2	Streams and Floodplains .....	5-20
5.4.3	Water Quality.....	5-20
5.4.4	Wetlands .....	5-21
5.4.5	Land Use and Zoning .....	5-21
5.4.6	Socioeconomics.....	5-21

## **Section 6 – Public Involvement**

6.1	Public Coordination .....	6-1
6.2	Permits/Legal Requirements.....	6-1
6.3	Cooperating Agencies.....	6-2

## **Section 7 – List of Preparers**

## **Section 8 – References**

## **Appendices (in separate volume)**

- Appendix A – Soil Series Description
- Appendix B – Air Quality
- Appendix C – Traffic Modeling and Analysis
- Appendix D – Noise
- Appendix E – Route 92 Engineer’s Reports
- Appendix F – Project Correspondence