Contents

Division 1 – General Information

Chapter 100  Manual Description
100.01  Purpose
100.02  Presentation and Revisions
100.03  Practical Solutions
100.04  Manual Applications
100.05  Manual Use
100.06  Manual Organization

Chapter 110  Design-Build Projects
110.01  General
110.02  Terminology and Language Used
110.03  Design and Documentation Responsibility
110.04  References

Division 2 – Hearings, Environmental, and Permits

Chapter 210  Public Involvement and Hearings
210.01  General
210.02  References
210.03  Definitions
210.04  Public Involvement
210.05  Public Hearings
210.06  Environmental Hearing
210.07  Corridor Hearing
210.08  Design Hearing
210.09  Limited Access Hearing
210.10  Combined Hearings
210.11  Administrative Appeal Hearing
210.12  Follow-Up Hearing
210.13  Documentation

Chapter 225  Environmental Coordination
225.01  General
225.02  References
225.03  Determining the Environmental Documentation
225.04  Identifying the Project Classification
225.05  Environmental Commitment File
225.06  Environmental Permits and Approvals
225.07  Documentation

Division 3 – Project Documentation

Chapter 300  Design Documentation, Approval, and Process Review
300.01  General
300.02  WSDOT Project Delivery
300.03  Design Documentation and Records Retention Policy
300.04  Project Design Approvals
300.05  FHWA Oversight and Approvals
300.06  Project Documents and Approvals
300.07  Process Review
300.08  References
Chapter 301  Design and Maintenance Coordination
301.01  Introduction
301.02  Communication
301.03  Incorporating Maintenance Considerations in Design
301.04  Documentation
301.05  References

Chapter 305  Project Management
305.01  Introduction
305.02  Project Management
305.03  Project Management Tools
305.04  Cost and Risk Management
305.05  References

Chapter 310  Value Engineering
310.01  General
310.02  Statewide VE Program
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
320.01  General
320.02  Design Year and Forecasting Considerations
320.03  Traffic Analysis Software
320.04  Travel Demand Forecasting
320.05  Traffic Impact Analysis (TIA)
320.06  TIA Scope
320.07  TIA Methods and Assumptions Document
320.08  TIA Methodologies
320.09  TIA Mitigation Measures
320.10  TIA Report
320.11  References

Chapter 321  Sustainable Safety Analysis
321.01  Sustainable Safety Related Policy
321.02  HQ Safety Technical Group
321.03  Project Related Safety Analysis
321.04  Stand Alone Safety Analysis
321.05  Reports and Documentation
321.06  References

Division 4 – Surveying
Chapter 400  Surveying and Mapping
400.01  General
400.02  References
400.03  Procedures
400.04  Datums
400.05  Global Positioning System
400.06  WSDOT Survey Monument Database
400.07  Geographic Information System
400.08  Photogrammetric Surveys
400.09  Documentation
## Contents

### Chapter 410 Monumentation
- 410.01 General
- 410.02 References
- 410.03 Control Monuments
- 410.04 Alignment Monuments
- 410.05 Property Corners
- 410.06 Other Monuments
- 410.07 Filing Requirements
- 410.08 Documentation

### Division 5 – Right of Way and Access Control

#### Chapter 510 Right of Way Considerations
- 510.01 General
- 510.02 Special Features
- 510.03 Easements and Permits
- 510.04 Programming for Funds
- 510.05 Appraisal and Acquisition
- 510.06 Transactions
- 510.07 Documentation
- 510.08 References

#### Chapter 520 Access Control
- 520.01 General
- 520.02 References
- 520.03 Definitions
- 520.04 Vocabulary

#### Chapter 530 Limited Access Control
- 530.01 General
- 530.02 Achieving Limited Access
- 530.03 Full Control (Most Restrictive)
- 530.04 Partial Control
- 530.05 Modified Control (Least Restrictive)
- 530.06 Access Approaches
- 530.07 Frontage Roads
- 530.08 Turnbacks
- 530.09 Adjacent Railroads
- 530.10 Access Breaks and Inner Corridor Access
- 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
- 540.06 Access Connection Permit
- 540.07 Permitting and Design Documentation
- 540.08 Other Considerations
- 540.09 Preconstruction Conference
- 540.10 Adjudicative Proceedings
- 540.11 Documentation
- 540.12 References
Chapter 550 Freeway Access Revision
550.01 Overview
550.02 Freeway Access Policy
550.03 Access Revision Analysis Process
550.04 Support Teams
550.05 Non-Access Feasibility Study
550.06 Access Revision Report Process
550.07 Documentation
550.08 References

Chapter 560 Fencing
560.01 General
560.02 Design Criteria
560.03 Fencing Types
560.04 Gates
560.05 Procedure
560.06 Documentation
560.07 References

Division 6 – Soils and Paving
Chapter 610 Investigation of Soils, Rock, and Surfacing Materials
610.01 General
610.02 References
610.03 Materials Sources
610.04 Geotechnical Investigation, Design, and Reporting
610.05 Use of Geotechnical Consultants
610.06 Geotechnical Work by Others
610.07 Surfacing Report
610.08 Documentation

Chapter 620 Design of Pavement Structure
620.01 General
620.02 Estimating Tables

Chapter 630 Geosynthetics
630.01 General
630.02 References
630.03 Geosynthetic Types and Characteristics
630.04 Geosynthetic Function Definitions and Applications
630.05 Design Approach for Geosynthetics
630.06 Design Responsibility
630.07 Documentation

Division 7 – Structures
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)
710.04 Additional Data for Grade Separations
# Division 10 – Traffic Safety Elements

## Chapter 1010 Work Zone Safety and Mobility
- 1010.01 General
- 1010.02 Definitions
- 1010.03 Work Zone Safety and Mobility
- 1010.04 Transportation Management Plans and Significant Projects
- 1010.05 Developing TMP Strategies
- 1010.06 Work Zone Capacity Analysis
- 1010.07 Work Zone Design
- 1010.08 Temporary Traffic Control Devices
- 1010.09 Positive Protection Devices
- 1010.10 Other Traffic Control Devices or Features
- 1010.11 Traffic Control Plan Development and PS&E
- 1010.12 Training and Resources
- 1010.13 Documentation
- 1010.04 References

## Chapter 1020 Signing
- 1020.01 General
- 1020.02 Design Components
- 1020.03 Overhead Installation
- 1020.04 State Highway Route Numbers
- 1020.05 Mileposts
- 1020.06 Guide Sign Plan
- 1020.07 Documentation
- 1020.08 References

## Chapter 1030 Delineation
- 1030.01 General
- 1030.02 Definitions
- 1030.03 Pavement Markings
- 1030.04 Guideposts
- 1030.05 Barrier Delineation
- 1030.06 Object Markers
- 1030.07 Documentation
- 1030.08 References

## Chapter 1040 Illumination
- 1040.01 General
- 1040.02 Definitions
- 1040.03 Design Considerations
- 1040.04 Required Illumination
- 1040.05 Additional Illumination
- 1040.06 Design Criteria
- 1040.07 Documentation
- 1040.08 References

## Chapter 1050 Intelligent Transportation Systems
- 1050.01 General
- 1050.02 References
- 1050.03 Systems Engineering
- 1050.04 FHWA Washington Division ITS Project Contracting Guidance
- 1050.05 Documentation
# Contents

## Division 11 – Practical Design

### Chapter 1100 Practical Design

- 1100.01 General
- 1100.02 Practical Design Procedure
- 1100.03 Community Engagement
- 1100.04 Advisory Team
- 1100.05 Need and Performance Identification
- 1100.06 Context Identification
- 1100.07 Design Control Selection
- 1100.08 Alternative Formulation and Evaluation
- 1100.09 Design Element Selection and Dimensions
- 1100.10 Documentation Tools
- 1100.11 References

### Chapter 1101 Need Identification

- 1101.01 General
- 1101.02 Baseline Needs
- 1101.03 Contextual Needs
- 1101.04 Contributing Factors Analysis
- 1101.05 Project Need Statement
- 1101.06 Documentation
- 1101.07 References

### Chapter 1102 Context Determination

- 1102.01 General Overview
- 1102.02 Land Use Context
- 1102.03 Transportation Context
- 1102.04 Documentation
- 1102.05 References

### Chapter 1103 Design Control Selection

- 1103.01 General Overview
- 1103.02 Control: Design Year
- 1103.03 Control: Modal Priority
- 1103.04 Control: Access Control
- 1103.05 Control: Design Speed
- 1103.06 Control: Terrain Classification
- 1103.07 Documentation
- 1103.08 References

### Chapter 1104 Alternatives Analysis

- 1104.01 General
- 1104.02 Alternative Solution Formulation
- 1104.03 Alternative Solution Evaluation
- 1104.04 Documentation
- 1104.05 References

### Chapter 1105 Design Element Selection

- 1105.01 General
- 1105.02 Selecting Design Elements
- 1105.03 Related Elements
- 1105.04 Documentation
- 1105.05 References
## Chapter 1106 Design Element Dimensions
1106.01 General
1106.02 Choosing Dimensions
1106.03 The Mode/Function/Performance Approach
1106.04 Design Up Method
1106.05 Quantitative Analysis Methods and Tools
1106.06 Documenting Dimensions
1106.07 Design Analysis
1106.08 References

## Chapter 1120 Preservation Projects
1120.01 General
1120.02 Structures Preservation (P2) and Other Facilities (P3)
1120.03 Roadway Preservation (P1)
1120.04 Documentation

## Division 12 – Geometrics

### Chapter 1210 Geometric Plan Elements
1210.01 General
1210.02 Horizontal Alignment
1210.03 Distribution Facilities
1210.04 Number of Lanes and Arrangement
1210.05 Pavement Transitions
1210.06 Procedures
1210.07 Documentation
1210.08 References

### Chapter 1220 Geometric Profile Elements
1220.01 General
1220.02 Vertical Alignment
1220.03 Coordination of Vertical and Horizontal Alignments
1220.04 Airport Clearance
1220.05 Railroad Crossings
1220.06 Procedures
1220.07 Documentation
1220.08 References

### Chapter 1230 Geometric Cross Section Basics
1230.01 General
1230.02 Guidance for Specific Facility Types
1230.03 Common Elements
1230.04 Jurisdiction for Design and Maintenance
1230.05 References

### Chapter 1231 Geometric Cross Section – Highways
1231.01 General
1231.02 Design Up
1231.03 Common Elements
1231.04 Vehicle Lanes
1231.05 Modally Integrated Cross Sections
1231.06 Road Diets and Retrofit Options
1231.07 References

### Chapter 1232 Geometric Cross Section – Freeways
1232.01 General
### Contents

1232.02  Lane Width  
1232.03  Shoulder Width  
1232.04  Other Elements  
1232.05  Design Flexibility  
1232.06  References  

#### Chapter 1238  Geometric Cross Section – Streetside and Parking  
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  
1239.01  Introduction  
1239.02  Shoulders  
1239.03  Side Slopes and Ditches  
1239.04  Roadway Sections in Rock Cuts  
1239.05  Curbs  
1239.06  Lateral Clearance to Curb and Barrier  
1239.07  Medians & Outer Separations  

#### Chapter 1240  Turning Roadways  
1240.01  General  
1240.02  Turning Roadway Widths  
1240.03  Documentation  
1240.04  References  

#### Chapter 1250  Cross slope and Superelevation  
1250.01  General  
1250.02  Roadway Cross Slope  
1250.03  Superelevation Rate Selection  
1250.04  Existing Curves  
1250.05  Turning Movements at Intersections  
1250.06  Runoff for Highway Curves  
1250.07  Runoff for Ramp Curves  
1250.08  Documentation  
1250.09  References  

#### Chapter 1260  Sight Distance  
1260.01  General  
1260.02  References  
1260.03  Stopping Sight Distance  
1260.04  Passing Sight Distance  
1260.05  Decision Sight Distance  
1260.06  Documentation  

#### Chapter 1270  Auxiliary Lanes  
1270.01  General  
1270.02  Climbing Lanes  
1270.03  Passing Lanes  
1270.04  Slow-Moving Vehicle Turnouts  
1270.05  Shoulder Driving for Slow Vehicles  
1270.06  Emergency Escape Ramps  
1270.07  Chain-Up and Chain-Off Areas  
1270.08  Documentation
### Division 13 – Intersections and Interchanges

#### Chapter 1300 Intersection Control Type
- 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
- 1310.02 Design Considerations
- 1310.03 Design Elements
- 1310.04 U-Turns
- 1310.05 Intersection Sight Distance
- 1310.06 Signing and Delineation
- 1310.07 Procedures
- 1310.08 Documentation
- 1310.09 References

#### Chapter 1320 Roundabouts
- 1320.01 General
- 1320.02 Roundabout Types
- 1320.03 Capacity Analysis
- 1320.04 Geometric Design
- 1320.05 Pedestrians
- 1320.06 Bicycles
- 1320.07 Signing
- 1320.08 Pavement Marking
- 1320.09 Illumination
- 1320.10 Road Approach, Parking, and Transit Facilities
- 1320.11 Geometric Design Peer Review
- 1320.12 Documentation and Approvals
- 1320.13 References

#### Chapter 1330 Traffic Control Signals
- 1330.01 General
- 1330.02 Procedures
- 1330.03 Intersection Design Considerations
- 1330.04 Conventional Traffic Signal Design
- 1330.05 Preliminary Signal Plan
- 1330.06 Operational Considerations for Design
- 1330.07 Documentation
- 1330.08 References

#### Chapter 1340 Driveways
- 1340.01 General
- 1340.02 References
- 1340.03 Design Considerations
- 1340.04 Driveway Design Templates
- 1340.05 Sidewalks
- 1340.06 Driveway Sight Distance
- 1340.07 Stormwater and Drainage
Chapter 1350 Railroad Grade Crossings
1350.01 General
1350.02 References
1350.03 Plans
1350.04 Traffic Control Systems
1350.05 Nearby Roadway Intersections
1350.06 Pullout Lanes
1350.07 Crossing Surfaces
1350.08 Crossing Closure
1350.09 Traffic Control During Construction and Maintenance
1350.10 Railroad Grade Crossing Petitions and WUTC Orders
1350.11 Grade Crossing Improvement Projects
1350.12 Light Rail
1350.13 Documentation

Chapter 1360 Interchanges
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
1370.01 General
1370.02 Analysis
1370.03 Design
1370.04 Plan Updates and Approvals
1370.05 Documentation

Division 14 – HOV and Transit

Chapter 1410 High-Occupancy Vehicle Facilities
1410.01 General
1410.02 Preliminary Design and Planning
1410.03 Operations
1410.04 Design Criteria
1410.05 Documentation
1410.06 References

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 Transit Facilities
1430.01 General
Division 15 – Pedestrian and Bicycle Facilities

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 (PARs)
1510.08 Sidewalks
1510.09 Curb Ramps
1510.10 Crosswalks
1510.11 Raised Medians/Traffic Islands
1510.12 Pedestrian Pushbuttons
1510.13 At-Grade Railroad Crossings
1510.14 Pedestrian Grade Separations (Structures)
1510.15 Other Pedestrian Facilities
1510.16 Illumination and Signing
1510.17 Work Zone Pedestrian Accommodation
1510.18 Documentation

Chapter 1515 Shared-Use Paths
1515.01 General
1515.02 References
1515.03 Definitions
1515.04 Shared-Use Path Design – The Basics
1515.05 Intersections and Crossings Design
1515.06 Grade Separation Structures
1515.07 Signing, Pavement Markings, and Illumination
1515.08 Restricted Use Controls
1515.09 Documentation

Chapter 1520 Roadway Bicycle Facilities
1520.01 General
1520.02 Roadway Bicycle Facility Types
1520.03 Bicycle Facility Selection
1520.04 Intersection Design Treatments
1520.05 Additional Bicycle Design Requirements and Considerations
1520.06 Documentation
1520.07 References

Division 16 – Roadside Safety Elements

Chapter 1600 Roadside Safety
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 Considerations
1610.04 Beam Guardrail
1610.05 High-Tension Cable Barrier
1610.06 Concrete Barrier
1610.07 Bridge Traffic Barriers
1610.08 Other Barriers
1610.09 References

Chapter 1620 Impact Attenuator Systems
1620.01 General
1620.02 Design Criteria
1620.03 Selection Considerations
1620.04 Transportable Attenuators (Truck-Mounted and Trailer-Mounted)
1620.05 Older Systems
1620.06 Inertial Barrier Systems (Sand Barrels)

Division 17 – Roadside Facilities
Chapter 1710 Safety Rest Areas and Traveler Services
1710.01 General
1710.02 References
1710.03 Definitions
1710.04 Safety Rest Area Project Team
1710.05 Location, Access, and Site Design
1710.06 Buildings
1710.07 Utilities
1710.08 Documentation

Chapter 1720 Weigh Sites
1720.01 General
1720.02 Definitions
1720.03 Planning, Development, and Responsibilities
1720.04 Permanent Facilities
1720.05 Portable Facilities
1720.06 Shoulder Sites
1720.07 Federal Participation
1720.08 Procedures
1720.09 Documentation

Glossary
Exhibits

<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-1</td>
<td>Design Documentation Sequence for a Typical Design-Build Project</td>
</tr>
<tr>
<td>210-1</td>
<td>Types of Public Hearings</td>
</tr>
<tr>
<td>210-2</td>
<td>Public Hearing Formats</td>
</tr>
<tr>
<td>210-3</td>
<td>Prehearing Packet Checklist</td>
</tr>
<tr>
<td>210-4</td>
<td>Sequence for Corridor, Design, and Environmental Hearings</td>
</tr>
<tr>
<td>210-5</td>
<td>Sequence for Limited Access Hearing</td>
</tr>
<tr>
<td>210-6</td>
<td>Hearing Summary Approvals</td>
</tr>
<tr>
<td>300-1</td>
<td>Approval Authorities</td>
</tr>
<tr>
<td>300-2</td>
<td>Approvals</td>
</tr>
<tr>
<td>300-3</td>
<td>PS&amp;E Process Approvals NHS (Including Interstate) and Non-NHS</td>
</tr>
<tr>
<td>300-4</td>
<td>Design to Construction Transition Project Turnover Checklist Example</td>
</tr>
<tr>
<td>300-5</td>
<td>Local Agency and Developer Approvals</td>
</tr>
<tr>
<td>301-1</td>
<td>General Input Form with Listed Performance Objectives</td>
</tr>
<tr>
<td>301-2</td>
<td>Design Option Worksheet Showing Example of Life Cycle Cost Assessment</td>
</tr>
<tr>
<td>301-3</td>
<td>Excerpts from Olympic Region Review Checklist</td>
</tr>
<tr>
<td>305-1</td>
<td>WSDOT Project Management Process</td>
</tr>
<tr>
<td>310-1</td>
<td>Seven-Phase Job Plan for VE Studies</td>
</tr>
<tr>
<td>310-2</td>
<td>VE Analysis Team Tools</td>
</tr>
<tr>
<td>310-3</td>
<td>Value Engineering Job Plan</td>
</tr>
<tr>
<td>400-1</td>
<td>Interagency Agreement</td>
</tr>
<tr>
<td>400-2</td>
<td>Report of Survey Mark Example</td>
</tr>
<tr>
<td>410-1</td>
<td>Monument Documentation Summary</td>
</tr>
<tr>
<td>410-2</td>
<td>DNR Permit Application</td>
</tr>
<tr>
<td>410-3</td>
<td>DNR Completion Report Form</td>
</tr>
<tr>
<td>410-4</td>
<td>Land Corner Record</td>
</tr>
<tr>
<td>510-1</td>
<td>Appraisal and Acquisition</td>
</tr>
<tr>
<td>520-1</td>
<td>Access Control Vocabulary</td>
</tr>
<tr>
<td>530-1a</td>
<td>Full Access Control Limits: Interchange</td>
</tr>
<tr>
<td>530-1b</td>
<td>Full Access Control Limits: Interchange</td>
</tr>
<tr>
<td>530-1c</td>
<td>Full Access Control Limits: Interchange With Roundabouts</td>
</tr>
<tr>
<td>530-1d</td>
<td>Full Access Control Limits: Ramp Terminal With Transition Taper</td>
</tr>
<tr>
<td>530-1e</td>
<td>Full Access Control Limits: Single Point Urban Interchange</td>
</tr>
<tr>
<td>530-1f</td>
<td>Full Access Control Limits: Diverging Diamond Interchange</td>
</tr>
<tr>
<td>530-2a</td>
<td>Partial Access Control Limits: At-Grade Intersections</td>
</tr>
<tr>
<td>530-2b</td>
<td>Partial Access Control Limits: Roundabout Intersections</td>
</tr>
<tr>
<td>530-3a</td>
<td>Modified Access Control Limits: Roundabout Intersections</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Exhibit Description</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>530-3b</td>
<td>Modified Access Control Limits: Intersections</td>
</tr>
<tr>
<td>540-1</td>
<td>Managed Access Highway Class Description</td>
</tr>
<tr>
<td>540-2</td>
<td>Minimum Corner Clearance: Distance From Access Connection to Public Road or Street</td>
</tr>
<tr>
<td>550-1</td>
<td>Non-Access Feasibility Study Process</td>
</tr>
<tr>
<td>550-2</td>
<td>Access Revision Report Process</td>
</tr>
<tr>
<td>550-3</td>
<td>Access Revision Report: Stamped Cover Sheet Example</td>
</tr>
<tr>
<td>550-4</td>
<td>Access Revision Documentation and Review/Approval Levels</td>
</tr>
<tr>
<td>610-1</td>
<td>Materials Source Development</td>
</tr>
<tr>
<td>620-1</td>
<td>Estimating: Miscellaneous Tables</td>
</tr>
<tr>
<td>620-2</td>
<td>Estimating: Hot Mix Asphalt Pavement and Asphalt Distribution Tables</td>
</tr>
<tr>
<td>620-3</td>
<td>Estimating: Bituminous Surface Treatment</td>
</tr>
<tr>
<td>620-4</td>
<td>Estimating: Base and Surfacing Typical Section Formulae and Example</td>
</tr>
<tr>
<td>620-5a</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5b</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5c</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5d</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5e</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5f</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5g</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>620-5h</td>
<td>Estimating: Base and Surfacing Quantities</td>
</tr>
<tr>
<td>630-1</td>
<td>Selection Criteria for Geotextile Class</td>
</tr>
<tr>
<td>630-2</td>
<td>Maximum Sheet Flow Lengths for Silt Fences</td>
</tr>
<tr>
<td>630-3</td>
<td>Maximum Contributing Area for Ditch and Swale Applications</td>
</tr>
<tr>
<td>630-4</td>
<td>Design Process for Drainage and Erosion Control: Geotextiles and Nonstandard Applications</td>
</tr>
<tr>
<td>630-5</td>
<td>Design Process for Separation, Soil Stabilization, and Silt Fence</td>
</tr>
<tr>
<td>630-6</td>
<td>Examples of Various Geosynthetics</td>
</tr>
<tr>
<td>630-7</td>
<td>Geotextile Application Examples</td>
</tr>
<tr>
<td>630-8</td>
<td>Definition of Slope Length</td>
</tr>
<tr>
<td>630-9</td>
<td>Definition of Ditch or Swale Storage Length and Width</td>
</tr>
<tr>
<td>630-10</td>
<td>Silt Fences for Large Contributing Area</td>
</tr>
<tr>
<td>630-11</td>
<td>Silt Fence End Treatment</td>
</tr>
<tr>
<td>630-12</td>
<td>Gravel Check Dams for Silt Fences</td>
</tr>
<tr>
<td>700-1</td>
<td>Determination of the Roles and Responsibilities for Projects With Structures: Project Development Phase</td>
</tr>
<tr>
<td>710-1</td>
<td>Structure Site Data Checklist</td>
</tr>
<tr>
<td>710-2</td>
<td>Conceptual Plan Structure Site Data Checklist</td>
</tr>
<tr>
<td>720-1</td>
<td>Phased Development of Multilane Divided Highways</td>
</tr>
<tr>
<td>720-2</td>
<td>Highway Structure Over Railroad</td>
</tr>
<tr>
<td>720-3</td>
<td>Bridge Vertical Clearances</td>
</tr>
</tbody>
</table>
Exhibits

720-4 Embankment Slope at Bridge Ends
730-1 Summary of Mechanically Stabilized Earth (MSE) Gravity Wall/Slope Options Available
730-2 Summary of Prefabricated Modular Gravity Wall Options Available
730-3 Summary of Rigid Gravity and Semigravity Wall Options Available
730-4 Summary of Nongravity Wall Options Available
730-5 Summary of Anchored Wall Options Available
730-6 Other Wall/Slope Options Available
730-7 Typical Mechanically Stabilized Earth Gravity Walls
730-8 Typical Prefabricated Modular Gravity Walls
730-9 Typical Rigid Gravity, Semigravity Cantilever, Nongravity Cantilever, and Anchored Walls
730-10 Typical Rockery and Reinforced Slopes
730-11 MSE Wall Drainage Detail
730-12 Retaining Walls With Traffic Barriers
730-13a Retaining Wall Design Process
730-13b Retaining Wall Design Process: Proprietary
740-1 Standard Noise Wall Types
1010-1 General Lane Closure Work Zone Capacity
1010-2 Minimum Work Zone Clear Zone Distance
1010-3 Transportation Management Plan Components Checklist
1020-1 Reflective Sheeting Requirements for Overhead Signs
1020-2 Timber Posts
1020-3 Wide Flange Steel Posts
1020-4 Laminated Wood Box Posts
1030-1 Pavement Marking Material Guide – Consult Region Striping Policy
1030-2 Guidepost Placement
1040-1a Freeway Lighting Applications
1040-1b Freeway Lighting Applications
1040-1c Freeway Lighting Applications
1040-2 Freeway Ramp Terminals
1040-3 Ramp With Meter
1040-4a HOT (High-Occupancy Toll) Lane Enter/Exit Zone
1040-4b HOT (High-Occupancy Toll) Lane Access Weave Lane
1040-5 Lane Reduction
1040-6a Intersection With Left-Turn Channelization: Divided Highway
1040-6b Intersections With Left-Turn Channelization
1040-6c Intersections With Raised Left-Turn Channelization
1040-7 Intersections With Traffic Signals
1040-8 Intersection Without Channelization
1040-9 Roundabout
1040-10 Railroad Crossing With Gates or Signals
1040-11 Midblock Pedestrian Crossing
1040-12 Transit Flyer Stop
1040-13 Major Parking Lot
1040-14 Minor Parking Lot
1040-15 Truck Weigh Site
1040-16 Safety Rest Area
1040-17 Chain-Up/Chain-Off Parking Area
1040-18 Bridge Inspection Lighting System
1040-19 Traffic Split Around an Obstruction
1040-20 Construction Work Zone and Detour
1040-21 Diverging Diamond Interchange
1040-22 Light Levels and Uniformity Ratios
1050-1 Systems Engineering Process (“V” Diagram)
1050-2 Intelligent Transportation Systems (ITS) Systems Engineering Analysis Worksheet
1050-3 FHWA Washington Division – ITS Project Contracting Guidance
1100-1 Basis of Design Flowchart
1102-1 Factors for Determining Initial Land Use Context
1103-1 WSDOT Design Controls
1103-2 Initial Modal Accommodation Level
1103-3 Example Characteristics Related to Modal Accommodation
1103-4 Target Speed Based on Land Use Context and Roadway Type
1103-5 Speed Transition Segment Example
1103-6 Geometric Traffic Calming Treatments and Considerations
1103-7 Roadside, Streetside, and Pavement-Oriented Traffic Calming Treatments
1105-1 Required Design Elements
1106-1 Dimensioning Guidance Variations
1106-2 Mode/Function/Performance Approach
1210-1 Maximum Angle Without Curve
1210-2a Alignment Examples
1210-2b Alignment Examples
1210-2c Alignment Examples
1220-1 Grade Length
1220-2a Coordination of Horizontal and Vertical Alignments
1220-2b Coordination of Horizontal and Vertical Alignments
1220-2c Coordination of Horizontal and Vertical Alignments
1220-3 Grading at Railroad Crossings
1230-1 Geometric Cross Section - Guide to Chapters
1230-2 State and City Jurisdictional Responsibilities
Exhibits

1231-1 Lane Widths for Highways
1231-2 Lane Width Considerations
1231-3 Motor Vehicle Oriented Cross Sections
1231-4 Cross Sections Featuring Bicycle Facilities
1231-5 Cross Sections Featuring Pedestrian Facilities
1231-6 Cross Sections Featuring Transit Facilities
1231-7 Complete Street Cross Sections
1232-1 Geometric Cross Section - Interstate (4 lanes shown, can vary)
1232-2 Geometric Cross Section – Non-Interstate (4 lanes shown, can vary)
1232-3 Median Section without Median Barrier
1238-1 Zones within the Streetside
1239-1 Shoulder Widths for Highways
1239-2 Shoulder Function & Modal Accommodation Width Considerations
1239-3 Shoulder Details
1239-3 Shoulder Details (continued)
1239-4 Drainage Ditch Details
1239-5a Bridge End Slopes
1239-5b Bridge End Slope Details
1239-6 Roadway Sections in Rock Cuts: Design A
1239-7 Roadway Sections in Rock Cuts: Design B
1239-8 Stepped Slope Design
1239-9 Minimum Lateral Clearance to Barrier and Curb
1239-10 Median Functions and Guidance: High and Intermediate Speeds
1239-11 Median Functions and Guidance: Low and Intermediate Speeds
1239-12a Divided Highway Median Sections
1239-12b Divided Highway Median Sections
1239-12c Divided Highway Median Sections
1240-1a Traveled Way Width for Two-Lane Two-Way Turning Roadways
1240-1b Traveled Way Width for Two-Lane Two-Way Turning Roadways: Based on the Delta Angle
1240-2a Traveled Way Width for Two-Lane One-Way Turning Roadways
1240-2b Traveled Way Width for Two-Lane One-Way Turning Roadways: Based on the Delta Angle
1240-3a Traveled Way Width for One-Lane Turning Roadways
1240-3b Traveled Way Width for One-Lane Turning Roadways: Based on the Delta Angle, Radius on Outside Edge of Traveled Way
1240-3c Traveled Way Width for One-Lane Turning Roadways: Based on the Delta Angle, Radius on Inside Edge of Traveled Way
1250-1 Minimum Radius for Normal Crown Section
1250-2 Minimum Radius for Existing Curves
1250-3 Side Friction Factor
1250-4a Superelevation Rates (10% Max)
1250-4b Superelevation Rates (8% Max)
1250-4c Superelevation Rates (6% Max)
1250-5 Superelevation Rates for Intersections and Low-Speed Urban Roadways
1250-6a Superelevation Transitions for Highway Curves
1250-6b Superelevation Transitions for Highway Curves
1250-6c Superelevation Transitions for Highway Curves
1250-6d Superelevation Transitions for Highway Curves
1250-6e Superelevation Transitions for Highway Curves
1250-7a Superelevation Transitions for Ramp Curves
1250-7b Superelevation Transitions for Ramp Curves
1260-1 Design Stopping Sight Distance
1260-2 Design Stopping Sight Distance on Grades
1260-3 Stopping Sight Distance on Grades
1260-4 Stopping Sight Distance: Crest Vertical Curves
1260-5 Sight Distance: Crest Vertical Curve
1260-6 Stopping Sight Distance for Sag Vertical Curves
1260-7 Sight Distance: Sag Vertical Curve
1260-8 Horizontal Stopping Sight Distance
1260-9 Sight Distance: Horizontal Curves
1260-10 Sight Distance: Overlapping Horizontal and Crest Vertical Curves
1260-11 Existing Stopping Sight Distance
1260-12 Passing Sight Distance
1260-13 Passing Sight Distance: Crest Vertical Curve Calculations
1260-14 Passing Sight Distance: Crest Vertical Curves
1260-15 Decision Sight Distance
1270-1 Climbing Lane Example
1270-2a Speed Reduction Warrant: Performance for Trucks
1270-2b Speed Reduction Warrant Example
1270-3 Auxiliary Climbing Lane
1270-4 Passing Lane Example
1270-5 Length of Passing Lanes
1270-6 Passing Lane Configurations
1270-7 Buffer Between Opposing Passing Lanes
1270-8 Auxiliary Passing Lane
1270-9 Emergency Escape Ramp Example
1270-10 Emergency Escape Ramp Length
1270-11 Rolling Resistance (R)
<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Exhibit Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1270-12</td>
<td>Typical Emergency Escape Ramp</td>
</tr>
<tr>
<td>1270-13</td>
<td>Chain Up/Chain Off Area</td>
</tr>
<tr>
<td>1300-1</td>
<td>Intersection Design Considerations</td>
</tr>
<tr>
<td>1300-2</td>
<td>Median U-Turn Intersection Example</td>
</tr>
<tr>
<td>1300-3</td>
<td>Restricted Crossing U-Turn Intersection Example with Stop-control</td>
</tr>
<tr>
<td>1300-4</td>
<td>Displaced Left Turn Intersection Example</td>
</tr>
<tr>
<td>1310-1</td>
<td>Lane Alignment Taper Rate</td>
</tr>
<tr>
<td>1310-2</td>
<td>Ramp Terminal Intersection Details</td>
</tr>
<tr>
<td>1310-3</td>
<td>Median at Two-Way Ramp Terminal</td>
</tr>
<tr>
<td>1310-4</td>
<td>Intersection Balance Example</td>
</tr>
<tr>
<td>1310-5</td>
<td>Diamond Interchange With Advance Storage</td>
</tr>
<tr>
<td>1310-6</td>
<td>Initial Ranges for Right-Turn Corner (Simple Curve-Taper)</td>
</tr>
<tr>
<td>1310-7a</td>
<td>Left-Turn Storage Guidelines: Two-Lane, Unsignalized</td>
</tr>
<tr>
<td>1310-7b</td>
<td>Left-Turn Storage Guidelines: Four-Lane, Unsignalized</td>
</tr>
<tr>
<td>1310-8a</td>
<td>Left-Turn Storage Length: Two-Lane, Unsignalized (40 mph)</td>
</tr>
<tr>
<td>1310-8b</td>
<td>Left-Turn Storage Length: Two-Lane, Unsignalized (50 mph)</td>
</tr>
<tr>
<td>1310-8c</td>
<td>Left-Turn Storage Length: Two-Lane, Unsignalized (60 mph)</td>
</tr>
<tr>
<td>1310-9</td>
<td>Left-Turn Storage With Trucks (ft)</td>
</tr>
<tr>
<td>1310-10a</td>
<td>Median Channelization: Widening</td>
</tr>
<tr>
<td>1310-10b</td>
<td>Median Channelization: Median Width 11 ft or More</td>
</tr>
<tr>
<td>1310-10c</td>
<td>Median Channelization: Median Width 23 ft to 26 ft</td>
</tr>
<tr>
<td>1310-10d</td>
<td>Median Channelization: Median Width of More Than 26 ft</td>
</tr>
<tr>
<td>1310-10e</td>
<td>Median Channelization: Minimum Protected Storage</td>
</tr>
<tr>
<td>1310-10f</td>
<td>Median Channelization: Two-Way Left-Turn Lane</td>
</tr>
<tr>
<td>1310-11</td>
<td>Right-Turn Lane Guidelines</td>
</tr>
<tr>
<td>1310-12</td>
<td>Right-Turn Pocket and Right-Turn Taper</td>
</tr>
<tr>
<td>1310-13</td>
<td>Right-Turn Lane</td>
</tr>
<tr>
<td>1310-14</td>
<td>Acceleration Lane</td>
</tr>
<tr>
<td>1310-15a</td>
<td>Traffic Island Designs</td>
</tr>
<tr>
<td>1310-15b</td>
<td>Traffic Island Designs: Compound Curve</td>
</tr>
<tr>
<td>1310-15c</td>
<td>Traffic Island Designs</td>
</tr>
<tr>
<td>1310-16</td>
<td>U-Turn Spacing</td>
</tr>
<tr>
<td>1310-17</td>
<td>U-Turn Roadway</td>
</tr>
<tr>
<td>1310-18</td>
<td>U-Turn Median Openings</td>
</tr>
<tr>
<td>1310-19a</td>
<td>Sight Distance at Intersections</td>
</tr>
<tr>
<td>1310-19b</td>
<td>Sight Distance at Intersections</td>
</tr>
<tr>
<td>1320-1</td>
<td>Suggested Initial Design Ranges</td>
</tr>
<tr>
<td>1320-2</td>
<td>Radii-Speed Relationship on Approach Legs and R Value Relationships</td>
</tr>
<tr>
<td>1320-3</td>
<td>Intersection Sight Distance</td>
</tr>
</tbody>
</table>
Exhibit

1330-1 Responsibility for Facilities
1330-2 Example Continuous Green “T” (CGT) Intersection Layout
1330-3 Left-Turn Lane Configuration Examples
1330-4 Recommended Features for Intersections Near Rail Crossings
1330-5 Standard Intersection Movements, Head Numbers, and Phase Operation
1330-6 Detector Numbering Examples
1330-7a Signal Display Placements – Key to Diagrams
1330-7b Signal Displays for Single Lane Approach
1330-7c Signal Display Mounting Locations for Multi-Lane Approaches
1330-7d Signal Displays for Dedicated Left Turn Lanes
1330-7e Signal Displays for Shared Through-Left Lanes – Multiple Through Lanes
1330-7f Signal Displays for Shared Through-Right Lanes
1330-7g Signal Displays for Dedicated Right Turn Lanes
1330-7h Signal Displays for Multiple Turn Lanes
1330-8 Example Signal Display Placement for Skew Intersection
1330-9 Signal Display Maximum Heights
1330-10 Pedestrian Display Placement Requirements
1330-11 PPB Placement Requirements
1330-12a PPB Placement on Vertical Shaft Poles
1330-12b PPB Placement on Large Signal Standards
1330-13 Signal Display Surface Areas
1330-14 Timber Strain Pole Classes
1330-15 Fixed Vehicle Detection Placement
1330-16 Decision Zone Detection Placement
1330-17 Video Detector Placement
1330-18 Signal Display Layout for Rail Crossings
1330-19 Conduit and Conductor Sizes
1330-20 Phase Diagrams: Four-Way Intersections
1330-21 Phase Diagrams: Three-Way Intersections
1330-22 Phasing at Railroad Crossings
1340-1 Driveway Design Template SU-30 and Smaller
1340-2 Driveway Design Template SU-30 and Larger
1340-3 Driveway Sight Distance
1350-1 Sight Distance at Railroad Crossing
1350-2 Typical Pullout Lane at Railroad Crossing
1360-1 Basic Interchange Patterns
1360-2 Interchange Spacing
1360-3 Minimum Ramp Connection Spacing
1360-4 Ramp Design Speed
<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1360-5</td>
<td>Maximum Ramp Grade</td>
</tr>
<tr>
<td>1360-6</td>
<td>Ramp Widths</td>
</tr>
<tr>
<td>1360-7a</td>
<td>Lane Balance</td>
</tr>
<tr>
<td>1360-7b</td>
<td>Lane Balance</td>
</tr>
<tr>
<td>1360-8</td>
<td>Main Line Lane Reduction Alternatives</td>
</tr>
<tr>
<td>1360-9</td>
<td>Acceleration Lane Length</td>
</tr>
<tr>
<td>1360-10</td>
<td>Deceleration Lane Length</td>
</tr>
<tr>
<td>1360-11a</td>
<td>Gore Area Characteristics</td>
</tr>
<tr>
<td>1360-11b</td>
<td>Gore Area Characteristics</td>
</tr>
<tr>
<td>1360-12</td>
<td>Length of Weaving Sections</td>
</tr>
<tr>
<td>1360-13a</td>
<td>On-Connection: Single-Lane, Tapered</td>
</tr>
<tr>
<td>1360-13b</td>
<td>On-Connection: Single-Lane, Parallel</td>
</tr>
<tr>
<td>1360-13c</td>
<td>On-Connection: Two-Lane, Parallel</td>
</tr>
<tr>
<td>1360-13d</td>
<td>On-Connection: Two-Lane, Tapered</td>
</tr>
<tr>
<td>1360-14a</td>
<td>Off-Connection: Single-Lane, Tapered</td>
</tr>
<tr>
<td>1360-14b</td>
<td>Off-Connection: Single-Lane, Parallel</td>
</tr>
<tr>
<td>1360-14c</td>
<td>Off-Connection: Single-Lane, One-Lane Reduction</td>
</tr>
<tr>
<td>1360-14d</td>
<td>Off-Connection: Two-Lane, Tapered</td>
</tr>
<tr>
<td>1360-14e</td>
<td>Off-Connection: Two-Lane, Parallel</td>
</tr>
<tr>
<td>1360-15a</td>
<td>Collector-Distributor: Outer Separations</td>
</tr>
<tr>
<td>1360-15b</td>
<td>Collector Distributor: Off-Connections</td>
</tr>
<tr>
<td>1360-15c</td>
<td>Collector Distributor: On-Connections</td>
</tr>
<tr>
<td>1360-16</td>
<td>Loop Ramp Connections</td>
</tr>
<tr>
<td>1360-17</td>
<td>Temporary Ramps</td>
</tr>
<tr>
<td>1360-18</td>
<td>Interchange Plan</td>
</tr>
<tr>
<td>1410-1</td>
<td>Minimum Traveled Way Widths for Articulated Buses</td>
</tr>
<tr>
<td>1410-2</td>
<td>Typical HOV Lane Sections</td>
</tr>
<tr>
<td>1410-3</td>
<td>Roadway Widths for Two-Lane Ramps With an HOV Lane</td>
</tr>
<tr>
<td>1410-4a</td>
<td>Single-Lane Ramp Meter With HOV Bypass</td>
</tr>
<tr>
<td>1410-4b</td>
<td>Two-Lane Ramp Meter With HOV Bypass</td>
</tr>
<tr>
<td>1410-5a</td>
<td>Enforcement Area: One Direction Only</td>
</tr>
<tr>
<td>1410-5b</td>
<td>Enforcement Area: Median</td>
</tr>
<tr>
<td>1430-1</td>
<td>Bus Zone Dimensions</td>
</tr>
<tr>
<td>1430-2</td>
<td>Pullout for Bus Stop along a Road</td>
</tr>
<tr>
<td>1430-3</td>
<td>Bus Stop Pullouts: Arterial Streets</td>
</tr>
<tr>
<td>1430-4</td>
<td>Bus Zone and Pullout After Right Turn</td>
</tr>
<tr>
<td>1430-5</td>
<td>Bus Stop Accessibility Features</td>
</tr>
<tr>
<td>1430-6</td>
<td>Bus Berth Design</td>
</tr>
<tr>
<td>1430-7</td>
<td>Design Alternative for a Combination of Bus Berths at a Platform</td>
</tr>
<tr>
<td>Exhibit</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>1510-1</td>
<td>Pedestrian Circulation Paths</td>
</tr>
<tr>
<td>1510-2</td>
<td>Relationship Between Pedestrian Circulation Paths and Pedestrian Access Routes</td>
</tr>
<tr>
<td>1510-3</td>
<td>Obstructed Pedestrian Access Route</td>
</tr>
<tr>
<td>1510-4</td>
<td>Beveling Options</td>
</tr>
<tr>
<td>1510-5</td>
<td>Surface Discontinuities (Noncompliant)</td>
</tr>
<tr>
<td>1510-6</td>
<td>Sidewalks With Buffers</td>
</tr>
<tr>
<td>1510-7</td>
<td>Typical Sidewalk Designs</td>
</tr>
<tr>
<td>1510-8</td>
<td>Typical Driveways</td>
</tr>
<tr>
<td>1510-9</td>
<td>Perpendicular Curb Ramp</td>
</tr>
<tr>
<td>1510-10</td>
<td>Perpendicular Curb Ramp Common Elements</td>
</tr>
<tr>
<td>1510-11</td>
<td>Parallel Curb Ramp</td>
</tr>
<tr>
<td>1510-12</td>
<td>Parallel Curb Ramp Common Elements</td>
</tr>
<tr>
<td>1510-13</td>
<td>Combination Curb Ramp</td>
</tr>
<tr>
<td>1510-14</td>
<td>Typical Curb Ramp Drainage</td>
</tr>
<tr>
<td>1510-15</td>
<td>Unmarked Crosswalks</td>
</tr>
<tr>
<td>1510-16</td>
<td>Marked Pedestrian Crossing</td>
</tr>
<tr>
<td>1510-17</td>
<td>Vacant</td>
</tr>
<tr>
<td>1510-18</td>
<td>Midblock Pedestrian Crossing</td>
</tr>
<tr>
<td>1510-19</td>
<td>Obstructed Line of Sight at Intersection</td>
</tr>
<tr>
<td>1510-20</td>
<td>Improved Line of Sight at Intersection</td>
</tr>
<tr>
<td>1510-21</td>
<td>Curb Extension Examples</td>
</tr>
<tr>
<td>1510-22</td>
<td>Raised Islands With Curb Ramps and Pedestrian Cut-Throughs</td>
</tr>
<tr>
<td>1510-23</td>
<td>Clear Space for Pedestrian Pushbutton</td>
</tr>
<tr>
<td>1510-24a</td>
<td>Perpendicular Ramp Concurrent Clear Space Examples</td>
</tr>
<tr>
<td>1510-24b</td>
<td>Parallel Ramp Concurrent Clear Space Examples</td>
</tr>
<tr>
<td>1510-25</td>
<td>Reach Range for Pedestrian Pushbutton</td>
</tr>
<tr>
<td>1510-26</td>
<td>Pedestrian Railroad Crossings</td>
</tr>
<tr>
<td>1510-27</td>
<td>Pedestrian Railroad Warning Device</td>
</tr>
<tr>
<td>1510-28</td>
<td>Pedestrian Bridges</td>
</tr>
<tr>
<td>1510-29</td>
<td>Pedestrian Tunnel</td>
</tr>
<tr>
<td>1510-30</td>
<td>Access Ramp With Accessible Handrails</td>
</tr>
<tr>
<td>1510-31</td>
<td>Work Zones and Pedestrian Facilities</td>
</tr>
<tr>
<td>1515-1</td>
<td>Shared-Use Path</td>
</tr>
<tr>
<td>1515-2</td>
<td>Bicycle Design Speeds</td>
</tr>
<tr>
<td>1515-3</td>
<td>Two-Way Shared-Use Path: Independent Alignment</td>
</tr>
<tr>
<td>1515-4a</td>
<td>Two-Way Shared-Use Path: Adjacent to Roadway (≤ 35 mph)</td>
</tr>
<tr>
<td>1515-4b</td>
<td>Two-Way Shared-Use Path: Adjacent to Roadway (&gt; 35 mph)</td>
</tr>
<tr>
<td>1515-5</td>
<td>Shared-Use Path Side Slopes and Railing</td>
</tr>
<tr>
<td>1515-6</td>
<td>Shared-Use Path Landing Profile</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1515-7</td>
<td>Shared-Use Path Landing and Rest Area</td>
</tr>
<tr>
<td>1515-8</td>
<td>Typical Redesign of a Diagonal Midblock Crossing</td>
</tr>
<tr>
<td>1515-9</td>
<td>Adjacent Shared-Use Path Intersection</td>
</tr>
<tr>
<td>1515-10</td>
<td>Roadway Crossing Refuge Area</td>
</tr>
<tr>
<td>1515-11</td>
<td>Shared-Use Path Bridge and Approach Walls</td>
</tr>
<tr>
<td>1515-12</td>
<td>Bridge and Pedestrian Rail</td>
</tr>
<tr>
<td>1515-13</td>
<td>Shared-Use Path in Limited Access Corridor</td>
</tr>
<tr>
<td>1515-14a</td>
<td>Stopping Sight Distance for Downgrades</td>
</tr>
<tr>
<td>1515-14b</td>
<td>Stopping Sight Distance for Upgrades</td>
</tr>
<tr>
<td>1515-15</td>
<td>Minimum Lengths for Crest Vertical Curves</td>
</tr>
<tr>
<td>1515-16</td>
<td>Lateral Clearance for Horizontal Curves</td>
</tr>
<tr>
<td>1520-1</td>
<td>Raised and Curb-Separated Bike Facility</td>
</tr>
<tr>
<td>1520-2</td>
<td>Separated Buffered Bike Lane</td>
</tr>
<tr>
<td>1520-3</td>
<td>Buffered Bike Lane</td>
</tr>
<tr>
<td>1520-4</td>
<td>Bike Lane</td>
</tr>
<tr>
<td>1520-5</td>
<td>Shared Lane Markings</td>
</tr>
<tr>
<td>1520-6a</td>
<td>Bicycle Facility Selection Chart – Interested, but Concerned Cyclists</td>
</tr>
<tr>
<td>1520-6b</td>
<td>Bicycle Facility Selection Chart – Confident Cyclists</td>
</tr>
<tr>
<td>1520-7</td>
<td>Approach Through Lanes</td>
</tr>
<tr>
<td>1520-8</td>
<td>Bike Box and Intersection Crossing Markings</td>
</tr>
<tr>
<td>1520-9</td>
<td>Two-Stage Left-Turn Queue Box</td>
</tr>
<tr>
<td>1520-10</td>
<td>Median Refuge Island for Cyclists</td>
</tr>
<tr>
<td>1520-11</td>
<td>Length of Solid Green Pavement Marking Preceding Conflict Area</td>
</tr>
<tr>
<td>1520-12</td>
<td>At-Grade Railroad Crossings</td>
</tr>
<tr>
<td>1520-13</td>
<td>Barrier Adjacent to Bicycle Facilities</td>
</tr>
<tr>
<td>1520-14a</td>
<td>Bike Facility Crossing On and Off Ramps</td>
</tr>
<tr>
<td>1520-14b</td>
<td>Bicycle Facility Crossing Single Lane On Ramp</td>
</tr>
<tr>
<td>1520-14c</td>
<td>Bicycle Facility Crossing Option for Dual Lane On-Ramp Configuration</td>
</tr>
<tr>
<td>1520-14d</td>
<td>Bicycle Facility Crossing Option for Dual Off-Ramp</td>
</tr>
<tr>
<td>1600-1</td>
<td>City and State Responsibilities and Jurisdictions</td>
</tr>
<tr>
<td>1600-2</td>
<td>Design Clear Zone Distance Table</td>
</tr>
<tr>
<td>1600-3</td>
<td>Design Clear Zone Inventory Form Link to Website for the form</td>
</tr>
<tr>
<td>1600-4</td>
<td>Recovery Area</td>
</tr>
<tr>
<td>1600-5</td>
<td>Design Clear Zone for Ditch Sections</td>
</tr>
<tr>
<td>1600-6</td>
<td>Guidelines for Embankment Barrier</td>
</tr>
<tr>
<td>1600-7</td>
<td>Mailbox Location and Turnout Design</td>
</tr>
<tr>
<td>1600-8</td>
<td>Glare Screens</td>
</tr>
<tr>
<td>1610-1</td>
<td>Concrete Barrier Placement Guidance: Assessing Impacts to Wildlife</td>
</tr>
<tr>
<td>1610-2</td>
<td>Traffic Barrier Locations on Slopes</td>
</tr>
<tr>
<td>Exhibit</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>1610-3</td>
<td>Longitudinal Barrier Deflection</td>
</tr>
<tr>
<td>1610-4</td>
<td>Longitudinal Barrier Flare Rates</td>
</tr>
<tr>
<td>1610-5</td>
<td>Barrier Length of Need on Tangent Sections</td>
</tr>
<tr>
<td>1610-6</td>
<td>Barrier Length of Need</td>
</tr>
<tr>
<td>1610-7</td>
<td>Barrier Length of Need on Curves</td>
</tr>
<tr>
<td>1610-8</td>
<td>W-Beam Guardrail Trailing End Placement for Divided Highways</td>
</tr>
<tr>
<td>1610-9</td>
<td>Beam Guardrail Post Installation</td>
</tr>
<tr>
<td>1610-10</td>
<td>Guardrail Connections</td>
</tr>
<tr>
<td>1610-11</td>
<td>Transitions and Connections</td>
</tr>
<tr>
<td>1610-12</td>
<td>Median Cable Barrier Placement</td>
</tr>
<tr>
<td>1610-13a</td>
<td>Roadside Cable Barrier Placement</td>
</tr>
<tr>
<td>1610-13b</td>
<td>Cable Barrier Placement for Divided Highways</td>
</tr>
<tr>
<td>1610-14</td>
<td>Concrete Barrier Shapes</td>
</tr>
<tr>
<td>1610-15</td>
<td>Type 7 Bridge Rail Upgrade Criteria</td>
</tr>
<tr>
<td>1610-16</td>
<td>Thrie Beam Rail Retrofit Criteria</td>
</tr>
<tr>
<td>1620-1</td>
<td>Impact Attenuator Distance Beyond Length of Need</td>
</tr>
<tr>
<td>1710-1</td>
<td>WSDOT Safety Rest Area</td>
</tr>
<tr>
<td>1710-2</td>
<td>WSDOT’s SRA Project and Programming Roles</td>
</tr>
<tr>
<td>1710-3</td>
<td>Additional Safety Rest Area Resources</td>
</tr>
<tr>
<td>1710-4</td>
<td>Roadside Facilities Level of Development</td>
</tr>
<tr>
<td>1710-5</td>
<td>Typical Truck Storage</td>
</tr>
<tr>
<td>1710-6</td>
<td>WSDOT Safety Rest Area Building – Adaptive Reuse Historic Preservation</td>
</tr>
<tr>
<td>1720-1</td>
<td>Truck Weigh Site: Multilane Highways</td>
</tr>
<tr>
<td>1720-2</td>
<td>Truck Weigh Site: Two-Lane Highways</td>
</tr>
<tr>
<td>1720-3</td>
<td>Vehicle Inspection Installation</td>
</tr>
<tr>
<td>1720-4</td>
<td>Minor Portable Scale Site</td>
</tr>
<tr>
<td>1720-5</td>
<td>Major Portable Scale Site</td>
</tr>
<tr>
<td>1720-6</td>
<td>Small Shoulder Site</td>
</tr>
<tr>
<td>1720-7</td>
<td>Large Shoulder Site</td>
</tr>
<tr>
<td>1720-8</td>
<td>MOU Related to Vehicle Weighing and Equipment: Inspection Facilities on State Highways</td>
</tr>
</tbody>
</table>