Table of Contents

Chapter 100 Manual Description	100-1
100.01 Purpose	100-1
100.02 Presentation and Revisions	100-1
100.03 Practical Solutions	
100.04 Manual Applications	100-2
100.05 Manual Use	
100.06 Manual Organization	100-3
Chapter 110 Design-Build Projects	110-1
110.01 General	110-1
110.02 Terminology and Language Used	110-1
110.03 Design and Documentation Responsibility	110-2
110.04 References	110-3
Chapter 210 Public Involvement and Hearings	210-1
210.01 General	210-1
210.02 References	210-2
210.03 Definitions	210-3
210.04 Public Involvement	210-5
210.05 Public Hearings	210-10
210.06 Environmental Hearing	210-19
210.07 Corridor Hearing	210-20
210.08 Design Hearing	210-21
210.09 Limited Access Hearing	210-22
210.10 Combined Hearings	210-25
210.11 Administrative Appeal Hearing	210-26
210.12 Follow-Up Hearing	210-26
210.13 Documentation	210-26
Chapter 225 Environmental Coordination	225-1
225.01 General	225-1
225.02 Determining the Environmental Documentation	225-1
225.03 Identifying the Project Classification	225-2
225.04 Environmental Commitment File	225-2
225.05 Environmental Permits and Approvals	225-3
225.06 Documentation	
225.07 References	225-6
Chapter 300 Design Documentation, Approval, and Process Review	
300.01 General	
300.02 WSDOT Project Delivery	

300.03 Design Documentation	300-3
300.04 Project Approvals	300-5
300.05 FHWA Oversight and Approvals	
300.06 Changes to Approved Documents (New Section September 2021)	300-9
300.07 Process Review	300-10
300.08 References	300-11
Chapter 301 Design and Maintenance Coordination	301-1
301.01 Introduction	
301.02 Communication	
301.03 Incorporating Maintenance Considerations in Design	301-7
301.04 Documentation	301-20
301.05 References	
Chapter 305 Project Management	305-1
305.01 Introduction	305-1
305.02 Project Management	
305.03 Project Management Tools	305-3
305.04 Project Risk Management	305-4
305.05 References	305-7
Chapter 310 Value Engineering	310-1
310.01 General	310-1
310.02 Statewide VE Program	310-1
310.03 VE Procedure	
310.04 Value Engineering Job Plan	
310.05 Project Management Accountability	
310.06 Documentation	
310.07 References	
Chapter 320 Traffic Analysis	320-1
320.01 General	320-1
320.02 Design Year and Forecasting Considerations	320-2
320.03 Traffic Analysis Software	320-3
320.04 Travel Demand Forecasting	320-3
320.05 Traffic Impact Analysis (TIA)	320-4
320.06 TIA Scope	320-5
320.07 TIA Methods and Assumptions Document	320-6
320.08 TIA Methodologies	320-6
320.09 TIA Mitigation Measures	320-7
320.10 TIA Report	320-8
320.11 References	320-9

Chapter 321 Sustainable Safety Analysis	321-1
321.01 Sustainable Safety Related Policy	321-1
321.02 HQ Safety Technical Group	321-2
321.03 Project Related Safety Analysis	321-2
321.04 Safety Analysis	321-2
321.05 Reports and Documentation	321-2
321.06 References	321-3
Chapter 400 Surveying and Mapping	400-1
400.01 General	400-1
400.02 References	400-1
400.03 Procedures	400-1
400.04 Datums	400-3
400.05 Global Positioning System	400-3
400.06 WSDOT Survey Monument Database	400-3
400.07 Geographic Information System	400-4
400.08 Photogrammetric Surveys	400-4
400.09 Documentation	400-4
Chapter 410 Monumentation	410-1
410.01 General	410-1
410.02 References	410-2
410.03 Control Monuments	410-2
410.04 Alignment Monuments	410-3
410.05 Property Corners	410-3
410.06 Other Monuments	410-4
410.07 Filing Requirements	410-4
410.08 Documentation	410-5
Chapter 510 Right of Way Considerations	510-1
510.01 General	510-1
510.02 Special Features	510-2
510.03 Easements and Permits	510-3
510.04 Programming for Funds	510-4
510.05 Appraisal and Acquisition	510-4
510.06 Transactions	510-4
510.07 Documentation	510-6
510.08 References	510-6
Chapter 520 Access Control	520-1
520.01 General	520-1
520.02 References	520-2
520.03 Definitions	520-3

520.04 Vocabulary	
Chapter 530 Limited Access Control	530-1
530.01 General	
530.02 Achieving Limited Access	
530.03 Full Control (Most Restrictive)	530-5
530.04 Partial Control	530-8
530.05 Modified Control (Least Restrictive)	530-12
530.06 Access Approaches	530-15
530.07 Frontage Roads	530-15
530.08 Turnbacks	530-16
530.09 Adjacent Railroads	530-16
530.10 Access Breaks and Inner Corridor Access	530-17
530.11 Documentation	
Chapter 540 Managed Access Control	
540.01 General	
540.02 Design Considerations	
540.03 Managed Access Highway Classes	
540.04 Corner Clearance Criteria	
540.05 Access Connection Categories	540-10
540.06 Access Connection Permit	540-11
540.07 Permitting and Design Documentation	
540.08 Other Considerations	540-14
540.09 Preconstruction Conference	540-15
540.10 Adjudicative Proceedings	540-15
540.11 Documentation	540-17
540.12 References	
Chapter 550 Freeway Access Revision	550-1
550.01 Overview	550-1
550.02 Freeway Access Policy	550-1
550.03 Access Revision Process	550-2
550.04 Support Teams	550-3
550.05 Non-Access Feasibility Study Process	550-4
550.06 Access Revision Report Process	550-10
550.07 Documentation	550-15
550.08 References	550-16
Chapter 560 Fencing	
560.01 General	
560.02 Design Criteria	560-1
560.03 Fencing Types	560-3

560.04 Gates	560-4
560.05 Procedure	560-4
560.06 Documentation	560-4
560.07 References	
Chapter 610 Investigation of Soils, Rock, and Surfacing Materials	610-1
610.01 General	610-1
610.02 References	610-2
610.03 Materials Sources	610-2
610.04 Geotechnical Investigation, Design, and Reporting	610-2
610.05 Use of Geotechnical Consultants	610-16
610.06 Geotechnical Work by Others	610-16
610.07 Surfacing Report	610-17
610.08 Documentation	610-17
Chapter 620 Design of Pavement Structure	620-1
620.01 General	620-1
620.02 Estimating Tables	620-1
Chapter 630 Geosynthetics	630-1
630.01 General	630-1
630.02 References	630-1
630.03 Geosynthetic Types and Characteristics	630-2
630.04 Geosynthetic Function Definitions and Applications	630-2
630.05 Design Approach for Geosynthetics	630-4
630.06 Design Responsibility	630-13
630.07 Documentation	630-13
Chapter 700 Project Development Roles and Responsibilities for Projects with Structures	
700.01 General	
700.02 Procedures	
Chapter 710 Site Data for Structures	
710.01 General	
710.02 Required Data for All Structures	
710.03 Additional Data for Waterway Crossings (Bridges and Buried Structures)	710-3
710.04 Additional Data for Grade Separations	
710.05 Additional Data for Widenings	710-5
710.06 Site Data for Design-Build Conceptual Drawings	
710.07 Structure Preliminary Plan and Structure Conceptual Drawing Process Responsibilitie	s 710-6
710.08 Documentation	
710.09 References	710-6

Chapter 720 Bridges	
720.01 General	
720.02 Bridge Locations	
720.03 Bridge Site Design Elements	
720.04 Coordination with US Coast Guard for Existing Bridges	
720.05 Documentation	
720.06 References	
Chapter 730 Retaining Walls and Steep Reinforced Slopes	
730.01 General	
730.02 References	
730.03 Design Principles	
730.04 Design Requirements	
730.05 Guidelines for Wall/Slope Selection	
730.06 Design Responsibility and Process	
730.07 Documentation	
Chapter 740 Noise Barriers	
740.01 General	
740.02 Design	
740.03 Procedures	
740.04 Documentation	
740.05 References	
Chapter 800 Hydraulic Design (Rewritten September 2022)	
800.01 General	
800.02 Coordination with Other Specialty Groups	
800.03 Hydraulic Design Process	800-3
800.04 Floodplain Management	
800.05 Water Crossings	
800.06 Safety Considerations	
800.07 Documentation	800-5
800.08 References	
Chapter 900 Roadsides	
900.01 General	
900.02 Project Development	
900.03 Documentation	
900.04 References	
Chapter 950 Public Art	
950.01 General	
950.02 References	

950.03 Standard Architectural Design	
950.04 Criteria for Public Art	
950.05 Community-Identified Mitigation (New Section)	
950.06 Process and Project Delivery Timing	
950.07 Approvals	
950.08 Documentation	
Chapter 1010 Work Zone Safety and Mobility	1010-1
1010.01 General	1010-1
1010.02 Work Zone Safety and Mobility	1010-1
1010.03 Transportation Management Plans and Significant Projects	1010-1
1010.04 Developing TMP Strategies	1010-4
1010.05 Work Zone Capacity Analysis	1010-15
1010.06 Work Zone Design	1010-17
1010.07 Temporary Traffic Control Devices	1010-21
1010.08 Positive Protection Devices	1010-23
1010.09 Other Traffic Control Devices or Features	1010-25
1010.10 Traffic Control Plan Development and PS&E	1010-27
1010.11 Training and Resources	1010-29
1010.12 Documentation	1010-30
1010.13 References	1010-30
Chapter 1020 Signing	1020-1
1020.01 General	1020-1
1020.02 Design Components	1020-2
1020.03 Overhead Installation	1020-4
1020.04 State Highway Route Numbers	1020-5
1020.05 Mileposts	1020-5
1020.06 Guide Sign Plan	1020-6
1020.07 Documentation	1020-6
1020.08 References	1020-6
Chapter 1030 Delineation	1030-1
1030.01 General	1030-1
1030.02 Definitions	1030-1
1030.03 Pavement Markings	1030-1
1030.04 Guideposts	1030-8
1030.05 Barrier Delineation	1030-9
1030.06 Object Markers	1030-9
1030.07 Documentation	
1030.08 References	1030-9

1040.01 General. 1040-1 1040.02 Conventional Roadways – Additional Illumination 1040-12 1040.04 Croventional Roadways – Additional Illumination 1040-12 1040.05 Bridges and Tunnels 1040-15 1040.06 Work Zone and Construction Lighting 1040-33 1040.07 Parking Lots 1040-33 1040.09 Adjacent Lighting Areas 1040-37 1040.01 Dight Level Criteria 1040-37 1040.11 Basic System Design 1040-37 1040.12 Documentation 1040-47 1040.13 References 1040-47 1040.14 Basic System Design 1040-47 1040.15 Documentation 1040-47 1050.01 General 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 HWA Washington Division ITS Project Contracting Guidance 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-1 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.04 Documentation Tools 1100-1 1000.05 References 1060-2 <	Chapter 1040 Illumination	1040-1
1040.03 Conventional Roadways – Additional Illumination. 1040-12 1040.04 Freeways and Expressways 1040-15 1040.05 Bridges and Tunnels 1040-30 1040.06 Work Zone and Construction Lighting 1040-33 1040.07 Parking Lots 1040-35 1040.08 Pedestrian Facility Lighting 1040-37 1040.09 Adjacent Lighting Areas 1040-37 1040.10 Light Level Criteria 1040-38 1040.11 Basic System Design 1040-40 1040.12 Documentation 1040-47 1040.13 References 1040-47 1050.01 General. 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-3 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2	1040.01 General	
1040.04 Freeways and Expressways 1040-15 1040.05 Bridges and Tunnels 1040-30 1040.06 Work Zone and Construction Lighting 1040-31 1040.07 Parking Lots 1040-35 1040.09 Adjacent Lighting Areas 1040-37 1040.10 Light Level Criteria 1040-37 1040.10 Light Level Criteria 1040-37 1040.11 Basic System Design 1040-37 1040.12 Documentation 1040-47 1040.13 References 1040-47 1040.13 References 1040-47 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.05 Documentation 1050-3 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 References 1060-2 1060.07 Design Solutions 1100-1 1100.01 General 1100-1 11	1040.02 Conventional Roadways – Required Illumination	
1040.05 Bridges and Tunnels 1040-30 1040.06 Work Zone and Construction Lighting 1040-33 1040.07 Parking Lots 1040-35 1040.09 Adjacent Lighting Areas 1040-37 1040.01 Light Level Criteria 1040-37 1040.11 Basic System Design 1040-38 1040.12 Light Level Criteria 1040-37 1040.13 References 1040-43 1040.13 References 1040-47 1040.13 References 1040-48 Chapter 1050 Intelligent Transportation Systems 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-2 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References <	1040.03 Conventional Roadways – Additional Illumination	1040-12
1040.06 Work Zone and Construction Lighting 1040-33 1040.07 Parking Lots 1040-35 1040.08 Pedestrian Facility Lighting 1040-37 1040.09 Adjacent Lighting Areas 1040-37 1040.10 Light Level Criteria 1040-38 1040.11 Basic System Design 1040-40 1040.12 Documentation 1040-47 1040.13 References 1040-47 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 References 1060-2 1060.07 Design Criteria 1060-2 1060.08 References 1060-2 1060.09 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.04 Documentation Tools 110	1040.04 Freeways and Expressways	1040-15
1040.07 Parking Lots 1040-35 1040.08 Pedestrian Facility Lighting 1040-37 1040.09 Adjacent Lighting Areas 1040-37 1040.10 Light Level Criteria 1040-37 1040.11 Basic System Design 1040-40 1040.12 Documentation 1040-40 1040.13 References 1040-47 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-1 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1050-5 Chapter 1060 Worker Fall Protection 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 References 1060-2 1060.07 Parking Lots 1060-2 1060.08 References 1060-2 1060.09 References 1060-2 1060.00 General 1000-2 1000.01 General 1000-1 1000.02 Practical Design 1100-1	1040.05 Bridges and Tunnels	1040-30
1040.08 Pedestrian Facility Lighting 1040-37 1040.09 Adjacent Lighting Areas 1040-37 1040.10 Light Level Criteria 1040-38 1040.11 Basic System Design 1040-37 1040.12 Documentation 1040-47 1040.13 References 1040-47 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.05 Documentation 1050-2 1050.05 Documentation 1050-2 1050.05 Chapter 1060 Worker Fall Protection 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 General 1060-1 1060.07 Design Criteria 1060-1 1060.08 General 1060-2 1060.09 References 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1000.05 References <	1040.06 Work Zone and Construction Lighting	1040-33
1040.09 Adjacent Lighting Areas 1040-37 1040.10 Light Level Criteria 1040-38 1040.11 Basic System Design 1040-40 1040.12 Documentation 1040-47 1040.13 References 1040-47 1040.13 References 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 References 1060-2 1060.07 Design Solutions 1060-2 1060.08 References 1060-2 1060.09 Design Solutions 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-1 1100.05 References 1100-1 110	1040.07 Parking Lots	1040-35
1040.10 Light Level Criteria 1040-38 1040.11 Basic System Design 1040-40 1040.12 Documentation 1040-47 1040.13 References 1040-47 1040.13 References 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-1 1060.04 Documentation 1060-2 1060.05 References 1060-2 1000.05 References 100-1	1040.08 Pedestrian Facility Lighting	1040-37
1040.11 Basic System Design 1040-40 1040.12 Documentation 1040-47 1040.13 References 1040-48 Chapter 1050 Intelligent Transportation Systems 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 Quertation 1060-2 1060.07 Design Solutions 1060-2 1060.08 References 1060-2 1060.09 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.03 Contextual Needs 1101-3 <td>1040.09 Adjacent Lighting Areas</td> <td> 1040-37</td>	1040.09 Adjacent Lighting Areas	1040-37
1040.12 Documentation 1040-47 1040.13 References 1040-48 Chapter 1050 Intelligent Transportation Systems 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 References 1060-2 1060.07 Besign Solutions 1060-2 1060.08 References 1060-2 1060.09 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1000.05 References 1060-2 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Ne	1040.10 Light Level Criteria	1040-38
1040.13 References. 1040-48 Chapter 1050 Intelligent Transportation Systems. 1050-1 1050.01 General. 1050-1 1050.02 References. 1050-1 1050.03 Systems Engineering. 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General. 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References. 1060-2 1060.06 References. 1060-2 1060.07 References. 1060-2 1060.08 References. 1060-2 1060.09 References. 1060-2 1060.01 General. 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools. 1100-1 1100.05 References. 1100-6 Chapter 1101 Need Identification 1101-1 1101.03 Contextual Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3<	1040.11 Basic System Design	
Chapter 1050 Intelligent Transportation Systems 1050-1 1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-1 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-2 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1000.05 References 1060-2 1100.05 References 1006-2 1100.06 Practical Design 1100-1 1100.07 Practical Design 1100-1 1100.08 Practical Solutions 1100-4 1100.09 Practical Solutions 1100-4 1100.05 References 1100-5 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1	1040.12 Documentation	1040-47
1050.01 General 1050-1 1050.02 References 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1050-5 Chapter 1060 Worker Fall Protection 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.07 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4 </td <td>1040.13 References</td> <td></td>	1040.13 References	
1050.02 References. 1050-1 1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance. 1050-4 1050.05 Documentation 1050-5 Chapter 1060 Worker Fall Protection 1060-1 1060.01 General. 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References. 1060-2 1060.05 References. 1060-2 1060.05 References. 1060-2 1060.05 References. 1060-2 1060.02 Practical Design 1100-1 1100.01 General. 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools. 1100-2 1100.05 References. 1100-6 Chapter 1101 Need Identification 1101-1 1100.05 References. 1100-1 1100-10 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 </td <td>Chapter 1050 Intelligent Transportation Systems</td> <td></td>	Chapter 1050 Intelligent Transportation Systems	
1050.03 Systems Engineering 1050-2 1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1050-5 Chapter 1060 Worker Fall Protection 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1000.01 General 1100-1 1100.02 Practical Design 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-4 1100-05 References 1100-5 Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1050.01 General	
1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.06 Questions 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-4 1100.05 References 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1050.02 References	
1050.04 FHWA Washington Division ITS Project Contracting Guidance 1050-4 1050.05 Documentation 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.05 References 1060-2 1060.06 Questions 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-4 1100.05 References 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1050.03 Systems Engineering	
Chapter 1060 Worker Fall Protection 1060-1 1060.01 General 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 Chapter 1100 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-4 1100.05 References 1100-3 1100.05 References 1100-4 1100.05 References 1100-4 1100.05 References 1100-5 Chapter 1101 Need Identification 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1050.04 FHWA Washington Division ITS Project Contracting Guidance	
1060.01 General. 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 General 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Solutions 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1050.05 Documentation	1050-5
1060.01 General. 1060-1 1060.02 Design Criteria 1060-1 1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 1060.06 General 1100-1 1100.01 General 1100-1 1100.02 Practical Design 1100-1 1100.03 Practical Solutions 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	Chapter 1060 Worker Fall Protection	
1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 Chapter 1100 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	·	
1060.03 Design Solutions 1060-2 1060.04 Documentation 1060-2 1060.05 References 1060-2 Chapter 1100 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-1 1100.04 Documentation Tools 1100-2 1100.05 References 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1060.02 Design Criteria	
1060.05 References. 1060-2 Chapter 1100 Practical Design 1100-1 1100.01 General. 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-2 1100.04 Documentation Tools. 1100-4 1100.05 References. 1100-4 1100.05 References. 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement. 1101-4		
Chapter 1100 Practical Design 1100-1 1100.01 General 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1060.04 Documentation	
1100.01 General. 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	1060.05 References	
1100.01 General. 1100-1 1100.02 Practical Solutions 1100-1 1100.03 Practical Design 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	Chapter 1100 Practical Design	
1100.02 Practical Solutions1100-11100.03 Practical Design1100-21100.04 Documentation Tools1100-41100.05 References1100-6Chapter 1101 Need Identification1101-11101.01 General1101-11101.02 Baseline Needs1101-11101.03 Contextual Needs1101-31101.04 Contributing Factors Analysis1101-31101.05 Project Need Statement1101-4		
1100.03 Practical Design 1100-2 1100.04 Documentation Tools 1100-4 1100.05 References 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4		
1100.04 Documentation Tools. 1100-4 1100.05 References. 1100-6 Chapter 1101 Need Identification 1101-1 1101.01 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement. 1101-4	1100.03 Practical Design	
Chapter 1101 Need Identification 1101-1 1101.01 General 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	-	
1101.01 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement. 1101-4	1100.05 References	1100-6
1101.01 General. 1101-1 1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement. 1101-4	Chapter 1101 Need Identification	
1101.02 Baseline Needs 1101-1 1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4	•	
1101.03 Contextual Needs 1101-3 1101.04 Contributing Factors Analysis 1101-3 1101.05 Project Need Statement 1101-4		
1101.04 Contributing Factors Analysis		
1101.05 Project Need Statement		
•		
	1101.06 Documentation	

1101.07 References	1101-5
Chapter 1102 Context Determination	1102-1
1102.01 General Overview	1102-1
1102.02 Land Use Context	1102-1
1102.03 Transportation Context	1102-4
1102.04 Documentation	1102-7
1102.05 References	1102-8
Chapter 1103 Design Control Selection	1103-1
1103.01 General Overview	1103-1
1103.02 Control: Design Year	1103-2
1103.03 Control: Modal Priority	1103-2
1103.04 Control: Access Control	1103-6
1103.05 Control: Design Speed	1103-6
1103.06 Control: Terrain Classification	1103-2
1103.07 Documentation	1103-2
1103.08 References	1103-2
Chapter 1104 Alternatives Analysis	1104-1
1104.01 General	1104-1
1104.02 Environmental Documentation Considerations	1104-1
1104.03 Alternative Solution Formulation	1104-1
1104.04 Alternative Solution Evaluation	1104-2
1104.05 Documentation	1104-3
1104.06 References	1104-3
Chapter 1105 Design Element Selection	1105-1
1105.01 General	1105-1
1105.02 Selecting Design Elements	1105-1
1105.03 Related Elements	1105-3
1105.04 Documentation	
1105.05 References	1105-3
Chapter 1106 Design Element Dimensions	1106-1
1106.01 General	1106-1
1106.02 Choosing Dimensions	1106-1
1106.03 The Mode/Function/Performance Approach	1106-2
1106.04 Design up Method	
1106.05 Quantitative Analysis Methods and Tools	
1106.06 Documenting Dimensions	1106-5
1106.07 Design Analysis	
1106.08 References	1106-5

Chapter 1120 Preservation Projects	1120-1
1120.01 General	1120-1
1120.02 Roadway Preservation (P1)	1120-1
1120.03 Structures Preservation (P2) and Other Facilities (P3)	1120-4
Chapter 1130 Development Services	1130-1
1130.01 Overview	1130-1
1130.02 WSDOT Development Services Policy	1130-2
1130.03 Local Agency and WSDOT Authority	1130-3
1130.04 State Environmental Policy Act (SEPA)	1130-4
1130.05 Growth Management Act (GMA)	1130-6
1130.06 Highway Access Connections	1130-8
1130.07 Early and Ongoing Coordination	1130-9
1130.08 Establishing Reimbursable Accounts	1130-9
1130.09 Review Procedures and Criteria	1130-10
1130.10 Development Services Agreements	1130-18
1130.11 Using Interlocal Agreements	1130-27
1130.12 Using Developer Permits	1130-29
1130.13 Construction Oversight	1130-30
1130.14 Final Inspection/Acceptance	1130-32
1130.15 Documentation	1130-32
1130.16 References	1130-33
Chapter 1210 Geometric Plan Elements	1210-1
1210.01 General	1210-1
1210.02 Horizontal Alignment	1210-1
1210.03 Distribution Facilities	1210-3
1210.04 Number of Lanes and Arrangement	1210-4
1210.05 Pavement Transitions	1210-5
1210.06 Procedures	1210-6
1210.07 Documentation	1210-7
1210.08 References	1210-7
Chapter 1220 Geometric Profile Elements	1220-1
1220.01 General	1220-1
1220.02 Vertical Alignment	1220-1
1220.03 Coordination of Vertical and Horizontal Alignments	1220-5
1220.04 Airport Clearance	1220-6
1220.05 Railroad Crossings	1220-6
1220.06 Procedures	1220-6
1220.07 Documentation	1220-7
1220.08 References	1220-7

Chapter 1230 Geometric Cross Section Basics	1230-1
1230.01 General	1230-1
1230.02 Guidance for Specific Facility Types	1230-1
1230.03 Common Elements	1230-3
1230.04 Jurisdiction for Design and Maintenance	1230-3
1230.05 References	1230-5
Chapter 1231 Geometric Cross Section – Highways	1231-1
1231.01 General	1231-1
1231.02 Design Up	1231-1
1231.03 Common Elements	1231-1
1231.04 Cross Section Elements	1231-1
1231.05 Bicycle and Pedestrian Elements	1231-3
1231.06 Modally Integrated Cross Sections	1231-3
1231.07 Road Diets and Retrofit Options	1231-15
1231.08 References	1231-16
Chapter 1232 Geometric Cross Section – Freeways	1232-1
1232.01 General	1232-1
1232.02 Lane Width	1232-1
1232.03 Shoulder Width	1232-1
1232.04 Other Elements	1232-2
1232.05 Design Flexibility	1232-3
1232.06 References	1232-4
Chapter 1238 Geometric Cross Section – Streetside and Parking	1238-1
1238.01 General	
1238.02 Parking	
1238.03 Streetside	
1238.04 Retrofit Options	
1238.05 References	
Chapter 1239 Geometric Cross Section – Shoulders, Side Slopes, Curbs, and Medians	1239-1
1239.01 Introduction	
1239.02 Shoulders	
1239.03 Fill Sections, Cut Sections, and Ditch Sections	
1239.04 Roadway Sections in Rock Cuts	
1239.05 Curbs	
1239.06 Lateral Clearance to Curb and Barrier	
1239.07 Chain-Up and/or Chain-Off Areas	
1239.08 Medians and Outer Separations	
1239.09 Documentation	

Chapter 1240 Turning Roadways	1240-1
1240.01 General	
1240.02 Turning Roadway Widths	
1240.03 Documentation	
1240.04 References	
Chapter 1250 Cross Slope and Superelevation	1250-1
1250.01 General	1250-1
1250.02 Roadway Cross Slope	
1250.03 Superelevation Rate Selection	1250-2
1250.04 Existing Curves	1250-3
1250.05 Turning Movements at Intersections	
1250.06 Runoff for Highway Curves	
1250.07 Runoff for Ramp Curves	1250-5
1250.08 Documentation	1250-5
1250.09 References	1250-5
Chapter 1260 Sight Distance	1260-1
1260.01 General	1260-1
1260.02 References	
1260.03 Stopping Sight Distance (Eye height – 3.5 ft, Object height – 2.0 ft)	
1260.04 Passing Sight Distance (Eye height – 3.5 ft, Object height – 3.5 ft)	1260-11
1260.05 Decision Sight Distance (Eye height – 3.5 ft, Object height – 2.0 ft)	1260-13
1260.06 Documentation	
Chapter 1270 Auxiliary Lanes	1270-1
1270.01 General	1270-1
1270.02 Climbing Lanes	1270-1
1270.03 Passing Lanes	
1270.04 Slow-Moving Vehicle Turnouts	1270-14
1270.05 Shoulder Driving for Slow Vehicles	
1270.06 Emergency Escape Ramps	1270-15
1270.07 Documentation	1270-18
1270.08 References	
Chapter 1300 Intersection Control Type	1300-1
1300.01 General	
1300.02 Intersection Control Objectives	
1300.03 Common Types of Intersection Control	
1300.04 Modal Considerations	
1300.05 Procedures	
1300.06 Documentation	
1300.07 References	

Chapter 1310 Intersections	
1310.01 General	1310-1
1310.02 Design Considerations	1310-2
1310.03 Design Elements	1310-11
1310.04 Intersection Sight Distance	1310-37
1310.05 Signing and Delineation	1310-41
1310.06 Procedures	1310-41
1310.07 Documentation	1310-41
1310.08 References	
Chapter 1320 Roundabouts	1320-1
1320.01 General	
1320.02 Roundabout Types	1320-2
1320.03 Capacity Analysis	
1320.04 Geometric Design	
1320.05 Pedestrians	1320-19
1320.06 Bicycles	1320-22
1320.07 Signing	1320-23
1320.08 Pavement Marking	1320-23
1320.09 Illumination	1320-23
1320.10 Road Approach, Parking, and Transit Facilities	1320-24
1320.11 Geometric Design Peer Review	1320-25
1320.12 Documentation and Approvals	1320-25
1320.13 References	1320-25
Chapter 1330 Traffic Control Signals	1330-1
1330.01 General	
1330.02 Procedures	
1330.03 Intersection Design Considerations	
1330.04 Conventional Traffic Signal Design	1330-8
1330.05 Preliminary Signal Plan	1330-49
1330.06 Operational Considerations for Design	1330-50
1330.07 Documentation	1330-58
1330.08 References	1330-58
Chapter 1340 Driveways	1340-1
1340.01 General	
1340.02 Access Control	
1340.03 Driveway Design	
1340.04 Documentation	
1340.05 References	

Chapter 1350 Railroad Grade Crossings	1350-1
1350.01 General	
1350.02 Plans	1350-2
1350.03 Traffic Control Systems	
1350.04 Nearby Roadway Intersections	
1350.05 Pullout Lanes	
1350.06 Crossing Surfaces	
1350.07 Crossing Closure	
1350.08 Traffic Control during Construction and Maintenance	1350-9
1350.09 Railroad Grade Crossing Petitions and WUTC Orders	
1350.10 Grade Crossing Improvement Projects	
1350.11 Light Rail	
1350.12 Documentation	
1350.13 References	
Chapter 1360 Interchanges	1360-1
1360.01 General	
1360.02 Interchange Design	
1360.03 Ramps	
1360.04 Interchange Connections	
1360.05 Ramp Terminal Intersections at Crossroads	
1360.06 Interchanges on Two-Lane Highways	
1360.07 Interchange Plans for Approval	
1360.08 Documentation	
1360.09 References	
Chapter 1370 Median Crossovers	1370-1
1370.01 General	
1370.02 Analysis	
1370.03 Design	
1370.04 Plan Updates and Approvals	
1370.05 Documentation	
Chapter 1400 New Chapter Managed Lanes	1400-1
1400.01 General	
1400.02 Managed Lane Selection	
1400.03 Managed Lane Design and Operational Considerations	
1400.04 Documentation	
1400.05 References	
Chapter 1410 High-Occupancy Vehicle Facilities	1410-1
1410.01 General	
1410.02 Preliminary Design and Planning	

1410.03 Operations	
1410.04 Design Criteria	
1410.05 Documentation	1410-12
1410.06 References	1410-12
	1 1 2 0 1
Chapter 1420 HOV Direct Access	
1420.01 General	
1420.02 HOV Access Types and Locations	
1420.03 Direct Access Geometrics	
1420.04 Passenger Access	
1420.05 Traffic Design Elements	
1420.06 Documentation	
1420.07 References	
Chapter 1430 Part-time Shoulder (New Chapter September 2022)	1430-1
1430.01 General	
1430.02 Viability Assessment	
1430.03 Operational Parameters	1430-2
1430.04 Design Criteria	1430-3
1430.05 Other Considerations	1430-8
1430.06 References	
Chapter 1440 New Chapter - Metered Shoulder	1440 1
Chapter 1440 New Chapter Metered Shoulder	
1440.01 General	
1440.01 General 1440.02 Design Considerations	1440-1 1440-1
1440.01 General	1440-1 1440-1
1440.01 General 1440.02 Design Considerations	
1440.01 General 1440.02 Design Considerations 1440.03 References	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.03 Definitions	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.03 Definitions 1510.04 Policy	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.02 References 1510.03 Definitions 1510.04 Policy 1510.05 ADA Requirements by Project Type	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.03 Definitions 1510.04 Policy 1510.05 ADA Requirements by Project Type 1510.06 Pedestrian Circulation Paths	
1440.01 General 1440.02 Design Considerations 1440.03 References. Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References. 1510.02 References. 1510.03 Definitions 1510.04 Policy 1510.05 ADA Requirements by Project Type 1510.06 Pedestrian Circulation Paths 1510.07 Pedestrian Access Routes	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.03 Definitions 1510.04 Policy 1510.05 ADA Requirements by Project Type 1510.06 Pedestrian Circulation Paths 1510.07 Pedestrian Access Routes 1510.08 Sidewalks	
1440.01 General 1440.02 Design Considerations 1440.03 References. Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References. 1510.03 Definitions 1510.04 Policy. 1510.05 ADA Requirements by Project Type. 1510.06 Pedestrian Circulation Paths 1510.07 Pedestrian Access Routes 1510.08 Sidewalks 1510.09 Curb Ramps	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.03 Definitions 1510.03 Definitions 1510.04 Policy 1510.05 ADA Requirements by Project Type 1510.06 Pedestrian Circulation Paths 1510.07 Pedestrian Access Routes 1510.08 Sidewalks 1510.09 Curb Ramps 1510.10 Crosswalks	
1440.01 General 1440.02 Design Considerations 1440.03 References Chapter 1510 Pedestrian Facilities 1510.01 General 1510.02 References 1510.03 Definitions 1510.03 Definitions 1510.04 Policy 1510.05 ADA Requirements by Project Type 1510.06 Pedestrian Circulation Paths 1510.07 Pedestrian Access Routes 1510.08 Sidewalks 1510.09 Curb Ramps 1510.10 Crosswalks 1510.11 Raised Medians/Traffic Islands	
1440.01 General.1440.02 Design Considerations1440.03 References.1440.03 References.Chapter 1510 Pedestrian Facilities1510.01 General.1510.02 References.1510.03 Definitions1510.04 Policy.1510.05 ADA Requirements by Project Type.1510.06 Pedestrian Circulation Paths1510.07 Pedestrian Access Routes1510.08 Sidewalks.1510.10 Crosswalks1510.11 Raised Medians/Traffic Islands.1510.12 Pedestrian Pushbuttons	

1510.17 Work Zone Pedestrian Accommodation 1510-45 1510.18 Documentation 1510-46 Chapter 1515 Shared-Use Paths 1515-1 1515.01 General 1515-1 1515.02 Shared-Use Path Design 1515-1 1515.03 Intersections and Crossings Design 1515-10 1515.04 Grade Separation Structures 1515-10 1515.05 Signing, Pavement Markings, and Illumination 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-12 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-12 1520.06 Documentation 1520-29 1520.07 References 1520-29 1520.07 References 1520-29 1520.07 References 1600-1 1600.03 Mitigation Guidance 1600-2 1600.03 Cheer Roadside Safety Features 1600-15 1600.04 Medians 1600-2 <tr< th=""><th>1510.17 Work Zone Pedestrian Accommodation</th><th> 1510-45</th></tr<>	1510.17 Work Zone Pedestrian Accommodation	1510-45
Chapter 1515 Shared-Use Paths. 1515-1 1515.01 General. 1515-1 1515.02 Shared-Use Path Design 1515-1 1515.03 Intersections and Crossings Design 1515-1 1515.04 Grade Separation Structures 1515-1 1515.05 Restricted Use Controls 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-17 1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-1 1520.04 Intersection Design Treatments 1520-19 1520.05 Additional Bicycle Design Requirements and Considerations 1520-29 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.03 Mitigation Guidance 1600-2 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-12 1600.05 Other Roadside Safety Features 1600-12<		
1515.01 General. 1515-1 1515.02 Shared-Use Path Design 1515-1 1515.03 Intersections and Crossings Design 1515-1 1515.04 Grade Separation Structures 1515-1 1515.05 Righting, Pavement Markings, and Illumination 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General. 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-1 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General. 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-12 1600.07 References 1600-12 1600.07 References 1600-12 </td <td>1510.18 Documentation</td> <td></td>	1510.18 Documentation	
1515.01 General. 1515-1 1515.02 Shared-Use Path Design 1515-1 1515.03 Intersections and Crossings Design 1515-1 1515.04 Grade Separation Structures 1515-1 1515.05 Righting, Pavement Markings, and Illumination 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General. 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-12 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General. 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-12 1600.07 References 1600-12 1600.08 Ocumentation 1600-12	Charter 1515 Charad Lies Daths	1 - 1 - 1
1515.02 Shared-Use Path Design 1515-1 1515.03 Intersections and Crossings Design 1515-10 1515.04 Grade Separation Structures 1515-14 1515.05 Signing, Pavement Markings, and Illumination 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General. 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-1 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-29 1520.07 References 1520-29 1520.07 References 1520-29 1520.07 References 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-15 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-12 1600.07 References 1600-12 1600.08 Nitigation Guidance 1600-12 <t< td=""><td>•</td><td></td></t<>	•	
1515.03 Intersections and Crossings Design 1515-10 1515.04 Grade Separation Structures 1515-14 1515.05 Signing, Pavement Markings, and Illumination 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-16 1515.07 Documentation 1515-17 Chapter 1520 Roadway Bicycle Facilities 1520-11 1520.01 General 1520-11 1520.02 Roadway Bicycle Facility Types 1520-11 1520.03 Bicycle Facility Selection 1520-12 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-12 1520.06 Documentation 1520-29 1520.07 References 1520-29 1520.07 References 1600-11 1600.01 General 1600-11 1600.02 Icear Zone 1600-12 1600.03 Mitigation Guidance 1600-13 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features		
1515.04 Grade Separation Structures1515-141515.05 Signing, Pavement Markings, and Illumination1515-161515.06 Restricted Use Controls1515-161515.07 Documentation1515-18Chapter 1520 Roadway Bicycle Facilities1520-11520.01 General1520-11520.02 Roadway Bicycle Facility Types1520-11520.03 Bicycle Facility Selection1520-11520.04 Intersection Design Treatments1520-121520.05 Additional Bicycle Design Requirements and Considerations1520-291520.06 Documentation1520-291520.07 References1520-291520.08 Requirements1600-11600.01 General1600-11600.02 Clear Zone1600-11600.03 Mitigation Guidance1600-11600.04 Medians1600-151600.05 Other Roadside Safety Features1600-151600.06 Documentation1600-211600.07 References1600-151600.08 Oxideration1600-151600.09 1600.09 Addition Guidance1600-151600.00 Forumentation1600-121600.01 Clear Zone1600-211600.02 Clear Zone1600-151600.03 Mitigation Guidance1600-151600.04 Medians1600-121600.05 Other Roadside Safety Features1600-151600.06 Documentation1610-161610.01 Introduction1610-161610.02 Barrier Impacts1610-21610.03 General Barrier Design1610-161610.05 High-Tension Cable Barrier1610-26	.	
1515.05 Signing, Pavement Markings, and Illumination 1515-16 1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-12 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-15 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-15 1600.08 Other Roadside Safety Features 1600-15 1600.09 Documentation 1600-15 1600.05 Other Roadside Safety Features 1600-21 1600.06 Documentation 1600-21 1600.07 Reference		
1515.06 Restricted Use Controls 1515-16 1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-1 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-29 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-15 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-15 1600.08 Mitigation Guidance 1600-15 1600.09 The Roadside Safety Features 1600-12 1600.01 Introduction 1610-12 1610.01 Introduction 1610-12 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-26		
1515.07 Documentation 1515-18 Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-1 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-1 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-15 1600.08 Other Roadside Safety Features 1600-15 1600.09 Intool Coumentation 1600-12 1600.01 Traffic Barriers 1610-14 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier De		
Chapter 1520 Roadway Bicycle Facilities 1520-1 1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-8 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-15 1600.08 Other Roadside Safety Features 1600-15 1600.09 1600.04 Medians 1600-12 1600.05 Other Roadside Safety Features 1600-12 1600.05 Other Roadside Safety Features 1600-21 1600.07 References 1610-12 1610.01 Introduction 1610-12 1610.02 Barrier Impacts		
1520.01 General 1520-1 1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-8 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1520-29 1520.07 References 1520-29 1600.01 General 1600-1 1600.02 Clear Zone 1600-1 1600.03 Mitigation Guidance 1600-15 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.07 References 1600-21 1600.07 References 1600-21 1600.07 References 1600-21 1600.07 References 1600-21 1600.08 Documentation 1600-21 1600.09 References 1600-21 1600.010 Introduction 1610-11 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-2 1610.04 Beam Guardrail 1610-26 1610.05 High-Tension Cable Barrier 1610-26	1515.07 Documentation	
1520.02 Roadway Bicycle Facility Types 1520-1 1520.03 Bicycle Facility Selection 1520-8 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.07 References 1600-21 1600.08 Documentation 1600-21 1600.09 Clear Zone 1600-15 1600.015 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-12 1600.07 References 1600-21 1600.08 Documentation 1600-21 1600.09 Ther Roadside Safety Features 1600-21 1600.01 Introduction 1610-10 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-2 1610.04 Beam Guardrail 1610-26	Chapter 1520 Roadway Bicycle Facilities	1520-1
1520.03 Bicycle Facility Selection 1520-8 1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations. 1520-19 1520.06 Documentation 1520-29 1520.07 References. 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General. 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References. 1600-15 1600.08 Other Roadside Safety Features 1600-15 1600.09 Other Roadside Safety Features 1600-15 1600.07 References. 1600-21 1600.08 Documentation 1600-21 1600.09 Therefore Roadside Safety Features 1600-21 1600.01 Introduction 1610-16 1610.02 Barrier Impacts 1610-1 1610.03 General Barrier Design 1610-2 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1520.01 General	
1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.07 References 1600-21 1600.08 Documentation 1600-25 1600.09 Icou0.09 Icou0.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Documentation 1600-21 1600.07 References 1600-21 1600.07 References 1610-16 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1520.02 Roadway Bicycle Facility Types	
1520.04 Intersection Design Treatments 1520-12 1520.05 Additional Bicycle Design Requirements and Considerations 1520-19 1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.05 Other Roadside Safety Features 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.07 References 1600-21 1600.08 Documentation 1600-25 1600.09 Icou0.09 Icou0.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.05 Documentation 1600-21 1600.07 References 1600-21 1600.07 References 1610-16 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1520.03 Bicycle Facility Selection	
1520.05 Additional Bicycle Design Requirements and Considerations. 1520.19 1520.06 Documentation 1520-29 1520.07 References. 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General. 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References. 1600-15 1600.08 Other Roadside Safety Features 1600-15 1600.09 Through the safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 1600.08 Documentation 1600-21 1600.09 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26		
1520.06 Documentation 1520-29 1520.07 References 1520-29 Chapter 1600 Roadside Safety 1600-1 1600.01 General 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 1600.07 References 1600-21 1600.07 References 1600-21 1600.07 References 1600-21 1600.08 Documentation 1600-21 1600.09 Traffic Barriers 1610-12 1610.01 Introduction 1610-12 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	-	
Chapter 1600 Roadside Safety 1600-1 1600.01 General. 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 1610.08 Darrier Infic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.05 High-Tension Cable Barrier 1610-26		
1600.01 General. 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 1600.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1520.07 References	
1600.01 General. 1600-1 1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 1600.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	Charter 1000 Deaded a Cafety	
1600.02 Clear Zone 1600-2 1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.05 High-Tension Cable Barrier 1610-26		
1600.03 Mitigation Guidance 1600-9 1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.05 High-Tension Cable Barrier 1610-26		
1600.04 Medians 1600-15 1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General	
1600.05 Other Roadside Safety Features 1600-15 1600.06 Documentation 1600-21 1600.07 References 1600-21 Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone	
1600.06 Documentation 1600-21 1600.07 References 1600-21 Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance	
1600.07 References. 1600-21 Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians	
Chapter 1610 Traffic Barriers 1610-1 1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features	
1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation	
1610.01 Introduction 1610-1 1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation	
1610.02 Barrier Impacts 1610-2 1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References	1600-1 1600-2 1600-9 1600-15 1600-15 1600-15 1600-21 1600-21
1610.03 General Barrier Design 1610-4 1610.04 Beam Guardrail 1610-16 1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References Chapter 1610 Traffic Barriers	
1610.04 Beam Guardrail	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References Chapter 1610 Traffic Barriers 1610.01 Introduction	1600-1 1600-2 1600-9 1600-15 1600-15 1600-21 1600-21 1600-21 1610-1 1610-1
1610.05 High-Tension Cable Barrier 1610-26	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References Chapter 1610 Traffic Barriers 1610.01 Introduction 1610.02 Barrier Impacts	
	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References 1600.07 References 1610.01 Introduction 1610.02 Barrier Impacts 1610.03 General Barrier Design	1600-1 1600-2 1600-9 1600-15 1600-15 1600-21 1600-21 1610-1 1610-1 1610-1 1610-2 1610-2 1610-2 1610-4
	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References Chapter 1610 Traffic Barriers 1610.01 Introduction 1610.02 Barrier Impacts 1610.03 General Barrier Design 1610.04 Beam Guardrail	1600-1 1600-2 1600-9 1600-15 1600-15 1600-21 1600-21 1610-1 1610-1 1610-2 1610-4 1610-16
1610.07 Bridge Traffic Barriers	1600.01 General 1600.02 Clear Zone 1600.03 Mitigation Guidance 1600.04 Medians 1600.05 Other Roadside Safety Features 1600.06 Documentation 1600.07 References Chapter 1610 Traffic Barriers 1610.01 Introduction 1610.02 Barrier Impacts 1610.03 General Barrier Design 1610.04 Beam Guardrail 1610.05 High-Tension Cable Barrier	1600-1 1600-2 1600-9 1600-15 1600-15 1600-21 1600-21 1610-1 1610-1 1610-2 1610-2 1610-4 1610-16 1610-26
1610.08 Other Barriers	1600.01 General.1600.02 Clear Zone1600.03 Mitigation Guidance1600.04 Medians1600.05 Other Roadside Safety Features1600.06 Documentation1600.07 ReferencesChapter 1610 Traffic Barriers1610.01 Introduction1610.02 Barrier Impacts1610.03 General Barrier Design1610.04 Beam Guardrail1610.05 High-Tension Cable Barrier1610.06 Concrete Barrier	1600-1 1600-2 1600-9 1600-15 1600-15 1600-21 1600-21 1610-1 1610-1 1610-2 1610-2 1610-4 1610-16 1610-26 1610-33
1610.09 References	1600.01 General1600.02 Clear Zone1600.03 Mitigation Guidance1600.04 Medians1600.05 Other Roadside Safety Features1600.06 Documentation1600.07 ReferencesChapter 1610 Traffic Barriers1610.01 Introduction1610.02 Barrier Impacts1610.03 General Barrier Design1610.04 Beam Guardrail1610.05 High-Tension Cable Barrier1610.07 Bridge Traffic Barriers	1600-1 1600-2 1600-9 1600-15 1600-15 1600-21 1600-21 1610-1 1610-1 1610-2 1610-2 1610-4 1610-26 1610-33 1610-37

1730.05 Transfer/Transit Centers 1730.06 Roadway and Intersection Design 1730.07 Documentation	1730-21
1730.05 Transfer/Transit Centers	
	1730-18
1730.04 Park and Ride Lots	
1730.03 Passenger Amenities	
1730.02 Bus Stops and Pullouts	
1730.01 General	
Chapter 1730 Transit Facilities	
1720.09 Documentation	1720-5
1720.08 Procedures	1720-5
1720.07 Federal Participation	1720-5
1720.06 Shoulder Sites	1720-4
1720.05 Portable Facilities	1720-3
1720.04 Permanent Facilities	1720-2
1720.03 Planning, Development, and Responsibilities	1720-1
1720.02 Definitions	1720-1
1720.01 General	1720-1
Chapter 1720 Weigh Sites	1720-1
1710.08 Documentation	1710-14
1710.07 Utilities	
1710.06 Buildings	
1710.05 Location, Access, and Site Design	
1710.04 Safety Rest Area Project Team	1710-3
1710.03 Definitions	1710-3
1710.02 References	1710-1
1710.01 General	1710-1
Chapter 1710 Safety Rest Areas	
1620.06 Inertial Barrier Systems (Sand Barrels)	1620-4
1620.05 Older Systems	
1620.04 Transportable Attenuators (Truck-Mounted and Trailer-Mounted)	
1620.03 Selection Considerations	
1620.02 Design Criteria	
1620.01 General	

List of Exhibits

Exhibit 110-1 Design Documentation Sequence for a Typical Design-Build Project	110-3
Exhibit 210-1 Types of Public Hearings	210-27
Exhibit 210-2 Public Hearing Formats	210-28
Exhibit 210-3 Prehearing Packet Checklist	210-29
Exhibit 210-4 Sequence for Corridor, Design, and Environmental Hearings	210-30
Exhibit 210-5 Sequence for Limited Access Hearing	210-31
Exhibit 210-6 Hearing Summary Approvals	210-32
Exhibit 300-1 Design Documentation Package	300-12
Exhibit 300-2 Approval Authorities	300-13
Exhibit 300-3 Approvals	300-14
Exhibit 300-4 Local Agency and Development Services Approving Authority	300-17
Exhibit 300-5 Design to Construction Transition Project Turnover Checklist Example	300-18
Exhibit 301-1 General Input Form with Listed Performance Objectives	301-10
Exhibit 301-2 Design Option Worksheet Showing Example of Life Cycle Cost Assessment	301-12
Exhibit 301-3 Excerpts from Olympic Region Review Checklist	301-17
Exhibit 305-1 WSDOT Project Management Process	305-2
Exhibit 305-2 Minimum Project Risk Management Process based on project size	
Exhibit 310-1 Job Plan for VE Studies	310-7
Exhibit 310-2 VE Analysis Team Tools	310-8
Exhibit 310-3 Value Engineering Job Plan	310-9
Exhibit 400-1 Interagency Agreement	400-5
Exhibit 400-2 Report of Survey Mark Example	400-7
Exhibit 410-1 Monument Documentation Summary	410-5
Exhibit 410-2 DNR Permit Application	410-6
Exhibit 410-3 DNR Completion Report Form	410-7
Exhibit 410-4 Land Corner Record	410-8
Exhibit 510-1 Appraisal and Acquisition	510-7
Exhibit 520-1 Access Control Vocabulary	520-7
Exhibit 530-1 Full Access Control Limits: Interchange	530-21
Exhibit 530-2 Full Access Control Limits: Interchange	530-22
Exhibit 530-3 Full Access Control Limits: Interchange with Roundabouts	530-23
Exhibit 530-4 Full Access Control Limits: Ramp Terminal with Transition Taper	530-24
Exhibit 530-5 Full Access Control Limits: Single Point Urban Interchange	530-25
Exhibit 530-6 Full Access Control Limits: Diverging Diamond Interchange	530-26
Exhibit 530-7 Partial Access Control Limits: At-Grade Intersections	530-27
Exhibit 530-8 Partial Access Control Limits: Roundabout Intersections	530-28
Exhibit 530-9 Modified Access Control Limits: Roundabout Intersections	530-29
Exhibit 530-10 Modified Access Control Limits: Intersections	530-30
Exhibit 540-1 Managed Access Highway Class Description	540-8
Exhibit 540-2 Minimum Corner Clearance: Distance From Access Connection to Public Road or Stree	t 540-10

Exhibit 550-1 Non-Access Feasibility Study Process	550-5
Exhibit 550-2 Access Revision Report Process	550-11
Exhibit 550-3 Access Revision Documentation and Review/Approval Levels	550-17
Exhibit 610-1 Materials Source Development	610-18
Exhibit 620-1 Estimating: Miscellaneous Tables	
Exhibit 620-2 Estimating: Hot Mix Asphalt Pavement and Asphalt Distribution Tables	620-3
Exhibit 620-3 Estimating: Bituminous Surface Treatment	620-4
Exhibit 620-4 Estimating: Base and Surfacing Typical Section Formulae and Example	620-6
Exhibit 620-5 Estimating: Base and Surfacing Quantities	620-7
Exhibit 620-6 Estimating: Base and Surfacing Quantities	620-8
Exhibit 620-7 Estimating: Base and Surfacing Quantities	620-9
Exhibit 620-8 Estimating: Base and Surfacing Quantities	620-10
Exhibit 620-9 Estimating: Base and Surfacing Quantities	620-11
Exhibit 620-10 Estimating: Base and Surfacing Quantities	620-12
Exhibit 620-11 Estimating: Base and Surfacing Quantities	620-13
Exhibit 620-12 Estimating: Base and Surfacing Quantities	620-14
Exhibit 630-1 Selection Criteria for Geotextile Class	630-4
Exhibit 630-2 Maximum Sheet Flow Lengths for Silt Fences	630-9
Exhibit 630-3 Maximum Contributing Area for Ditch and Swale Applications	630-10
Exhibit 630-4 Design Process for Drainage and Erosion Control: Geotextiles and Nonstandard Appli	cations 630-14
Exhibit 630-5 Design Process for Separation, Soil Stabilization, and Silt Fence	630-15
Exhibit 630-6 Examples of Various Geosynthetics	630-16
Exhibit 630-7 Geotextile Application Examples	630-18
Exhibit 630-8 Definition of Slope Length	630-22
Exhibit 630-9 Definition of Ditch or Swale Storage Length and Width	630-22
Exhibit 630-10 Silt Fences for Large Contributing Area	630-23
Exhibit 630-11 Silt Fence End Treatment	630-24
Exhibit 630-12 Gravel Check Dams for Silt Fences	630-25
Exhibit 700-1 Determination of the Roles and Responsibilities for Projects with Structures: Project I	Development
Phase	
Exhibit 710-1 Structure Site Data Checklist	710-7
Exhibit 710-2 Conceptual Plan Structure Site Data Checklist	710-8
Exhibit 720-1 Phased Development of Multilane Divided Highways	
Exhibit 720-2 Highway Structure Over Railroad	720-5
Exhibit 720-3 Bridge Vertical Clearances	
Exhibit 720-4 Embankment Slope at Bridge Ends	720-11
Exhibit 730-1 Summary of Mechanically Stabilized Earth Gravity Wall/Slope Options Available	
Exhibit 730-2 Summary of Prefabricated Modular Gravity Wall Options Available	730-17
Exhibit 730-3 Summary of Rigid Gravity and Semigravity Wall Options Available	730-18
Exhibit 730-4 Summary of Nongravity Wall Options Available	
Exhibit 730-5 Summary of Anchored Wall Options Available	730-19
Exhibit 730-6 Other Wall/Slope Options Available	730-20

Exhibit 730-7 Typical Mechanically Stabilized Earth Gravity Walls	730-21
Exhibit 730-8 Typical Prefabricated Modular Gravity Walls	730-22
Exhibit 730-9 Typical Rigid Gravity, Semigravity Cantilever, Nongravity Cantilever, and Anchored Walls	730-23
Exhibit 730-10 Typical Rockery and Reinforced Slopes	730-24
Exhibit 730-11 MSE Wall Drainage Detail	730-25
Exhibit 730-12 Retaining Walls with Traffic Barriers	730-26
Exhibit 730-13 Retaining Wall Design Process	730-27
Exhibit 730-14 Retaining Wall Design Process: Proprietary	730-28
Exhibit 740-1 Standard Noise Wall Types	740-3
Exhibit 800-1 Specialty Group Coordination: Pre-Design	800-6
Exhibit 800-2 Specialty Group Coordination: Contractor Supplied Design**	800-7
Exhibit 800-3 Specialty Group Coordination: Design	800-8
Exhibit 800-4 Hydraulic Design Process	800-9
Exhibit 800-5 Preliminary Hydraulic Design: Stream Design Process	800-10
Exhibit 1010-1 Minimum Work Zone Clear Zone Distance	1010-18
Exhibit 1010-2 Transportation Management Plan Components Checklist	1010-31
Exhibit 1020-1 Reflective Sheeting Requirements for Overhead Signs	1020-5
Exhibit 1020-2 Timber Posts	1020-7
Exhibit 1020-3 Wide Flange Steel Posts	1020-9
Exhibit 1020-4 Square Steel Posts	1020-11
Exhibit 1030-1 Pavement Marking Material Guide – Consult Region Striping Policy	1030-10
Exhibit 1030-2 Guidepost Placement	1030-11
Exhibit 1040-1 Interchange Lighting Responsibility – Basic Interchange	1040-3
Exhibit 1040-2 Interchange Lighting Responsibility – Complex Interchange	1040-3
Exhibit 1040-3 Ramp to Street Transition Lighting Responsibility	1040-4
Exhibit 1040-4 Local Street Lighting Responsibility – No Interchange	1040-4
Exhibit 1040-5 Basic Intersection Lighting Design Area	1040-5
Exhibit 1040-6 Basic Intersection with Raised Channelization Lighting Design Area	1040-6
Exhibit 1040-7 Basic Intersection with Traffic Island	1040-6
Exhibit 1040-8 Roundabout Core Lighting Design Area	1040-7
Exhibit 1040-9 Roundabout Approach Lighting Design Areas – Reverse Curves	1040-8
Exhibit 1040-10 Roundabout Approach Lighting Design Areas – Reverse Curves	1040-9
Exhibit 1040-11 Roundabout Approach Lighting Design Area – Exit Only Approach	1040-9
Exhibit 1040-12 Midblock Crossing Lighting Design Areas	1040-10
Exhibit 1040-13 Railroad Crossing Lighting Design Areas	1040-11
Exhibit 1040-14 Weigh Station Lighting Design Areas	1040-12
Exhibit 1040-15 Pullout Transit Stop Lighting Design Areas	1040-14
Exhibit 1040-16 In-Lane Transit Stop Lighting Design Areas	1040-14
Exhibit 1040-17 Rural Transit Stop Lighting Design Areas	1040-15
Exhibit 1040-18 Single Lane Off-Ramp Lighting Design Area	1040-16
Exhibit 1040-19 Multi-Lane Off-Ramp Lighting Design Area	1040-16

Exhibit 1040-20 Off Down Lighting Design Area Adjustment Limit	1040 17
Exhibit 1040-20 Off-Ramp Lighting Design Area Adjustment Limit Exhibit 1040-21 Single Lane On-Ramp Merge Lighting Design Area	
Exhibit 1040-22 Add Lane On-Ramp Lighting Design Area	
Exhibit 1040-23 Multi-Lane On-Ramp Lighting Design Area	
Exhibit 1040-24 Metered On-Ramp Lighting Design Area	
Exhibit 1040-25 Loop Ramp Lighting Design Area	
Exhibit 1040-26 Diverging Diamond Interchange (DDI) Lighting Design Area	
Exhibit 1040-27 Single Point Urban Interchange (SPUI) Lighting Design Area	
Exhibit 1040-28 Lane Reduction Lighting Design Area	
Exhibit 1040-29 Special Use Lane - Basic Access Zone Lighting Design Area	
Exhibit 1040-30 Special Use Lane – Start Weaving Access Zone Lighting Design Area	
Exhibit 1040-30 Special Use Lane – End Weaving Access Zone Lighting Design Area	
Exhibit 1040-32 Safety Rest Area Lighting Design Areas	
Exhibit 1040-33 Chain-Up and Chain-Off Area Lighting Design Area	
Exhibit 1040-34 Freeway Weigh Station Lighting Design Areas	
Exhibit 1040-35 Lane Split Lighting Design Area	
Exhibit 1040-36 Bridge Inspection Lighting and Receptacle Circuit Layout	
Exhibit 1040-37 Bridge Inspection Lighting and Receptacle Layout	
Exhibit 1040-38 Bridge Inspection Lighting Circuit Control Layouts Exhibit 1040-39 Barrier Constrained Roadway Lighting Design Areas	
Exhibit 1040-40 Two-Way One Lane Signal Control Lighting Design Areas Exhibit 1040-41 Major Parking Lot Lighting Design Area	
Exhibit 1040-41 Major Parking Lot Lighting Design Area	
Exhibit 1040-43 Light Level Requirements for Conventional Roadways	
Exhibit 1040-44 Light Level Requirements for Freeways and Expressways Exhibit 1040-45 Light Level Requirements for Special Locations	
Exhibit 1040-46 Typical Temporary High Mast Light Arrangements	
Exhibit 1040-47 Basic Lighting Circuit Divisions	
Exhibit 1050-1 Systems Engineering Process "V" Diagram	
Exhibit 1050-2 ITS Systems Engineering Analysis Worksheet Exhibit 1050-3 FHWA Washington Division – ITS Project Contracting Guidance	
Exhibit 1000-3 FRWA Washington Division – It's Project Contracting Guidance	
Exhibit 1102-1 Factors for Determining Initial Land Use Context Exhibit 1103-1 WSDOT Design Controls	
Exhibit 1103-2 Initial Modal Accommodation Level	
Exhibit 1103-3 Example Characteristics Related to Modal Accommodation	
Exhibit 1103-4 Target Speed Based on Land Use Context and Roadway Type Exhibit 1103-5 Speed Management Strategies	
Exhibit 1105-1 Required Design Elements	
Exhibit 1105-1 Required Design Elements	
Exhibit 1106-1 Dimensioning Guidance Variations	

Exhibit 1130-1 Preliminary Assessment Land Use Proposal	1130-11
Exhibit 1130-2 Further Assessing land use Proposal	1130-12
Exhibit 1130-3 Assessment questions for State Highway connections	1130-13
Exhibit 1130-4 Common Plans and Reports	1130-23
Exhibit 1210-1 Maximum Angle without Curve	1210-3
Exhibit 1210-2 Alignment Examples	1210-8
Exhibit 1210-3 Alignment Examples	
Exhibit 1210-4 Alignment Examples	1210-10
Exhibit 1220-1 Minimum Length of Sag Vertical Curves	1220-3
Exhibit 1220-2 Grade Length	1220-4
Exhibit 1220-3 Maximum Grades	1220-5
Exhibit 1220-4 Coordination of Horizontal and Vertical Alignments	1220-7
Exhibit 1220-5 Coordination of Horizontal and Vertical Alignments	1220-8
Exhibit 1220-6 Coordination of Horizontal and Vertical Alignments	
Exhibit 1220-7 Grading at Railroad Crossings	1220-10
Exhibit 1230-1 Geometric Cross Section - Guide to Chapters	1230-2
Exhibit 1230-2 State and City Jurisdictional Responsibilities	1230-4
Exhibit 1231-1 Lane Widths for Highways	1231-2
Exhibit 1231-2 Motor Vehicle Oriented Cross Sections	
Exhibit 1231-3 Cross Sections Featuring Bicycle Facilities	1231-8
Exhibit 1231-4 Cross Sections Featuring Pedestrian Facilities	1231-10
Exhibit 1231-5 Cross Sections Featuring Transit Facilities	1231-12
Exhibit 1231-6 Complete Street Cross Sections	1231-14
Exhibit 1232-1 Geometric Cross Section - Interstate (4 lanes shown, can vary)	1232-2
Exhibit 1232-2 Geometric Cross Section – Non-Interstate (4 lanes shown, can vary)	1232-3
Exhibit 1232-3 Median Section without Median Barrier	1232-3
Exhibit 1238-1 Zones within the Streetside	
Exhibit 1239-1 Shoulder Widths for Highways	1239-2
Exhibit 1239-2 Shoulder Function & Modal Accommodation Width Considerations	1239-3
Exhibit 1239-3 Shoulder Grading Details	1239-4
Exhibit 1239-4 Shoulder Widening Details	1239-5
Exhibit 1239-5 Drainage Ditch Details	1239-8
Exhibit 1239-6 Bridge End Slopes	1239-9
Exhibit 1239-7 Bridge End Slope Details	1239-10
Exhibit 1239-8 Roadway Sections in Rock Cuts: Design A	1239-13
Exhibit 1239-9 Roadway Sections in Rock Cuts: Design B	1239-15
Exhibit 1239-10 Stepped Slope Design	1239-16
Exhibit 1239-11 Minimum Lateral Clearance to Barrier and Curb [7]	1239-18
Exhibit 1239-12 Chain-Up/Chain-Off Shoulders	1239-20
Exhibit 1239-13 Median Functions and Guidance: High and Intermediate Speeds	1239-23
Exhibit 1239-14 Median Functions and Guidance: Low and Intermediate Speeds	1239-24

Exhibit 1239-15 Divided Highway Median Sections	1239-25
Exhibit 1239-16 Divided Highway Median Sections	1239-26
Exhibit 1239-17 Divided Highway Median Sections	1239-27
Exhibit 1240-1 Traveled Way Width for Two-Lane Two-Way Turning Roadways	1240-4
Exhibit 1240-2 Traveled Way Width for Two-Lane Two-Way Turning Roadways: Based on the Delta	Angle. 1240-5
Exhibit 1240-3 Traveled Way Width for Two-Lane One-Way Turning Roadway	1240-6
Exhibit 1240-4 Traveled Way Width for Two-Lane One-Way Turning Roadways: Based on the Delta A	Angle . 1240-7
Exhibit 1240-5 Traveled Way Width for One-Lane Turning Roadways	1240-8
Exhibit 1240-6 Traveled Way Width for One-Lane Turning Roadways: Based on the Delta Angle, Rad	ius on
Outside Edge of Traveled Way	1240-9
Exhibit 1240-7 Traveled Way Width for One-Lane Turning Roadways: Based on the Delta Angle, Rad	
Edge of Traveled Way	
Exhibit 1250-1 Minimum Radius for Normal Crown Section	
Exhibit 1250-2 Minimum Radius for Existing Curves	
Exhibit 1250-3 Side Friction Factor	
Exhibit 1250-4 Superelevation Rates (10% Max)	
Exhibit 1250-5 Superelevation Rates (8% Max)	
Exhibit 1250-6 Superelevation Rates (6% Max)	1250-8
Exhibit 1250-7 Superelevation Rates for Low-Speed Streets in Urban Areas Where Speed is Relative	•
Variable or at Intersections	
Exhibit 1250-8 Superelevation Transitions for Highway Curves	
Exhibit 1250-9 Superelevation Transitions for Highway Curves	
Exhibit 1250-10 Superelevation Transitions for Highway Curves	
Exhibit 1250-11 Superelevation Transitions for Highway Curves	
Exhibit 1250-12 Superelevation Transitions for Highway Curves	
Exhibit 1250-13 Superelevation Transitions for Ramp Curves	
Exhibit 1250-14 Superelevation Transitions for Ramp Curves	1250-17
Exhibit 1260-1 Design Stopping Sight Distance	
Exhibit 1260-2 Design Stopping Sight Distance on Grades	1260-3
Exhibit 1260-3 Stopping Sight Distance on Grades	
Exhibit 1260-4 Stopping Sight Distance: Crest Vertical Curves	1260-4
Exhibit 1260-5 Sight Distance: Crest Vertical Curve	1260-5
Exhibit 1260-6 Stopping Sight Distance for Sag Vertical Curves	1260-6
Exhibit 1260-7 Sight Distance: Sag Vertical Curve	1260-7
Exhibit 1260-8 Horizontal Stopping Sight Distance	1260-8
Exhibit 1260-9 Sight Distance: Horizontal Curves	1260-9
Exhibit 1260-10 Existing Stopping Sight Distance	1260-11
Exhibit 1260-11 Passing Sight Distance	1260-11
Exhibit 1260-12 Passing Sight Distance: Crest Vertical Curve Calculations	1260-12
Exhibit 1260-13 Passing Sight Distance: Crest Vertical Curves	1260-13
Exhibit 1260-14 Decision Sight Distance	1260-14
Exhibit 1270-1 Climbing Lane Example	1270-2

Exhibit 1270-2 Speed Reduction Warrant: Performance for Trucks	1270-3
Exhibit 1270-3 Speed Reduction Warrant Example	
Exhibit 1270-4 Auxiliary Climbing Lane	
Exhibit 1270-5 Passing Lane Example	
Exhibit 1270-6 Length of Passing Lanes	
Exhibit 1270-7 Passing Lane Configurations	
Exhibit 1270-8 Buffer Between Opposing Passing Lanes	
Exhibit 1270-9 Auxiliary Passing Lane	
Exhibit 1270-10 Emergency Escape Ramp Example	
Exhibit 1270-11 Emergency Escape Ramp Length	
Exhibit 1270-12 Rolling Resistance (R)	
Exhibit 1270-13 Typical Emergency Escape Ramp	
Exhibit 1300-1 Intersection Design Considerations	
Exhibit 1300-2 Median U-Turn Intersection Example	
Exhibit 1300-3 Restricted Crossing U-Turn Intersection Example with Stop-control	
Exhibit 1300-4 Displaced Left Turn Intersection Example	
Exhibit 1310-1 Lane Alignment Taper Rate	
Exhibit 1310-2 Ramp Terminal Intersection Details	
Exhibit 1310-3 Median at Two-Way Ramp Terminal	
Exhibit 1310-4 Intersection Balance Example	
Exhibit 1310-5 Diamond Interchange with Advance Storage	1310-10
Exhibit 1310-6 Initial Ranges for Right-Turn Corner (Simple Curve-Taper)	1310-12
Exhibit 1310-7 Left-Turn Storage Guidelines: Two-Lane, Unsignalized	
Exhibit 1310-8 Left-Turn Storage Guidelines: Four-Lane, Unsignalized	1310-15
Exhibit 1310-9 Left-Turn Storage Length: Two-Lane, Unsignalized (40mph)	1310-16
Exhibit 1310-10 Left-Turn Storage Length: Two-Lane, Unsignalized (50 mph)	
Exhibit 1310-11 Left-Turn Storage Length: Two-Lane, Unsignalized (60 mph)	1310-18
Exhibit 1310-12 Left-Turn Storage with Trucks (ft)	1310-19
Exhibit 1310-13 Median Channelization: Widening	1310-20
Exhibit 1310-14 Median Channelization: Median Width 11 ft or More	1310-21
Exhibit 1310-15 Median Channelization: Median Width 23 ft to 26 ft	1310-22
Exhibit 1310-16 Median Channelization: Median Width of More Than 26 ft	1310-23
Exhibit 1310-17 Median Channelization: Minimum Protected Storage	1310-24
Exhibit 1310-18 Median Channelization: Two-Way Left-Turn Lane	1310-25
Exhibit 1310-19 Right-Turn Lane Guidelines	1310-27
Exhibit 1310-20 Right-Turn Pocket and Right-Turn Taper	
Exhibit 1310-21 Right-Turn Lane	1310-29
Exhibit 1310-22 Acceleration Lane	
Exhibit 1310-23 Traffic Island Designs	
Exhibit 1310-24 Traffic Island Designs: Compound Curve	
Exhibit 1310-25 Traffic Island Designs	1310-34

Exhibit 1310-26 U-Turn Spacing	1310-35
Exhibit 1310-27 U-Turn Roadway	
Exhibit 1310-28 U-Turn Median Openings	
Exhibit 1310-29 Sight Distance at Intersections	
Exhibit 1310-30 Sight Distance at Intersections	
Exhibit 1320-1 Suggested Initial Design Ranges	
Exhibit 1320-2 Radii-Speed Relationship on Approach Legs and R Value Relationships	
Exhibit 1320-3 Intersection Sight Distance	
Exhibit 1330-1 Responsibility for Facilities	
Exhibit 1330-2 Example Continuous Green "T" Intersection Layout	
Exhibit 1330-3 Left-Turn Lane Configuration Examples	
Exhibit 1330-4 Recommended Features for Intersections near Rail Crossings	
Exhibit 1330-5 Standard Intersection Movements, Head Numbers, and Phase Operation	
Exhibit 1330-6 Detector Numbering Examples	
Exhibit 1330-7 Signal Display Placements – Key to Diagrams	
Exhibit 1330-8 Signal Displays for Single Lane Approach	
Exhibit 1330-9 Signal Display Mounting Locations for Multi-Lane Approaches	
Exhibit 1330-10 Signal Displays for Dedicated Left Turn Lanes	
Exhibit 1330-11 Signal Displays for Shared Through-Left Lanes – Multiple Through Lanes	
Exhibit 1330-12 Signal Displays for Shared Through-Right Lanes	
Exhibit 1330-13 Signal Displays for Dedicated Right Turn Lanes	
Exhibit 1330-14 Signal Displays for Multiple Turn Lanes	
Exhibit 1330-15 Example Signal Display Placement for Skew Intersection	
Exhibit 1330-16 Signal Display Maximum Heights	
Exhibit 1330-17 Pedestrian Display Placement Requirements	1330-25
Exhibit 1330-18 PPB Placement Requirements	
Exhibit 1330-19 PPB Placement on Vertical Shaft Poles	1330-26
Exhibit 1330-20 PPB Placement on Large Signal Standards	1330-27
Exhibit 1330-21 Signal Display Surface Areas	1330-32
Exhibit 1330-22 Timber Strain Pole Classes	1330-33
Exhibit 1330-23 Fixed Vehicle Detection Placement	1330-36
Exhibit 1330-24 Decision Zone Detection Placement	1330-37
Exhibit 1330-25 Video Detector Placement	1330-39
Exhibit 1330-26 Signal Display Layout for Rail Crossings	1330-43
Exhibit 1330-27 Conduit and Conductor Sizes	1330-47
Exhibit 1330-28 Phase Diagrams: Four-Way Intersections	1330-55
Exhibit 1330-29 Phase Diagrams: Three-Way Intersections	1330-56
Exhibit 1330-30 Phasing at Railroad Crossings	1330-57
Exhibit 1340-1 Driveway Design Template SU-30 and Smaller	1340-4
Exhibit 1340-2 Driveway Design Template SU-30 and Larger	1340-5
Exhibit 1340-3 Driveway Sight Distance	1340-6

Exhibit 1350-1 Sight Distance at Railroad Crossing	1350-4
Exhibit 1350-2 Typical Pullout Lane at Railroad Crossing	1350-8
Exhibit 1360-1 Basic Interchange Patterns	1360-4
Exhibit 1360-2 Interchange Spacing	1360-5
Exhibit 1360-3 Minimum Ramp Connection Spacing	1360-6
Exhibit 1360-4 Ramp Design Speed	1360-7
Exhibit 1360-5 Maximum Ramp Grade	1360-7
Exhibit 1360-6 Ramp Widths	1360-8
Exhibit 1360-7 Lane Balance	1360-10
Exhibit 1360-8 Lane Balance	1360-11
Exhibit 1360-9 Main Line Lane Reduction Alternatives	1360-12
Exhibit 1360-10 Acceleration Lane Length	1360-14
Exhibit 1360-11 Deceleration Lane Length	1360-16
Exhibit 1360-12 Single-Lane Tapered Off Ramp EXIT ONLY	1360-17
Exhibit 1360-13 Gore Area Characteristics	1360-19
Exhibit 1360-14 Gore Area Characteristics	1360-20
Exhibit 1360-15 Length of Weaving Sections	1360-22
Exhibit 1360-16 On-Connection: Single-Lane, Tapered	1360-25
Exhibit 1360-17 On-Connection: Single-Lane, Parallel	1360-26
Exhibit 1360-18 On-Connection: Two-Lane, Parallel	1360-27
Exhibit 1360-19 On-Connection: Two-Lane, Tapered	
Exhibit 1360-20 Off-Connection: Single-Lane, Tapered	1360-29
Exhibit 1360-21 Off-Connection: Single-Lane, Parallel	1360-30
Exhibit 1360-22 Off-Connection: Single-Lane, One-Lane Reduction	1360-31
Exhibit 1360-23 Single-Lane Tapered Off Ramp EXIT ONLY	1360-32
Exhibit 1360-24 Off-Connection: Two-Lane, Tapered	
Exhibit 1360-25 Off-Connection: Two-Lane, Parallel	1360-34
Exhibit 1360-26 Two-Lane Tapered Off-Ramp EXIT ONLY	1360-35
Exhibit 1360-27 Collector-Distributor: Outer Separations	1360-36
Exhibit 1360-28 Collector Distributor: Off-Connections	1360-37
Exhibit 1360-29 Collector Distributor: On-Connections	1360-38
Exhibit 1360-30 Loop Ramp Connections	1360-39
Exhibit 1360-31 Temporary Ramps	1360-40
Exhibit 1360-32 Interchange Plan	1360-41
Exhibit 1400-1 Managed Lane Types	1400-2
Exhibit 1410-1 Minimum Traveled Way Widths for Articulated Buses	1410-9
Exhibit 1410-2 Typical HOV Lane Sections	1410-13
Exhibit 1410-3 Roadway Widths for Two-Lane Ramps with an HOV Lane	1410-14
Exhibit 1410-4 Single-Lane Ramp Meter with HOV Bypass	1410-15
Exhibit 1410-5 Two-Lane Ramp Meter with HOV Bypass	
Exhibit 1410-6 Enforcement Area: One Direction Only	

Exhibit 1410-7 Enforcement Area: Median	
Exhibit 1430-1 Part Time Shoulder Layout ^[1]	1430-4
Exhibit 1430-2 Considerations for Part-Time Shoulder Utilization ^[1]	1430-5
Exhibit 1440-1 Metered Shoulder Layout ^[1]	1440-2
Exhibit 1440-2 Considerations for Metered Shoulder Utilization ^[1]	1440-2
Exhibit 1510-1 Pedestrian Circulation Paths	1510-8
Exhibit 1510-2 Relationship Between Pedestrian Circulation Paths and Pedestrian Access Routes	1510-9
Exhibit 1510-3 Obstructed Pedestrian Access Route	1510-10
Exhibit 1510-4 Beveling Options	1510-12
Exhibit 1510-5 Surface Discontinuities (Noncompliant)	1510-12
Exhibit 1510-6 Sidewalks With Buffers	1510-14
Exhibit 1510-7 Typical Sidewalk Designs	1510-15
Exhibit 1510-8 Typical Driveways	1510-16
Exhibit 1510-9 Perpendicular Curb Ramp	1510-17
Exhibit 1510-10 Perpendicular Curb Ramp Common Elements	1510-18
Exhibit 1510-11 Parallel Curb Ramp	1510-19
Exhibit 1510-12 Parallel Curb Ramp Common Elements	1510-19
Exhibit 1510-13 Combination Curb Ramps	1510-20
Exhibit 1510-14 Typical Curb Ramp Drainage	1510-23
Exhibit 1510-15 Unmarked Crosswalks	1510-24
Exhibit 1510-16 Marked Pedestrian Crossing	1510-25
Exhibit 1510-17 Midblock Pedestrian Crossing	1510-27
Exhibit 1510-18 Obstructed Line of Sight at Intersection	1510-28
Exhibit 1510-19 Improved Line of Sight at Intersection	1510-29
Exhibit 1510-20 Curb Extension Examples	1510-29
Exhibit 1510-21 Raised Islands With Curb Ramps and Pedestrian Cut-Throughs	1510-31
Exhibit 1510-22 Clear Space for Pedestrian Pushbutton	1510-33
Exhibit 1510-23 Perpendicular Ramp Concurrent Clear Space Examples	1510-34
Exhibit 1510-24 Parallel Ramp Concurrent Clear Space Examples	1510-35
Exhibit 1510-25 Reach Range for Pedestrian Pushbuttons	1510-37
Exhibit 1510-26 Pedestrian Railroad Crossings	1510-38
Exhibit 1510-27 Pedestrian Railroad Warning Device	1510-39
Exhibit 1510-28 Pedestrian Bridges	1510-40
Exhibit 1510-29 Pedestrian Tunnel	1510-41
Exhibit 1510-30 Access Ramp With Accessible Handrails	1510-43
Exhibit 1510-31 Work Zones and Pedestrian Facilities	1510-46
Exhibit 1515-1 Shared-Use Path	1515-2
Exhibit 1515-2 Bicycle Design Speeds	1515-2
Exhibit 1515-3 Two-Way Shared-Use Path: Independent Alignment	1515-4
Exhibit 1515-4 Two-Way Shared-Use Path: Adjacent to Roadway (≤ 35 mph)	1515-5
Exhibit 1515-5 Two-Way Shared-Use Path: Adjacent to Roadway (> 35mph)	1515-5

Exhibit 1515-6 Two-Way Shared-Use Path: Attached to Roadway (> 35mph)	1515-6
Exhibit 1515-7 Shared-Use Path Side Slopes and Railing	1515-7
Exhibit 1515-8 Shared-Use Path Landing Profile	
Exhibit 1515-9 Shared-Use Path Landing and Rest Area	
Exhibit 1515-10 Typical Redesign of a Diagonal Midblock Crossing	1515-11
Exhibit 1515-11 Adjacent Shared-Use Path Intersection	1515-12
Exhibit 1515-12 Roadway Crossing Refuge Area	1515-14
Exhibit 1515-13 Shared-Use Path Bridge and Approach Walls	1515-15
Exhibit 1515-14 Bridge and Pedestrian Rail	1515-16
Exhibit 1515-15 Shared-Use Path in Limited Access Corridor	1515-17
Exhibit 1515-16 Stopping Sight Distance for Downgrades	1515-19
Exhibit 1515-17 Stopping Sight Distance for Upgrades	1515-20
Exhibit 1515-18 Minimum Lengths for Crest Vertical Curves	1515-21
Exhibit 1515-19 Lateral Clearance for Horizontal Curves	1515-22
Exhibit 1520-1 Raised and Curb-Separated Bike Facility	1520-3
Exhibit 1520-2 Separated Buffered Bike Lane	
Exhibit 1520-3 Buffered Bike Lane	
Exhibit 1520-4 Bike Lane	1520-6
Exhibit 1520-5 Shared Lane Markings	1520-7
Exhibit 1520-6 Bicycle Facility Selection Chart – Interested, but Concerned Cyclists	1520-10
Exhibit 1520-7 Bicycle Facility Selection Chart – Confident Cyclists	1520-11
Exhibit 1520-8 Approach Through Lanes	1520-14
Exhibit 1520-9 Bike Box and Intersection Crossing Markings	1520-15
Exhibit 1520-10 Two-Stage Left-Turn Queue Box	1520-16
Exhibit 1520-11 Median Refuge Island for Cyclists	1520-17
Exhibit 1520-12 Length of Solid Green Pavement Marking Preceding Conflict Area	1520-21
Exhibit 1520-13 At-Grade Railroad Crossings	1520-22
Exhibit 1520-14 Barrier Adjacent to Bicycle Facilities	1520-23
Exhibit 1520-15 Bike Facility Crossing On- and Off-Ramps	1520-25
Exhibit 1520-16 Bicycle Facility Crossing Single-Lane On-Ramp	1520-26
Exhibit 1520-17 Bicycle Facility Crossing Option for Dual Lane On-Ramp Configuration	1520-27
Exhibit 1520-18 Bicycle Facility Crossing Option for Dual Off-Ramp	1520-28
Exhibit 1600-1 Clear Zone Plan View	1600-2
Exhibit 1600-2 City and State Responsibilities and Jurisdictions	
Exhibit 1600-3 Design Clear Zone Distance Table	
Exhibit 1600-4 Recovery Area	
Exhibit 1600-5 Design Clear Zone Examples for Ditch Sections	1600-7
Exhibit 1600-6 Guidelines for Embankment Barrier	
Exhibit 1600-7 Mailbox Location and Turnout Design	
Exhibit 1600-8 Glare Screens	
Exhibit 1610-1 Concrete Barrier Placement Guidance: Assessing Impacts to Wildlife	1610-3

Exhibit 1610-2 Traffic Barrier Locations on Slopes	1610-6
Exhibit 1610-3 Longitudinal Barrier Deflection	1610-9
Exhibit 1610-4 Barrier Standard Run Minimum/Maximum Lengths (New Exhibit)	1610-10
Exhibit 1610-5 Longitudinal Barrier Flare Rates	1610-11
Exhibit 1610-6 Barrier Length of Need on Tangent Sections	1610-13
Exhibit 1610-7 Barrier Length of Need	1610-14
Exhibit 1610-8 Barrier Length of Need on Curves	1610-15
Exhibit 1610-9 Beam Guardrail Trailing End Placement for Divided Highways	1610-15
Exhibit 1610-10 Beam Guardrail Post Installation	1610-18
Exhibit 1610-11 Guardrail Connections	1610-24
Exhibit 1610-12 Transitions and Connections	1610-24
Exhibit 1610-13 Median Cable Barrier Placement	1610-28
Exhibit 1610-14 Roadside Cable Barrier Placement	1610-29
Exhibit 1610-15 Cable Barrier Placement: Overlap on Divided Highways	1610-31
Exhibit 1610-16 Cable Barrier Placement: Cable Barrier Termination/Overlap with Beam Guardrai	l 1610-32
Exhibit 1610-17 Concrete Barrier Shapes	1610-33
Exhibit 1610-18 Type 7 Bridge Rail Upgrade Criteria	1610-38
Exhibit 1610-19 Thrie Beam Rail Retrofit Criteria	1610-39
Exhibit 1620-1 Impact Attenuator Distance Beyond Length of Need	1620-2
Exhibit 1710-1 WSDOT Safety Rest Area	1710-1
Exhibit 1710-2 WSDOT's SRA Project and Programming Roles	1710-5
Exhibit 1710-3 Additional Safety Rest Area Resources	1710-6
Exhibit 1710-4 Roadside Facilities Level of Development	1710-8
Exhibit 1710-5 Typical Truck Storage	1710-10
Exhibit 1710-6 WSDOT Safety Rest Area Building – Adaptive Reuse Historic Preservation	1710-12
Exhibit 1720-1 Truck Weigh Site: Multilane Highways	1720-6
Exhibit 1720-2 Truck Weigh Site: Two-Lane Highways	1720-7
Exhibit 1720-3 Vehicle Inspection Installation	1720-8
Exhibit 1720-4 Minor Portable Scale Site	1720-9
Exhibit 1720-5 Major Portable Scale Site	1720-10
Exhibit 1720-6 Small Shoulder Site	1720-11
Exhibit 1720-7 Large Shoulder Site	1720-11
Exhibit 1720-8 MOU Related to Vehicle Weighing and Equipment: Inspections Facilities (23 pages) 1720-12
Exhibit 1730-1 Bus Zone Dimensions	1730-5
Exhibit 1730-2 Pullout for Bus Stop along a Road	1730-6
Exhibit 1730-3 Bus Stop Pullouts: Arterial Streets	1730-7
Exhibit 1730-4 Bus Zone and Pullout after Right Turn	1730-8
Exhibit 1730-5 Bus Stop Accessibility Features	1730-10
Exhibit 1730-6 Bus Berth Design	
Exhibit 1730-7 Design Alternative for a Combination of Bus Berths at a Platform	1730-21