

Contents

Summary	Summary – Page 1
1. Purpose and Need for Proposed Action.....	1-1
1.1 Introduction	1-1
1.2 Project Purpose.....	1-3
1.3 Need for Project.....	1-3
1.3.1 Need for Improved System Continuity	1-6
1.3.2 Need for Safety Improvements.....	1-10
1.3.3 Need for Highway Capacity	1-14
1.3.4 Need to Correct Highway and Bridge Design Deficiencies.....	1-18
1.4 Proposed Action and Schedule	1-22
1.4.1 Proposed Action and Funding Status	1-22
1.4.2 Schedule for Environmental Review	1-23
1.5 Project History and Other Projects in the Study Area	1-24
1.5.1 Previous Studies of the DEIS Study Corridor.....	1-24
1.5.2 Other US 14 Projects in the Study Area	1-25
2. Alternatives.....	2-1
2.1 Introduction	2-1
2.2 DEIS Alternatives-Overview	2-1
2.3 No Build Alternative	2-1
2.4 Build Alternatives	2-3
2.4.1 Highway Design Details	2-3
2.4.2 West Study Section Location Alternatives	2-4
2.4.3 East Study Section Location Alternatives.....	2-7
2.4.4 Proposed Interchanges and Access Features	2-8
2.5 Alternatives Development and Screening.....	2-22
2.5.1 Scoping Process.....	2-22
2.5.2 DEIS Alternatives Screening Process and Amended the SDD.....	2-24
2.6 Project Cost and Benefit-Cost Analysis.....	2-24
2.7 Recommendation of a Preferred Alternative	2-27
3. Affected Environment, Environmental Consequences, and Mitigation Measures	3-1
3.1 Introduction	3-1
3.1.1 Environmental Impact Categories and Relative Importance	3-1
3.1.2 Organization of Sub-Sections.....	3-3
3.2 Relocations and Right-of-Way	3-3
3.2.1 Affected Environment.....	3-3
3.2.2 Environmental Consequences.....	3-4
3.2.3 Mitigation Measures.....	3-6
3.3 Land Use and Visual Quality	3-7
3.3.1 Affected Environment.....	3-7
3.3.2 Environmental Consequences.....	3-16

3.3.3 Mitigation Measures..... 3-24

3.4 Agricultural Resources and Soils..... 3-24

3.4.1 Affected Environment..... 3-24

3.4.2 Environmental Consequences..... 3-26

3.4.3 Mitigation Measures..... 3-27

3.5 Transportation..... 3-27

3.5.1 Affected Environment..... 3-27

3.5.2 Environmental Consequences..... 3-29

3.5.3 Mitigation Measures..... 3-35

3.6 Socioeconomics..... 3-35

3.6.1 Affected Environment..... 3-35

3.6.2 Environmental Consequences..... 3-39

3.6.3 Mitigation Measures..... 3-42

3.7 Surface Water, Water Quality, Erosion Control, and Slope Stability 3-42

3.7.1 Affected Environment..... 3-42

3.7.2 Environmental Consequences..... 3-45

3.7.3 Mitigation Measures..... 3-47

3.8 Groundwater 3-48

3.8.1 Affected Environment..... 3-48

3.8.2 Environmental Consequences..... 3-48

3.8.3 Mitigation Measures..... 3-48

3.9 Wetlands..... 3-48

3.9.1 Affected Environment..... 3-49

3.9.2 Environmental Consequences..... 3-51

3.9.3 Wetland Sequencing..... 3-52

3.9.4 Wetland Impact Avoidance..... 3-52

3.10 Floodplains 3-54

3.10.1 Affected Environment..... 3-54

3.10.2 Environmental Consequences..... 3-55

3.10.3 Mitigation Measures..... 3-58

3.11 Upland Habitat and Wildlife..... 3-58

3.11.1 Affected Environment..... 3-58

3.11.2 Environmental Consequences and Mitigation Measures 3-59

3.12 Threatened and Endangered Species..... 3-60

3.12.1 Affected Environment..... 3-60

3.12.2 Environmental Consequences..... 3-61

3.12.3 Mitigation Measures..... 3-62

3.13 Cultural Resources-Historical and Archaeological, and Section 106
Evaluation 3-62

3.13.1 Affected Environment..... 3-63

3.13.2 Environmental Consequences..... 3-74

3.13.3 Mitigation Measures..... 3-81

3.14 Public Lands and Recreational Resources 3-82

3.14.1 Affected Environment..... 3-82

3.14.2 Environmental Consequences and Mitigations..... 3-83

3.15 Contaminated Properties and Materials..... 3-84

3.15.1 Affected Environment..... 3-85

- 3.15.2 Environmental Consequences..... 3-85
- 3.15.3 Mitigation Measures..... 3-87
- 3.16 Air Quality 3-87
 - 3.16.1 Affected Environment..... 3-87
 - 3.16.2 Environmental Consequences..... 3-88
- 3.17 Noise 3-88
 - 3.17.1 Affected Environment..... 3-88
 - 3.17.2 Environmental Consequences..... 3-92
 - 3.17.3 Additional Analysis and Potential Mitigation Measures..... 3-93
- 3.18 Indirect and Cumulative Impacts 3-94
 - 3.18.1 Indirect and Cumulative Impacts-Definitions..... 3-94
 - 3.18.2 Indirect Impacts..... 3-94
- 3.19 Permits and Related Approvals 3-102
- 3.20 Relationship of Local Short-Term Uses versus Long-Term Productivity 3-103
 - 3.20.1 No Build Alternative 3-103
 - 3.20.2 Build Alternatives..... 3-104
- 3.21 Irreversible and Irretrievable Commitments of Resources 3-104
 - 3.21.1 No-Build Alternative..... 3-104
 - 3.21.2 Build Alternatives..... 3-104
- 3.22 Construction and Excess Material..... 3-105
 - 3.22.1 Environmental Consequences..... 3-105
 - 3.22.2 Mitigation Measures..... 3-105
- 4. Comments and Coordination..... 4-1**
 - 4.1 Introduction 4-1
 - 4.2 DEIS Public Involvement Activities 4-1
 - 4.2.1 Project Communications..... 4-1
 - 4.2.2 Public Meetings..... 4-2
 - 4.2.3 Project Advisory Committee (PAC)..... 4-4
 - 4.2.4 Federal, State, and Local Agency Coordination..... 4-5
 - 4.3 Activities Planned After Publication of the DEIS..... 4-7
 - 4.3.1 DEIS Public Hearing, Public Meeting, and Informal Open Houses..... 4-7
 - 4.3.2 Additional Agency Coordination 4-8
- Aerial Photo Exhibit..... attached to end of DEIS**

Tables

- 1-1 US 14 Corridor Segments from New Ulm to North Mankato 1-6
- 1-2 Crash and Severity Rates along US 14 Corridor Segments (1996-2000) 1-11
- 1-3 Crash Rates at Corridor Intersections 1-12
- 1-4 Analysis of No Passing Zones along Corridor Segments..... 1-14
- 1-5 Actual and Forecasted Traffic Volumes..... 1-15
- 1-6 Existing and Future Speed Performance 1-17
- 1-7 Summary of Access Inventory by Segment..... 1-19
- 1-8 Existing Geometric Deficiencies..... 1-21
- 1-9 Schedule for US 14 Environmental Review..... 1-24
- 2-1 Summary of West Study Section Proposed Public Road Access

(from west to east)	2-21
2-2 Summary of East Study Section Proposed Public Road Access (from west to east)	2-21
2-3 Preliminary Capital Cost Estimate Summary (\$ Millions 2007).....	2-25
2-4 Benefit-Cost Ratios for each of the Build Alternatives.....	2-26
3-1 Residential & Business Relocations	3-4
3-2 Total Land Acquisition Estimates.....	3-5
3-3 Land Acquisition Requirements in Acres.....	3-6
3-4 2002 Harvested Cropland Statistics for Brown and Nicollet Counties	3-24
3-5 Value of Agricultural Products Sold in 2003.....	3-25
3-6 Estimated Agricultural Land Acquisition, Prime Farmland Impacts, Agricultural Parcels Impacts, and Severances by Build Alternative.....	3-26
3-7 Summary of Transportation and Design Considerations	3-33
3-8 US 14 Project Area Population Trends and Percent Change	3-35
3-9 US 14 Project Area Population Characteristics	3-36
3-10 US 14 Project Area Employment by Industry Sector in 2000.....	3-36
3-11 1999 Income Characteristics.	3-37
3-12 Housing Characteristics	3-38
3-13 Churches and Cemeteries in Close Proximity to US 14 and Proposed Building Alternatives	3-39
3-14 Surface Water Resources in US 14 Project Area.....	3-42
3-15 Ditch, River, and Stream Crossings Impacts.....	3-45
3-16 Extent of Wetland Types in the US 14 Study Area.....	3-50
3-17 Summary of Wetland Impacts by Wetland Type in West Study Section.....	3-51
3-18 Summary of Wetland Impacts by Wetland Type in East Study Section.....	3-52
3-19 Summary of 100-Year Floodplain Impacts in West Study Section in Acres and Feet.....	3-56
3-20 State Endangered and Threatened Species Documented Within 1-Mile of the US 14 Project Area.....	3-61
3-21 Properties Determined as Eligible for National Register for Historic Places (NRHP) within US 14 Area for Potential Effect (APE).....	3-65
3-22 Potential Section 106 Adverse Effects to NRHP Eligible and Listed Properties.....	3-74
3-23 Comparison of Section 106 Adverse Effects by Alternative-West Study Section.....	3-79
3-24 Comparison of Section 106 Adverse Effects by Alternative-East Study Section.....	3-81
3-25 Sites Identified in Phase I ESA in Close Proximity to US 14 DEIS Alternatives.....	3-86
3-26 Typical Noise Levels in dBA and Noise Level Comparison.....	3-89
3-27 FHWA Noise Level Abatement Criteria (NAC) Hourly-A Weighted Sound Level in Decibels (dBA).....	3-89
3-28 State Noise Standards.....	3-90
3-29 US 14 Existing (2004) Peak Hour (Daytime) Noise Levels (in US 14 Study Area from West to East).....	3-91
3-30 US 14 Noise Impacts by Alternative (2030).....	3-92
3-31 Development Trends and Projects in the Two-County Study Area.....	3-99
3-32 Required Permits and Approvals.....	3-103
3-33 Construction Noise and Distance Relationship.....	3-105
4-1 US 14 Public Meeting Schedule.....	4-3
4-2 Project Advisory Committee Representation.....	4-4

4-3 Public Advisory Committee Meeting Dates and Meeting Topics.....4-5
 4-4 Federal, State, and Local Agency Meetings..... 4-6

Exhibits

1-1 Study Area Map.....1-2
 1-2 Summary of Deficiencies from US 14 Scoping Document..... 1-4
 1-3 Relation of Proposed Project to Other US 14 Expansion Projects.....1-4
 2-1 Draft EIS Alternatives2-2
 2-2 4-Lane Rural Highway Design2-6
 2-3 4-Lane Constrained (Urban) Highway Design2-6
 2-4 US 14/MN 15/CR 21 Alternative W1/W3 Concept A (Trumpet) New Ulm.....2-11
 2-5 US 14/MN 15/CR 21 Alternative W1/W3 Concept B New Ulm.....2-12
 2-6 US 14/MN 15/CR 21 Alternative W1/W3 Concept C (Roundabout) New Ulm2-13
 2-7 US 14/MN 15 Alternative W2 Interchange Concept New Ulm2-14
 2-8 US 14/CR 37 Alternative W1 Concept A (Trumpet) New Ulm.....2-15
 2-9 US 14/CR 37 Alternative W1 Concept B (Tight Diamond) New Ulm.....2-16
 2-10 US 14/CR 37 Alternative W3 Concept A (Tight Diamond) New Ulm.....2-17
 2-11 US 14/CR 24 All Alternatives Diamond Interchange Bypass Courtland.....2-18
 2-12 US 14/MN 99/CR 23 Alternatives E1, E2, and E3 Interchange Concept Nicollet...2-19
 2-13 US 14/MN 99/CR 23 Alternatives E1, E2, and E3 Interchange Concept Nicollet...2-20
 2-14 Full Universe of Scoping Alternatives Examined in US 14 Scoping Document
 (March 2003).....2-23
 3-1 Parcels with Development Potential.....3-11
 3-2 US 14/MN 15 View Looking North towards Bluff3-12
 3-3 Existing US 14 in Constrained Area & Example 4-Lane Constrained
 Highway Design.....3-13
 3-4 Top-of-Bluff and Alternative W2 Alignment3-15
 3-5 Rural 4-Lane Section3-23
 3-6 Section 106 NRHP Eligible Cultural Resources3-64
 3-7 Indirect and Cumulative Study Area.....3-95

Appendices

A Draft Section 4(f) Evaluation
 B List of Preparers
 C Distribution List