

5400 S

BANGERTE HIGHWAY TO 4800 WEST

Draft State
Environmental
Study

5400 South
(SR-173)



April 2011
UDOT Project No. S-0173(16)5

TABLE OF CONTENTS

Executive Summary	ES-1
Chapter 1 Purpose and Need.....	1-1
1.1 Study Background.....	1-1
1.2 Purpose for the Project.....	1-4
1.3 Need for the Project	1-4
Chapter 2 Alternatives	2-1
2.1 Step 1: Identify Alternatives	2-1
2.2 Step 2: Preliminary Screening	2-3
2.3 Step 3: Purpose and Need Screening	2-3
2.4 Step 4: Comparative Evaluation	2-6
2.5 Step 5: Preferred Alternative	2-9
Chapter 3 Affected Environment and Environmental Consequences.....	3-1
3.1 Land Use.....	3-1
3.2 Social	3-4
3.3 Relocations.....	3-9
3.4 Economics.....	3-12
3.5 Bicyclist and Pedestrian Considerations.....	3-14
3.6 Water Resources	3-17
3.7 Natural Resources	3-18
3.8 Air Quality	3-20
3.9 Noise	3-25
3.10 Hazardous Materials	3-31
3.11 Cultural Resources.....	3-34
3.12 Visual Quality	3-39
Chapter 4 Comments and Coordination.....	4-1
4.1 Agency Scoping.....	4-1
4.2 Public Scoping	4-2
4.3 Public and Agency Scoping Comments.....	4-3
4.4 Comments on the Draft State Environmental Study.....	4-4
Chapter 5 References	5-1

LIST OF APPENDICES (ON CD)

Appendix A: Agency Consultation

Appendix B: Noise Report

Appendix C: Public Comments

LIST OF FIGURES

Figure ES-1: Proposed Build Alternative	ES-3
Figure 1-1: Project Study Area	1-1
Figure 1-2: Existing 5400 South Roadway Widths.....	1-2
Figure 1-3: Land Uses within the Study Area.....	1-2
Figure 1-4: Planned Transportation Improvement Projects	1-4
Figure 1-5: PM Peak Hour Traffic Volumes Comparison	1-5
Figure 1-6: PM Peak Hour Level of Service.....	1-6
Figure 1-7: PM Peak Travel Times and Intersection Delay	1-7
Figure 2-1: Alternatives Development and Screening Process	2-1
Figure 2-2: Design Year 2040 Level of Service for 5400 South Intersections by Alternative	2-4
Figure 2-3: Proposed Build Alternative	2-10
Figure 3.1-1: Land Uses in the Study Area.....	3-2
Figure 3.2-1: Utilities along 5400 South.....	3-7
Figure 3.3-1: Easements, Acquisitions, and Relocations in the Study Area	3-11
Figure 3.5-1: SNAP Routes and Pedestrian Generators in the Study Area.....	3-15
Figure 3.8-1: Sulfur Dioxide 2 nd Highest 24-hour Values	3-24
Figure 3.9-1: Noise-sensitive Receivers and Impacted Receivers	3-28
Figure 3.10-1: Hazardous Waste Sites in the Study Area	3-33
Figure 3.11-1: Surveyed Properties in the Study Area	3-35
Figure 3.11-2: Effects on Historic Properties	3-37
Figure 3.12-1: Typical View within the Commercial Area in the Study Area	3-40
Figure 3.12-2: Typical View within the Residential Area in the Study Area	3-40
Figure 3.12-3: 5400 South from Northwest Avenue Looking East Before and After	3-41

LIST OF TABLES

Table ES-1: Summary of Environmental Impacts & Mitigation Measures for the Build Alternative ...	ES-4
Table 1-1: Regional and Local Transportation Plans.....	1-3
Table 2-1: Purpose and Need Screening Results Summary	2-5
Table 2-2: Alternatives Comparison: Engineering Considerations	2-7
Table 2-3: Alternatives Comparison: Environmental Considerations	2-8
Table 3.3-1: Acquisitions and Relocations in the Study Area	3-11
Table 3.9-1: UDOT Noise Abatement Criteria.....	3-26
Table 3.9-2: Field Recorded and Predicted Noise Measurements at Noise-sensitive Receivers	3-27
Table 3.9-3: Noise Levels at the Modeled Noise-sensitive Receivers.....	3-28
Table 3.10-1: Hazardous Waste Facilities Identified in the Study Area.....	3-33
Table 3.11-1: Summary of Eligibility and Effects Determinations for Historic Properties.....	3-37