Remarks and Instructions

The complete manual, revision packages, and individual chapters can be accessed at www.wsdot.wa.gov/publications/manuals/m36-63.htm.

For updating printed manuals, page numbers indicating portions of the manual that are to be removed and replaced are shown below.

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<tr>
<th>Chapter</th>
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<tbody>
<tr>
<td>Title Page</td>
<td>i – ii</td>
<td>i – ii</td>
</tr>
<tr>
<td>Chapter 42 City and County Design Standards for All Routes</td>
<td>42-1 – 42-2</td>
<td>42-1 – 42-2</td>
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<tr>
<td></td>
<td>42-9 – 42-10</td>
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<td>42-15 – 42-16</td>
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<tr>
<td>Appendix 42.101 Local Agency Design Matrix Checklists</td>
<td>42-19 – 42-26</td>
<td>42-19 – 42-26</td>
</tr>
</tbody>
</table>

Please contact Stacie Kelsey at 360-705-7383 with comments, questions, or suggestions for improvement to the manual.

To get the latest information, please sign up for email updates for individual publications at www.wsdot.wa.gov/publications/manuals/.

Washington State Department of Transportation
Highways and Local Programs
Engineering Services
PO Box 47390
Olympia, WA 98504-7390
www.wsdot.wa.gov/localprograms

Approved By
Dave Mounts

Signature
/s/
Local Agency Guidelines

M 36-63.19

December 2012
Americans with Disabilities Act (ADA) Information

Materials can be made available in an alternate format by emailing the WSDOT Diversity/ADA Compliance Team at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

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It is Washington State Department of Transportation (WSDOT) policy to ensure no person shall, on the grounds of race, color, national origin, or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated may file a complaint with WSDOT’s Office of Equal Opportunity (OEO). For Title VI complaint forms and advice, please contact OEO’s Title VI Coordinator at 360-705-7082 or 509-324-6018.

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Highways and Local Programs
Engineering Services
PO Box 47390
Olympia, WA 98504-7390
360-705-7383
www.wsdot.wa.gov/localprograms/
Chapter 42

Standards for All Routes

42.1 Introduction

The City Design Standards Committee and the County Design Standards Committee, in accordance with RCW 35.78.030 and 43.32.020, meet on a regular basis to review and update the city and county design standards for all facilities (NHS and Non-NHS).

The Local Agency Engineer may approve use of the minimum AASHTO and related standards as contained in the references. Design deviations must have the approval of the Washington State Department of Transportation (WSDOT) Highways and Local Programs in accordance with RCW 35.78.040 or RCW 36.86.080 as appropriate. When AASHTO and/or related design standards as contained in the references are updated and published, agencies must incorporate the new design standards for all projects no later than two years after of the publication date.

All projects are subject to Americans with Disabilities Act (ADA) requirements for accessibility. For guidance on ADA standards, please see Design Manual M 22-01 Section 1025 and the Local Agency ADA Planning and Design Resource web page at www.wsdot.wa.gov/ta/operations/localplanning/ada.html.

These standards apply to new construction and reconstruction projects, 3R and 2R projects, and low volume road and street projects on all routes which are classified as Principal Arterials, Minor Arterials, or Collectors. These standards are applicable to new or reconstructed bridges on rural minor collectors, local roads, and local streets.

Included in the standards are the Local Agency Design Matrices. The matrices are used to standardize design element requirements based on project type for all facilities. The Local Agency Design Matrices Checklists may serve as design documentation for decisions made.

In adopting these standards, the committees seek to encourage standardization of road design elements where necessary for consistency and to assure that motoring, bicycling, and pedestrian public safety needs are met. Considerations include safety, convenience, context sensitive solutions, proper drainage, and economical maintenance. The committees recognize that cities and counties must have the flexibility to carry out the general duty to provide streets, roads, and highways for the diverse and changing needs of the traveling public.

These standards cannot provide for all situations. They are intended to assist, but not to substitute for, competent work by design professionals. It is expected that land surveyors, engineers, and architects will bring to each project the best skills from their respective disciplines. These standards are also not intended to limit any innovative or creative effort, which could result in better quality, better cost savings, or both. An agency may adopt higher standards to fit local conditions. Special funding programs may also have varying standards.
The decision to use a particular road design element at a particular location should be made on the basis of an engineering analysis of the location. Thus, while this document provides design standards, it is not a substitute for engineering judgment.

Engineers should take into account all available information, including available funding, and use the professional judgment that comes from training and experience to make the final design determination. There shall be a record, of the matters considered during the design process that justify decisions made regarding the final project design. The project design must be approved by the approving authority as outlined on the agency’s Certification Acceptance Agreement or the acting designated authority for a Non-Certification Acceptance agency. See Chapter 43 and Appendix 43.62.

### 42.2 Committee Membership

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<thead>
<tr>
<th>City Design Standards Committee</th>
<th>County Design Standards Committee</th>
<th>Other Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jim Parvey, PE</strong>&lt;br&gt;Senior Principal Engineer&lt;br&gt;City of Tacoma&lt;br&gt;<a href="mailto:jparvey@cityoftacoma.org">jparvey@cityoftacoma.org</a></td>
<td><strong>Jim Whitbread, PE</strong>&lt;br&gt;County Engineer&lt;br&gt;Stevens County&lt;br&gt;<a href="mailto:jwhitbre@co.stevens.wa.us">jwhitbre@co.stevens.wa.us</a></td>
<td><strong>Ashley Probart</strong>&lt;br&gt;Association of Washington Cities&lt;br&gt;<a href="mailto:ashleyp@awcnet.org">ashleyp@awcnet.org</a></td>
</tr>
<tr>
<td><strong>Dan Handa, PE</strong>&lt;br&gt;Development Services&lt;br&gt;City of Puyallup&lt;br&gt;<a href="mailto:dhanda@ci.puyallup.wa.us">dhanda@ci.puyallup.wa.us</a></td>
<td><strong>Bryan Thorp, PLS</strong>&lt;br&gt;Design and Construction Manager&lt;br&gt;Benton County&lt;br&gt;<a href="mailto:bryan.thorp@co.benton.wa.us">bryan.thorp@co.benton.wa.us</a></td>
<td><strong>Randy Hart, PE</strong>&lt;br&gt;County Road Administration Board&lt;br&gt;<a href="mailto:randy@crab.wa.gov">randy@crab.wa.gov</a></td>
</tr>
<tr>
<td><strong>Mike Johnson, PE</strong>&lt;br&gt;Design Engineering and Construction Advisor&lt;br&gt;City of Seattle&lt;br&gt;<a href="mailto:mike.johnson@seattle.gov">mike.johnson@seattle.gov</a></td>
<td><strong>Dale Rancour, PE</strong>&lt;br&gt;County Engineer&lt;br&gt;Thurston County&lt;br&gt;<a href="mailto:rancoud@co.thurston.wa.us">rancoud@co.thurston.wa.us</a></td>
<td><strong>Greg Armstrong, PE</strong>&lt;br&gt;Chief Engineer&lt;br&gt;Transportation Improvement Board&lt;br&gt;<a href="mailto:grega@tib.wa.gov">grega@tib.wa.gov</a></td>
</tr>
<tr>
<td><strong>Mike Taylor, PE</strong>&lt;br&gt;City Engineer&lt;br&gt;City of Spokane&lt;br(<a href="mailto:mtaylor@spokanecity.org">mtaylor@spokanecity.org</a>)</td>
<td><strong>Jon Brand, PE</strong>&lt;br&gt;Assistant Director of Roads and Engineering&lt;br&gt;Kitsap County&lt;br&gt;<a href="mailto:jbrand@co.kitsap.wa.us">jbrand@co.kitsap.wa.us</a></td>
<td><strong>Dave Olson</strong>&lt;br&gt;WSDOT Design&lt;br&gt;<a href="mailto:olsonda@wsdot.wa.gov">olsonda@wsdot.wa.gov</a></td>
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<tr>
<td><strong>Martin Hoppe, PE, PTOE</strong>&lt;br&gt;City of Lacey&lt;br&gt;Transportation Manager&lt;br&gt;<a href="mailto:mhoppe@ci.lacey.wa.us">mhoppe@ci.lacey.wa.us</a></td>
<td><strong>Bob McEwen, PE</strong>&lt;br&gt;Program Engineer&lt;br&gt;Snohomish County&lt;br&gt;<a href="mailto:bob.mcewen@co.snohomish.wa.us">bob.mcewen@co.snohomish.wa.us</a></td>
<td><strong>Megan Hall, PE</strong>&lt;br&gt;Federal Highway Administration&lt;br&gt;<a href="mailto:megan.hall@fhwa.dot.gov">megan.hall@fhwa.dot.gov</a></td>
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<tr>
<td><strong>Vacant</strong></td>
<td><strong>Ramiro Chavez, PE</strong>&lt;br&gt;Project Engineering Manager&lt;br&gt;Pierce County&lt;br&gt;<a href="mailto:rchavez@co.pierce.wa.us">rchavez@co.pierce.wa.us</a></td>
<td><strong>Mike Horton</strong>&lt;br&gt;CECW Representative&lt;br&gt;W. H. Pacific&lt;br&gt;<a href="mailto:mhorton@whpacific.com">mhorton@whpacific.com</a></td>
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</table>

These design standards were developed with the approval and authorization of:

Aaron Butters, PE, Committee Chair<br>Engineering Services Manager<br>Headquarters Highways and Local Programs<br>Washington State Department of Transportation
### Chapter 42 City and County Design Standards for All Routes

#### Project Type

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</table>

- **Blank Cell**
- **D** Design Level D
- **A** Design Level A
- **AE** Agency Evaluate to Design Level A

(1) When provided, must meet current applicable standards.

(2) Refer to Safety Improvements on page 8. Mandatory Upgrade items 1 and all others are AE.
### Project Type

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- **Railroad (If roadway work included, use 3R line)**
- **Bridge Rehabilitation, Paint, Seismic, etc.**
- **Trails**
- **Pedestrian Facility Improvement Projects**

| Other, Interpretive Centers, etc. | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Parking Facilities | A | A | A | A | A | 1 | 1 |

**Local Agency Design Matrix**

**Table 1.2**

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<th>Design Elements</th>
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<th>Shldr Width</th>
<th>Vertical Clearance</th>
<th>Structural Capacity</th>
<th>Bridge Rail</th>
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</table>

- **Railroad (If roadway work included, use 3R line)**
- **Bridge Rehabilitation, Paint, Seismic, etc.**
- **Trails**
- **Pedestrian Facility Improvement Projects**

| Other, Interpretive Centers, etc. | 1 | 1 | 1 | 1 | 1 |
| Parking Facilities | A | A | AE | AE | 1 |
On all projects, which include structures with deficient safety features, consideration must be given to correcting the deficient features. When complete upgrading is not practical, a partial or selective upgrading and/or other improvements should be considered to mitigate the effects of the substandard elements.

### 42.8 2R Projects

.81 General Discussion – Funding restrictions do not always allow improvement of existing roadways to the standards desired. Therefore, when pavement condition reaches a minimal condition, cost effective pavement improvements are needed.

Resurfacing and restoration (2R) projects involve work to restore the existing roadway surface and appurtenances for safe and efficient highway operation. This type of project provides for resurfacing of the existing roadway to provide structural adequacy, to restore the roadway surface condition, and to consider making minor safety improvements.

Resurfacing of the roadway will normally be to the existing width. This should consider paving of previously unpaved shoulders. If short lengths of narrower lanes or shoulders exist within the project limits, widening should be considered to provide roadway section continuity within the project limits.

### 42.9 References

The designer must use the standards and rationales incorporated into the following manuals (see the following page for addresses to acquire reference materials).

**AASHTO**

- *Guide for Design of Pavement Structures*
- *Highway Drainage Guidelines*
- *Guide for Roadway Lighting*
- *Roadside Design Guide*
- *Geometric Design of Very Low Volume Local Roads (ADT<400)*
- *AASHTO Guide for the Development of Bicycle Facilities*

**Transportation Research Board (TRB)**

- *Highway Capacity Manual*

**Washington State Department of Transportation (WSDOT)**

- *Standard Specifications for Road, Bridge, and Municipal Construction M 41-10*
- Supplement to MUTCD (WAC 468-95)
- *Bridge Design Manual M 23-50*
- *Highway Hydraulics Manual*
• Standard Plans for Road, Bridge, and Municipal Construction M 21-01
• Design Manual M 22-01
• Pavement Design Manual
• A Guide for Local Agency Sidewalk Details, WSDOT Headquarters Highways and Local Programs, Washington State Technology Transfer Center

Institute of Transportation Engineers (ITE)
• Traffic Engineering Handbook

FHWA
• Manual of Uniform Traffic Control Devices (MUTCD)
• 49 CFR Part 27 and Designing Sidewalks and Trails for Access, Part II

ADA
• Public Rights of Way Access Advisory Committee (PROWAAC)
  http://ite.org/accessible/prowaac/prowaac_/specialreport.pdf
• Local Agency ADA Planning and Design Resource
  www.wsdot.wa.gov/ta/operations/localplanning/ada.html

Roundabouts
• NCHRP Synthesis 264 – Modern Roundabout Practice in the United States, Transportation Research Board
• FHWA – Roundabouts, An Informational Guide
• WSDOT Design Manual M 22-01

Traffic Calming

.91 Websites and Addresses to Acquire Reference Materials

AASHTO
AASHTO Bookstore
https://bookstore.transportation.org/item_details.aspx?id=104

TRB
Transportation Research Board National Research Council
500 5th Street NW
Washington, DC 20418
www.trb.org/highways1/public/highways.aspx
### Local Agency Design Matrix Checklists

#### Design Element Design Level

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#### Local Agency Design Exception Approval Date

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#### Is a Deviation on Design Element Required?

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#### Meets Standard?

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<tr>
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<td>No</td>
</tr>
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<td>Design Element</td>
<td>Design Level</td>
<td>Any work on Blank Cell Design Element? If “No” move down to next Design Element</td>
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**Design Levels**
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- D Design Level D
- A Design Level A
- AE Agency Evaluate to Design Level A

(1) When provided, must meet current standards.
(2) Items 1 and 2 under Safety Improvements Definitions are required and all others are AE.
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### Design Levels*

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- **D** Design Level D
- **A** Design Level A
- **AE** Agency Evaluate to Design Level A

*(1) When provided, must meet current standards. (2) Items 1 and 2 under Safety Improvements Definitions are required and all others are AE.*

See Matrix Definitions for requirements.

## 3R Project Checklist

Page 2 of 2
# Local Agency Guidelines Design Matrix Reconstruction Project Checklist

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Chapter 42 City and County Design Standards for All Routes
Appendix 42.101 Local Agency Design Matrix Checklists
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**Design Levels**

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- AE Agency Evaluate to Design Level A

(1) When provided, must meet current standards.

(2) Items 1 and 2 under Safety Improvements Definitions are required and all others are AE.
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Design Levels*
- **Blank Cell**: (1) When provided, must meet current standards.
- **D Design Level D**: (2) Items 1 and 2 under Safety Improvements Definitions are required and all others are AE.
- **A Design Level A**
- **AE Agency Evaluate to Design Level A**

See Matrix Definitions for requirements.

Local Agency Guidelines Design Matrix New Construction Project Checklist

Page 2 of 2