

TABLE OF CONTENTS

1.0	PURPOSE AND NEED FOR THE PROPOSED ACTION	1-1
1.1	BASIS FOR THE ENVIRONMENTAL ASSESSMENT	1-1
1.2	PURPOSE AND NEED	1-2
1.3	PLANNING CONTEXT.....	1-5
	1.3.1 Project History.....	1-5
	1.3.2 Local and Regional Plans	1-6
	1.3.3 Environmental Review and Project Development Process	1-9
1.4	PUBLIC INVOLVEMENT AND AGENCY COORDINATION	1-10
2.0	ALTERNATIVES EVALUATED	2-1
2.1	FINAL EIS WIEHLE AVENUE EXTENSION.....	2-1
	2.1.1 Final EIS Wiehle Avenue Extension Alignment.....	2-1
	2.1.2 Final EIS Wiehle Avenue Extension Stations.....	2-2
	2.1.3 Final EIS Wiehle Avenue Extension Yard Facilities	2-3
	2.1.4 Final EIS Wiehle Avenue Extension Ancillary Facilities	2-4
	2.1.5 Final EIS Wiehle Avenue Extension Operations.....	2-4
	2.1.6 Final EIS Wiehle Avenue Extension Ridership	2-5
	2.1.7 Final EIS Wiehle Avenue Extension Construction Activities.....	2-5
2.2	PE WIEHLE AVENUE EXTENSION	2-6
	2.2.1 PE Wiehle Avenue Extension Alignment	2-6
	2.2.2 PE Wiehle Avenue Extension Stations.....	2-8
	2.2.3 PE Wiehle Avenue Extension Yard Facilities	2-10
	2.2.4 PE Wiehle Avenue Extension Ancillary Facilities	2-11
	2.2.5 PE Wiehle Avenue Extension Operations.....	2-11
	2.2.6 PE Wiehle Avenue Extension Ridership	2-12
	2.2.7 PE Wiehle Avenue Extension Construction Activities.....	2-12
2.3	CAPITAL AND OPERATING COSTS.....	2-12
	2.3.1 Final EIS Wiehle Avenue Extension Costs.....	2-13
	2.3.2 PE Wiehle Avenue Extension Costs.....	2-13
	2.3.3 Summary of Financial Plan.....	2-13
2.4	SUMMARY OF PE DESIGN REFINEMENTS	2-15

TABLE OF CONTENTS

3.0 ENVIRONMENTAL EFFECTS 3-1

3.1 DISPLACEMENTS AND RELOCATION 3-4

 3.1.1 Changes in Long-Term Effects.....3-4

 3.1.2 Construction Effects3-6

 3.1.3 Mitigation..... 3-7

3.2 VISUAL AND AESTHETIC CONDITIONS..... 3-7

 3.2.1 Changes in Long-Term Effects..... 3-7

 3.2.2 Construction Effects3-10

 3.2.3 Mitigation.....3-10

3.3 AIR QUALITY 3-11

 3.3.1 Changes in Long-Term Effects.....3-11

 3.3.2 Construction Effects3-12

 3.3.3 Mitigation..... 3-12

3.4 NOISE..... 3-12

 3.4.1 Changes in Long-Term Effects.....3-15

 3.4.2 Construction Effects3-21

 3.4.3 Mitigation.....3-21

3.5 VIBRATION 3-21

 3.5.1 Changes in Long-Term Effects.....3-22

 3.5.2 Construction Effects3-23

 3.5.3 Mitigation..... 3-23

3.6 WATER RESOURCES..... 3-23

 3.6.1 Changes in Long-Term Effects.....3-23

 3.6.2 Construction Effects3-27

 3.6.3 Mitigation.....3-27

3.7 TRAFFIC 3-28

 3.7.1 Changes in Long-Term Effects.....3-28

 3.7.2 Construction Effects3-31

 3.7.3 Mitigation..... 3-33

3.8 TRANSIT OPERATIONS 3-33

APPENDICES

- A. LIST OF PREPARERS
- B. DISTRIBUTION LIST
- C. SUMMARY OF EFFECTS

INDEX OF TABLES

CHAPTER 2

2-1 Capital Funding Plan.....2-14
 2-2 Summary of Preliminary Engineering Design Refinements.....2-15

CHAPTER 3

3-1 Summary of Changes in Environmental Effects.....3-1
 3-2 Anticipated Acquisitions and Displacements3-5
 3-3 Summary of Long-Term Visual Effects3-8
 3-4 Maximum Predicted CO Concentrations in parts per million (ppm).....3-11
 3-5 Comparison of FTA Noise Impacts at Discrete Receptors.....3-15
 3-6 Comparison of WMATA Noise Impacts at Discrete Receptors3-19
 3-7 Comparison of Vibration Effects.....3-22
 3-8 Summary of Long-Term Effects on Water Resources.....3-23
 3-9 Tysons Central 7 Station Peak Hour LOS and Delay (in seconds).....3-29
 3-10 2011 Tysons West Station Peak Hour LOS and Delay (in seconds).....3-30
 3-11 2025 Tysons West Station Peak Hour LOS and Delay (in seconds).....3-30
 3-12 Summary of Transit Operations Effects.....3-34

INDEX OF FIGURES

CHAPTER 1

1-1 Project Map.....1-3
 1-2 Regional Metrorail System (2005)1-7

CHAPTER 2

2-1 Key to Design Changes2-17
 2-2 Alignment Change from I-66 to Dulles Connector Road2-19
 2-3 Aerial Structure Types2-21
 2-4 Alignment Change in Tysons Corner2-23
 2-5 Proposed Cross-Section Changes along Route 7.....2-25
 2-6 Tysons East Station Plan Comparison.....2-27
 2-7 Tysons East Station Longitudinal Section2-29
 2-8 Tysons Central 123 Station Plan Comparison.....2-31
 2-9 Tysons Central 123 Station Longitudinal Section2-33
 2-10 Tysons Central 7 Station Plan Comparison2-35
 2-11 Tysons Central 7 Station Longitudinal Section.....2-37
 2-12 Tysons West Station Plan Comparison2-39
 2-13 Tysons West Station Longitudinal Section.....2-41
 2-14 Wiehle Avenue Station Plan Comparison2-43
 2-15 Wiehle Avenue Station Longitudinal Section.....2-45
 2-16 Changes to West Falls Church Rail Yard2-47

TABLE OF CONTENTS

2-17 Y-15 Yard Site: Proposed Phase 1 Construction Use2-49

2-18 Proposed Stormwater Management Facilities.....2-51

2-19 Potential Construction Staging Areas2-53

CHAPTER 3

3-1 Intersections Modeled for Air Quality Analysis3-13

3-2 Discrete Receptors Evaluated for Noise Impacts3-17

3-3 Water Resources3-25

LIST OF ACRONYMS

ADA	Americans with Disabilities Act
ARS	Adopted Regional System
BMP	Best Management Practice
BRT	Bus Rapid Transit
CBPA	Chesapeake Bay Preservation Area
CLRP	Constrained Long-Range Plan
CMP	Congestion Management Plan
CO	Carbon Monoxide
CTB	Commonwealth Transportation Board
dBA	A-Weighted Decibels
DIAAH	Dulles International Airport Access Highway
DRPT	Department of Rail and Public Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EQC	Environmental Quality Corridor
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FY	Fiscal Year
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation Systems
LPA	Locally Preferred Alternative
LOS	Level of Service
MIS	Major Investment Study
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority

LIST OF ACRONYMS

MWCOG	Metropolitan Washington Council of Governments
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
O&M	Operations & Maintenance
PE	Preliminary Engineering
ROD	Record of Decision
SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 – A Legacy for Users
S&I	Service and Inspection
SIP	State Implementation Plan
TEA-21	Transportation Equity Act for the 21 st Century
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIP	Transportation Improvement Program
VDOT	Virginia Department of Transportation
VTA	Virginia Transportation Act
WMATA	Washington Metropolitan Area Transit Authority
YOE	Year of Expenditure