

Bicycle/Pedestrian Facilities, Parking, ADA Ramps & Curbs



Data Collection User's Guide

January 2015



This guide has been prepared for use by Asset Management Integration in coordination with Technical Services Branch and Roadway Engineering. The information contained in this manual was acquired from a variety of sources. These sources include the links provided throughout the document and the individuals listed below. Sincere gratitude is extended to these individuals for their support in the compilation of this document.

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INTRODUCTION

In an effort to monitor inventory, condition and asset performance, Oregon Department of Transportation (ODOT) has adopted asset management principles for a proactive approach to stewardship of the transportation infrastructure. Asset Management is a systematic and strategic approach to maintain, upgrade and operate physical assets. In order to maximize the benefits of asset management, a standardized method of data collection and data processing is needed. This will not only benefit the individual asset managers, but will also create “corporate” data that can be used by all ODOT employees. Commonly understood corporate data will allow for informed decision-making, as well as better communication between asset managers and other ODOT departments (e.g., Maintenance, Construction, GIS, etc.). Data collection standards will lay the foundation for a regular cycle of communication about asset needs and conditions.

In January 2007, the draft ODOT Asset Management Region 2 Pilot Report was produced. This report documented experiences over the course of the previous year in collecting, integrating and reporting data about a variety of assets within specific highway segments. The state of available data for the assets included ranged from zero to well-established management systems. Research was done to analyze the data collection process, resources used, and condition of those assets that lacked previously existing data. Among the findings of the Pilot Report were recommendations specific to the assets included in the report, the methods and tools for data collection, and the quantity of data needed to build capacities for informed decisions.

The purpose of this guide is to assist ODOT employees and outside contractors in gathering Bicycle/Pedestrian Facilities, Parking, ADA Ramps and Curb inventory information and to maintain a consistent data collection method for road inventory throughout the state. A commitment to utilize the definitions, processes, and procedures contained in this manual is an important step in moving the agency forward.

The dedication to Asset Management principles by ODOT will foster the development of strategic methods to evaluate asset data and communicate asset needs. This system will prove beneficial throughout the agency in ways such as: ODOT will benefit from an increase in reliable and accurate asset information; Asset Management practices help ensure that public agency activities are consistent with existing federal guidelines, current accounting practices such as *Governmental Accounting Standards Board (GASB) Statement 34*, and Legislative performance measures; Asset Management helps ODOT as an agency demonstrate to the public that they are responsible stewards of Oregon’s transportation assets.

BASIC INVENTORY

BEFORE INVENTORY BEGINS

Before collecting inventory, you will first need to do the following:

- Identify the segment of roadway to be inventoried.
- Prepare collection method
 - Digital or physical excel spreadsheet: Use the FACS-STIP Tool Data-To-Go function to export a spreadsheet to the assets to be inspected/collected. Refer to the FACS-STIP User Guide for instructions on how to accomplish this. The FACS-STIP Tools and User Guide are available from the right-hand menu at the following location: <http://transnet.odot.state.or.us/hwy/techserv/Web%20Pages/FACS-STIP%20Home.aspx>
 - ArcPad on Trimble Handheld Device: Check-out data for assets to be inspected/collected. Refer to “Business System Process: 1R Asset Handheld Application” document for instructions.
file://wpdotfill03/6100pub/1R_Application_Documentation/1R_WOC10_Final_Delivery/7_Business_System_Process_Documentation/Bike-Ped_TrafficBarriers/1R_Business_System_Process_BikePed_TrafficBarrier_v1_0_1.pdf
- Acquire fundamental working knowledge of the Digital Video Log (DVL).
 - *See Appendix B*
 - You can also access the DVL’s User’s Guide, at the following website:
http://intranet.odot.state.or.us/cf/dvl/DigitalVideoLog_Instr.htm
 - The following link provides access to a list of the available video logs:
http://www.oregon.gov/ODOT/TD/TDATA/rics/docs/Videolog_Data_Available.pdf
- Familiarize yourself with the Field Inventory Manual compiled by Road Inventory & Classification Services (RICS). To do this you will need to contact someone in the RICS unit to request a copy. The RICS website is:
http://www.oregon.gov/ODOT/TD/TDATA/Pages/TDATA_All_Contacts.aspx#Road_Inventory___Classification_Services
- Familiarize yourself with the terminology (e.g., milepoints, add direction, non-add direction, roadway ID, etc.).
- Print a copy, or have access to, the Highway Inventory Summary Report for the relevant segment of highway you are inventorying before you head out into the field (*see Appendix D*). Visit the following website to search for reports according to ODOT highway number:
http://highway.odot.state.or.us/cf/highwayreports/aml_summary_parms_by_route_no.cfm

STEPS FOR COLLECTING INVENTORY

Note: This section merely contains a list of the steps to follow; more detailed information regarding the steps to be taken and the terms found here will be given in the following section (“Inventory Definitions and Photographs”).

1. Download Asset Data for Area of Interest from FACS-STIP Data To Go, or Check-Out data for Area of Interest onto Trimble Hand-held Device with ArcPad.
2. Using the Digital Video Log (DVL), verify or add in the following information for each feature
 - a. Location
 - i. Milepoints
 1. Beginning Milepoint
 2. Ending Milepoint
 - ii. Side of Road
 - iii. Add & Non-Add Mileage
 - b. Identify type of feature (i.e., Bike Facility, Pedestrian Facility, Shared-Use Path, Mid-Block Crossing, Parking, ADA Ramp, Curb)
 - i. Determine Need
 - ii. Determine Existence
 - iii. Identify Attributes
3. Field verify the following when and where appropriate (i.e. when conditions are safe to do so) – be sure to review the “Checklist Before Leaving Office” in the Field Inventory Manual (*see Before Inventory Begins*).
 - a. Milepoints
 - i. Beginning
 - ii. Ending
 - b. Condition
 - c. Width
 - d. Check for new features not previously identified with the DVL, and features that have been removed and should be deleted from the asset database

DATA COLLECTION METHODS

There are two options for how to collect asset data: by exporting an excel spreadsheet of the asset data for a specific area from the FACS-STIP Data To Go Tool or by uploading data onto a Trimble GeoXT Handheld GPS Device.

FACS-STIP Data To Go Option

For information on how to export data using the FACS-STIP Data To Go Tool, see the current FACS-STIP Tool User Guide located in the right hand menu here:

<http://transnet.odot.state.or.us/hwy/techserv/Web%20Pages/FACS-STIP%20Home.aspx>.

Below is an example of a spreadsheet downloaded from the FACS-STIP Data To Go Tool. This example features the ADA Ramps asset, but all spreadsheets look very similar. Note that the Location fields start on the left side of the document and Asset Attribute fields are to the right. Each asset category has a separate tab in the excel workbook.

HIGHWAY NUMBER	HIGHWAY SUFFIX CODE	ROADWAY ID	MILEAGE TYPE	OVERLAP MILEAGE CODE	INTERSECTION MILEPOINT	CITYNAME	INSPECTION YEAR	PHYSICAL CONDITION	FUNCTIONAL CONDITION	RAMP TYPE	RAMP CORNER	RAMP LOCATION	ADA RAMP NEEDED	RUNNING SLOPE	COUNTER SLOPE	CROSS SLOPE	LIP HEIGHT	DET W
015	00	5	0		6.23	SPRINGFIELD	2010	F	G	D	4	HWY. 227 M.P. 9.97	Y					
015	00	5	0		6.23	SPRINGFIELD	2010	F	G	D	3A	HWY. 227 M.P. 9.97	N					
015	00	5	0		6.23	SPRINGFIELD	2010	F	P	CS	2	HWY. 227 M.P. 9.97	Y					
015	00	5	0		6.23	SPRINGFIELD	2010	F	G	CS	3	HWY. 227 M.P. 9.97	Y					
015	00	5	0		6.23	SPRINGFIELD	2010	F	G	CS	3	HWY. 227 M.P. 9.97	Y					
015	00	5	0		6.23	SPRINGFIELD	2010	F	P	D	1A	HWY. 227 M.P. 9.97	N					
015	00	5	0		6.23	SPRINGFIELD	2010	F	P	D	1	HWY. 227 M.P. 9.97	Y					
091	00	5	0		123.30	EUGENE	2010	F	P	CS	2	JEFFERSON ST.	Y					
091	00	5	0		123.30	EUGENE	2010	F	P	D	1	JEFFERSON ST.	Y					
091	00	5	0		123.37	EUGENE	2010	F	P	CS	3	HWY. 227 M.P. 0.00	Y					
091	00	5	0		123.37	EUGENE	2010	F	P	D	2	HWY. 227 M.P. 0.00	Y					
091	00	5	0		123.37	EUGENE	2010	F	P	D	2	HWY. 227 M.P. 0.00	Y					
091	00	5	0		123.37	EUGENE	2010	F	P	CS	1	HWY. 227 M.P. 0.00	Y					
091	00	5	0		123.37	EUGENE	2010	F	P	CS	4	HWY. 227 M.P. 0.00	N					
091	00	5	0		123.29	EUGENE	2010	F	P	CD	3	JEFFERSON ST.	Y					
091	00	5	0		123.23	EUGENE	2010	F	P	CD	2	JEFFERSON ST.	Y					
091	00	5	0		123.23	EUGENE	2010	F	P	I	1	JEFFERSON ST.	Y					
091	00	5	0		123.23	EUGENE	2010	F	P	I	4	JEFFERSON ST.	Y					

Below are examples of the attribute tables for assets included in this document. The location fields repeat at the beginning of each asset spreadsheet, but to save space they are listed only once in the following examples. The acceptable entries for each field are listed, separated by commas, in the cell below the corresponding field name. If a text response is required, the cell says 'text'. If a numerical response is required, the cell contains '#' for each allowable digit. Attribute fields and their acceptable entries are explained in more detail in the Inventory Definitions and Photographs section below.

LOCATION

HIGHWAY NUMBER	HIGHWAY SUFFIX CODE	ROADWAY ID	MILEAGE TYPE	OVERLAP MILEAGE CODE	MILEPOINT	ROAD SIDE	CITY NAME
###	##	I, D	Z		###.##	L, R	text

BICYCLE FACILITIES

BIKE NEED	FACILITY TYPE	INSPECTION YEAR	BIKE LANE WIDTH (FT)	BIKE LANE CONDITION	BIKE LANE NOTES
Y, N	BL, SL, SH, NO	20##	##	G, F, P, B	text

SIDEWALKS

SIDEWALK NEED	SIDEWALK	WIDTH (FT)	SURFACE	BUFFER	CONDITION
Y, N	Y, N	##	Black, White, Other	Y, N	G, F, P, B

ADA RAMPS

ADA RAMP NEEDED	RAMP CORNER	INSPECTION YEAR	RAMP TYPE	PHYSICAL CONDITION	FUNCTIONAL CONDITION
Y, N	1, 1A, 2, 2A, 3, 3A, 4, 4A, 5, 5A, 6, 6A, 7, 7A	20##	CS, CD, D, ID, IT, I, N	G, F, P, B	G, F, P, B

RUNNING SLOPE	COUNTER SLOPE	CROSS SLOPE	LIP HEIGHT	DETECTABLE WARNING	CLEAR WIDTH	LEVEL LANDING	SLOPE DIFFERENTIAL
C, NC	C, NC	C, NC	C, NC	C, NC	C, CC, NC	C, NC	C, NC

Trimble GeoXT Handheld GPS Device Option

For information on how to upload data using the Trimble, see the Business System Process document for 1R Asset Handheld Applications located here: \\Wpdotfill03\6100pub\1R_Application_Documentation\1R_WOC10_Final_Delivery\7_Business_System_Process_Documentation\Bike-Ped_TrafficBarriers\1R_Business_System_Process_BikePed_TrafficBarrier_v1_0_1.pdf

Below are examples of the screens a data collector would see while using the Trimble Device to collect Asset Data. Each Asset has different attribute tabs to fill out, though there are similarities in many categories.

There are multiple tabs to fill out for each asset. There is a Location tab included in the application for every asset. Bicycle Facilities and Sidewalks each have a second tab for the attributes of the assets. ADA Ramps has three more tabs: two for attributes and one for the verification. Fill them out by selecting options from the drop down tabs, entering numerical values where appropriate, and lastly pressing the “Verify Data” button. Specific instructions and definitions for filling out each attribute field are included in the Inventory Definitions and Photographs section below.

LOCATION

Sidewalk Start

Location Sidewalk

Highway # 333

Hwy Suffix 00

Roadway ID

Mileage Type 0

Overlap Mileage 0

Start MP

End MP

Position Right

Left

Right

ok X

BICYCLE FACILITIES

Bike Start

Location Bike Facility

Type Shared Lane

Width

Condition Good

Notes

Verify Data

Inspection Year 2014

ok X

SIDEWALKS

Sidewalk Start

Location Sidewalk

Surface Color <Null>

Buffer Indicator No

Width 22.2

Condition Fair

Notes

Verify Data

Inspection Year 2014

ok X

ADA RAMPS

ADA Ramps

ADA Ramp Compliance

XST_NM 2nd St

Needed Indicator No

Type B

Physical Cond B

ok X

ADA Ramps

Compliance Finalize

Running Slope <Null>

Counter Slope <Null>

Cross Slope <Null>

Lip Height <Null>

Clear Width <Null>

Detectable Warning <Null>

Level Landing <Null>

Slope Differential <Null>

ok X

ADA Ramps

Compliance Finalize

Functional Cond B

Notes Test

Verify Data

Inspection Year 2005

ok X

INVENTORY DEFINITIONS & PHOTOGRAPHS

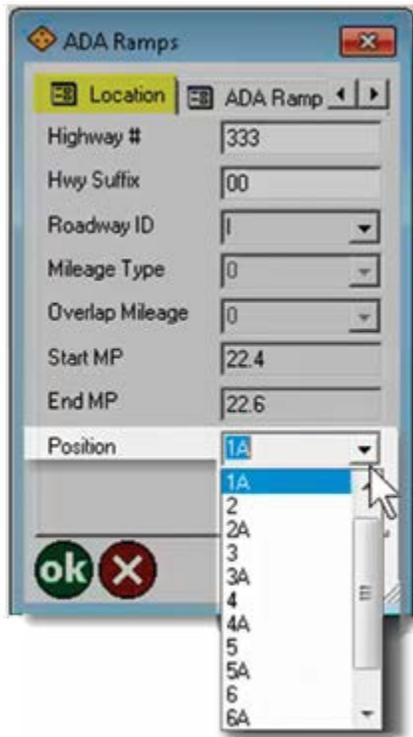
Shown in the manual are both types of data collection: by Excel Spreadsheet exported from Data To Go and by 1R Applications on ArcPad. It should be noted that because the ArcPad Applications were designed for the 1R Inventory Project, they may include fewer attributes for collection than are available using the Data To Go spreadsheet.

Location: This refers to the information that is needed to geographically reference the location of each feature (i.e., bike facility, pedestrian facility, parking facility, ADA ramp, curb). The goal is to use this information to map the location of features along roadways. When a GPS point location is taken using the mobile GPS unit, the proper location for taking the point is: for ADA Ramps - right on top of the ADA Ramp; for Bike Facilities - at the edge of the curb as close to the start or end of the lane as possible; for Sidewalks - on the inside edge of the sidewalk farthest from the road and as close to the start or end point as possible.

Shown is an example of the Location fields that appear at the left of each spreadsheet downloaded from FACS-STIP Data To Go and an example image of the Location Tab of the ArcPad Application on the Trimble Handheld Device. The attributes differ slightly from asset to asset. On the Data To Go spreadsheet, “Position” is considered an ADA Ramp specific asset field. In ArcPad, “Position” is considered part of the location tab. “Position” in the Bicycle Facility and Sidewalks ArcPad applications are equivalent to “Road Side” on the location spreadsheet.

Definitions for the location data that will help in filling in the location data fields are provided below.

HIGHWAY NUMBER	HIGHWAY SUFFIX CODE	ROADWAY ID	MILEAGE TYPE	OVERLAP MILEAGE CODE	MILEPOINT	ROAD SIDE	CITY NAME
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Highway Number – A three-digit number (not route number) assigned by ODOT to a length of highway for internal identification purposes. Valid highway numbers range from 001 to 499.

The “Routes | State Highway Cross Reference” report provides a list of Highway Names and their corresponding Route Numbers and Highways Numbers. The list can be viewed at: http://www.oregon.gov/ODOT/TD/TDATA/otms/Route_Hwy_CrossRef.shtml; however, some of the highways have more than one route number, for this list see *Appendix E*.

Highway Suffix – Each connection (i.e., ramp) or frontage road will have its own unique identifying highway suffix which will have the same highway number as the mainline, with an additional two letters to uniquely identify a specific connection or frontage road (e.g. 001AA, 001AB).

Roadway ID – This is a one-digit code used in conjunction with the highway number and milepoint to identify the alignment on which the feature being inventoried exists. There are two systems for Roadway ID. The current system, which is the one your should use, only has two possible values: I and D. “I” stands for Increasing, and represents the add mile direction of a divided roadway or both directions of a non-divided highway. “D” stands for Decreasing and represents the non-add mile direction of a divided roadway. When you download data, some Roadway IDs may still be in the old system; therefore, it is explained here: the old system has value ranges

from 1 through 5, with 1 and 2 being the most commonly used. The number “1” was used for all roads that are not considered divided highways, as well as for the add direction of divided highways. The number “2” was used for the non-add direction of divided highways.

Add Mileage & Non-Add Mileage – Refers to the direction of travel. When traveling in the add direction you are traveling in the direction of increasing milepoints. When traveling in the non-add mileage direction you are traveling in the direction of decreasing milepoints. For most highways, the add direction is south or east, however, it is important to refer to the DVL to determine if you are traveling in the Add or Non-Add direction

Mileage Type – This is used to make milepoints unique in areas where there are multiple occurrences of a milepoint on a single highway. Mileage types are identified as follows:

- Regular mileage is left blank
- Overlaps are indicated with a “Z”. Example: Z-mileage refers to a section of road that has been lengthened due to realignment.

Overlap Mileage Code (ovlap_mlge_cd) – This is used only in conjunction with “Z” mileage. The first chronological occurrence of “Z” mileage will have an overlapping mileage code of 1, the second occurrence will have a overlapping mileage code of 2, etc. Overlapping mileage occurs when a section of highway is lengthened in the middle due to realignment. Example: Section of highway from milepoint 49.00 to milepoint 50.00 is washed-out. The washed-out section must be replaced, but old alignment cannot be used. A new alignment is built around the problem area, but new alignment is 4.62 miles longer than the original alignment. The new distance between milepoint 49.00 and milepoint 50.00 is now 5.62 miles. To reflect true distance along the highway without renumbering all of the milepoints along the entire road, “overlapping mileage” is created.

Milepoint – A number that represents the distance in miles from the original beginning of the highway. Valid values for milepoints can range from - 999.9999 to 999.9999. This distance, measured along the alignment of the traveled roadway, is derived from construction plans and field inventory.

For linear facility features, such as Bike Facilities and Sidewalks, both the beginning and ending milepoints, to the nearest hundredth of a mile (0.01 miles or 52 feet), are recorded. The Begin Milepoint is always the lower milepoint number, and the End Milepoint is always the higher milepoint number. For non-linear objects, a single corresponding milepoint is recorded. For ADA ramps specifically, the milepoint of the intersection where multiple ramps may be located is recorded.

Road Side or Position (for Bicycle Facilities and Sidewalks only) – Refers to the location along the highway; identified as Left (L), or Right (R), based on the “Add” mile direction.

Note: “Position” for ADA Ramps is not the same as “Position” for Bicycle Facilities and Sidewalks. “Position” for ADA Ramps is equivalent to “Corner Number” and is described in the ADA Ramp section later in this document.

City Name – The name of the city in whose boundaries you are mapping facilities.

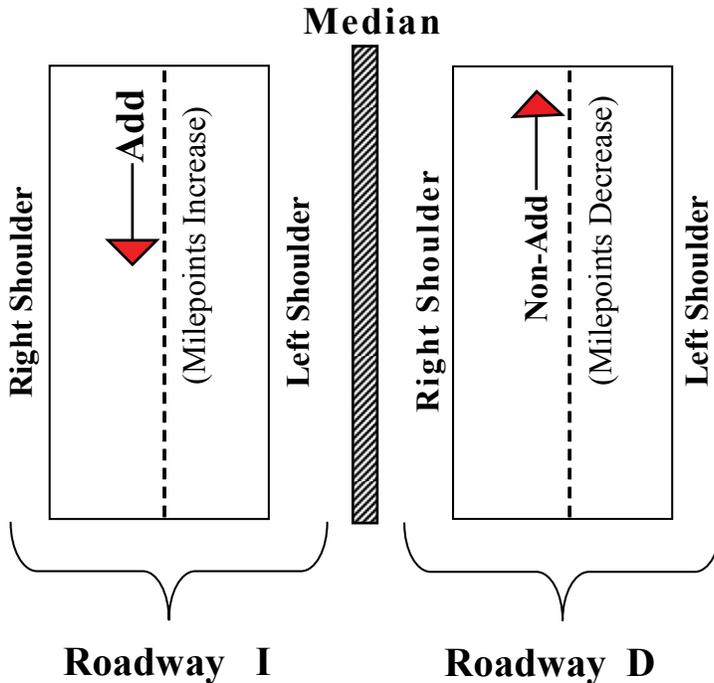


Figure 1. This figure depicts the Roadway ID, Side of Road, and Add & Non-Add Mileage for most divided highways.

COMMON ATTRIBUTE FIELDS: Besides the location fields just described, there are three more fields that are included at the end of each asset. These are Effective Date, Comments and Notes, and Verified No Change.

Effective Date: the year the data was placed into a GIS data layer to be accessed by the FACS-STIP or TransGIS data tools. This is a ‘for-your-information’ column included in the FACS-STIP spreadsheet from Data To Go and not an attribute that needs to be collected. This is not included on the Mobile GPS applications.

Comments and Notes: This is where you can add any notes that did not fit in the standardized note columns already associated with each asset. Note: if multiple notes are entered, please separate them with a semicolon (;).

Verified No Change: When using the Data To Go spreadsheet collection method: When you verify the location and all attributes of an asset without changing any values, enter “Y” for yes in this column. This lets the Data Steward know that the information was verified and unchanged. When using the mobile GPS applications, tap on the Verify Data button whether the data was changed or not. The Inspection Year should update to the current year. This lets the Data Steward know the data is current.

EFFECTIVE DATE	COMMENTS AND NOTES	VERIFIED NO CHANGE
-----------------------	---------------------------	---------------------------

BIKE FACILITY: When gathering road inventory data, the first feature you will need to identify is the bike facility.

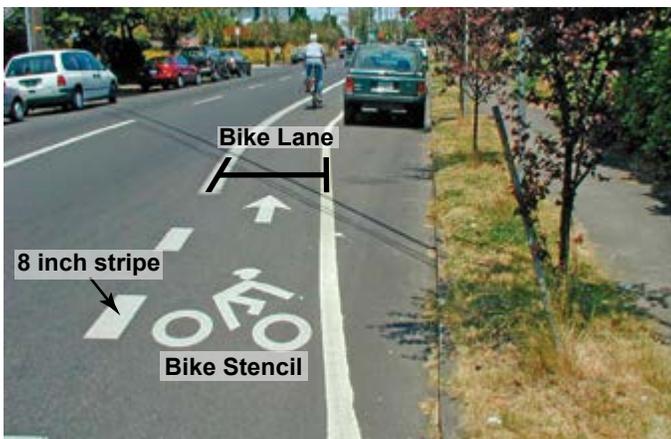
BIKE NEED	FACILITY TYPE	INSPECTION YEAR	BIKE LANE WIDTH (FT)	BIKE LANE CONDITION	BIKE LANE NOTES
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1) Bike Need: This field answers the question, “Should there be a bike facility on this segment of highway?” This field is marked with a “Y” for Yes or “N” for No. This field is not included on the mobile GPS application because “Needs” categories are not part of the 1R inventory data collection initiative.

Bike facilities are needed in all urban areas. Bike facilities are needed on both sides of the street for two-way roads and on one side of the street for one-way roads.

2) Facility Type: This is the field where you describe what type of bike facility exists (i.e., BL, SL, SH). If no bike facility exists, enter NO for none.



Bike Lane (BL) – Bike lanes are denoted by an 8-inch stripe separating motor vehicle traffic from bicycles, and by a bicycle stencil; other lines, dashed or dotted, are optional. Skip Striping, as in the photo above on the left, is an example of optional striping, and still constitutes a bike lane. It is used to indicate that motor vehicle traffic may be crossing the bike lane, in this instance to access the parking lane. It is also becoming more common to stripe a painted buffer to separate the bike lane from traffic. These bike lanes may have cross hatch markings, chevron markings, colored pavement or double white lines to separate them. All of these facilities are considered bike lanes.



Shared Lane (SL) – A Shared lane is appropriate on streets posted 25 mph or less, as in central business districts. No obvious bike facility is provided; bicyclists and motor vehicles simply share the same travel lane. It is now common practice to include shared lane markings (sharrows) to indicate bicycle positioning in some shared streets. These markings are not required, but may be present.

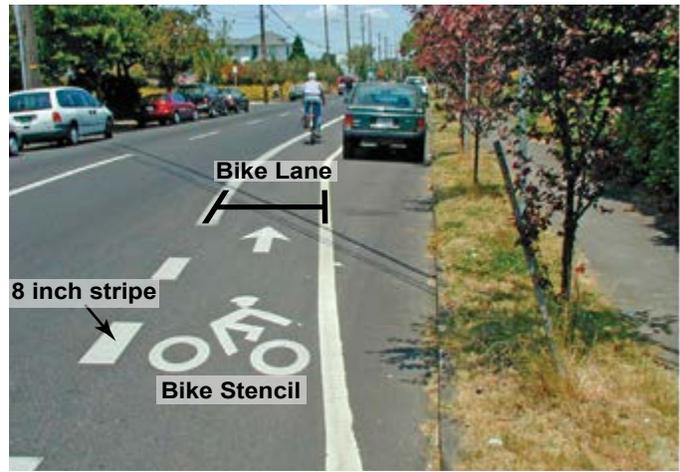


Transition Area, 45 MPH
Bike Facility= Shoulder (SH)

Shoulder Bikeway (SH) – Shoulder bikeways, or the road shoulder, vary in width from 5 feet upward and are separated from traffic by a 4 inch white stripe. Typically, shoulders are the bike facility on rural highways. **Note:** Shoulders less than 5 feet wide are not considered shoulder bikeways.

Shared-Use Path – A Shared Use Path is separated from the roadway and serves both pedestrians and bicyclists. It is normally 8-12 feet wide (*see page 16 for more information & pictures*). This is not an option for Facility Type under Bicycle Facilities.

Whether the bike facility is a bike lane, a shoulder, or a shared lane depends on the posted speed, motor vehicle traffic volumes, and land uses. For example, separate bike lanes are not needed in urban business districts or downtowns where speeds are 25 miles per hour or below and there is on-street parking; instead, bikes will share the road with motor vehicle drivers and a shared lane is established.



3) Bike Lane Width (ft): Bike facility width is measured in feet from the face of curb, the edge of pavement, or the center of the inside white line to the center of the 8-inch or outside stripe. Where the bike lane includes a buffer, only measure the width where bicyclists ride. For shared lanes, leave the width blank. *See the four pictures above for examples of width measurements.* **Note:** Do not enter the prime symbol (') or label the data in any way. Use only numbers rounded down to the nearest whole foot.

4) Bike Lane Condition: This is a rating that refers to the physical condition of the pavement that makes up the bike facility, and should be determined by asking yourself, “would I feel safe riding my bike on this surface?” There are four ratings:

- Good (G)** – Smooth pavement. **Note:** This rating is only used for new construction.
- Fair (F)** – Reasonably smooth pavement, safe to ride on. **Note:** Use this rating when the condition is fair or better, but the pavement is not newly constructed.
- Poor (P)** – Pavement that is badly cracked, heaved, potholed, rough, etc. Pavement which is dangerous to ride on or which would force a bicyclist into the motor vehicle travel lane to avoid it.
- Blank (B)**- There is no bike facility currently at this location

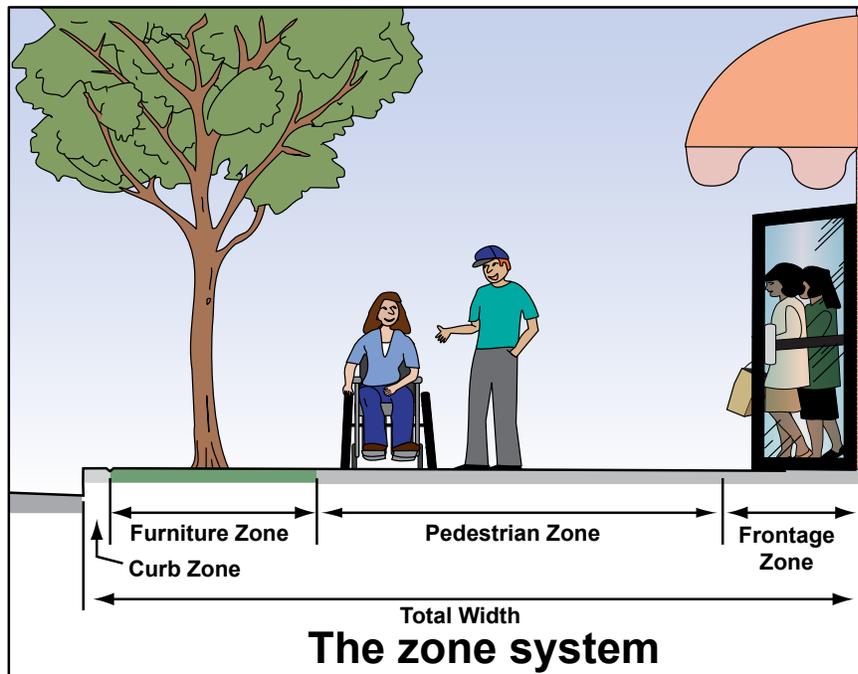
5) Notes: This column is used to record pertinent information about the bike facility in addition to the required inventory data. See *Appendix A* for a list of standard notes. This is the only field that can accept special characters (. , ‘ - / etc). Please separate each note with a semicolon (;)

6) Functional Condition: The functional condition refers to the compliance of the bike facility with the current standards. Functional Condition is derived from the other attributes after data collection is complete. This field is not available to be filled in; it is provided here for your information. Possible conditions are Good (G), Fair (F), and Poor (P). Shoulder Bikeways and Shared lanes cannot be more than functionally fair (F).

PEDESTRIAN FACILITY: Pedestrian Facilities include sidewalks, shared-use paths, and mid-block crossings. Note: the mobile GPS application is only built to collect data on sidewalks. Shared-use paths and mid-block crossings are not inventoried for the 1R Initiative.

SIDEWALK NEED	SIDEWALK	WIDTH (FT)	SURFACE	BUFFER	CONDITION
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Sidewalk – Sidewalks are located along roadways, and separated from them by a curb, a drainage swale, or a planter strip. Most sidewalks are concrete; asphalt sidewalks are less common. In addition, sidewalks also have zones. All sidewalks have a Pedestrian Zone and a Frontage Zone. Not all sidewalks have a furniture zone. For example, a curbside sidewalk has no furniture zone because the pedestrian zone meets the curb. However, a 10 foot sidewalk in a downtown area should have all three zones.



1) Sidewalk Need: This field answers the question: “Should there be a sidewalk on this segment of highway?” This field is marked with a “Y” for Yes or “N” for No. If a sidewalk already exists it is considered needed. This field is not collected when using the mobile GPS application because “Needs” categories are not part of the 1R inventory data collection initiative.

Sidewalks are needed in all urban areas and suburban areas with roadside development. Sidewalk needs along a highway will be continuous (i.e., without gaps) within urban and suburban areas. Sidewalks may not be needed in the fringe areas that have no roadside development. On couplets, sidewalk is needed on both sides of both legs. On rural roads the shoulder serves as the pedestrian facility and a sidewalk is not needed. Typically, a sidewalk is not needed on limited access expressways or on the interstate freeways.

Examples:



Is a sidewalk needed here? **Yes.**
Foot paths indicate a need for a sidewalk.



Is a sidewalk needed here? **Yes.**
This route clearly leads to a school.



Is a sidewalk needed here? **Yes.**
All central business districts need sidewalks.



Is a sidewalk needed here? **No.**
This road transitions from urban to rural quickly; on this rural portion the shoulder serves as the pedestrian facility.

2) Sidewalk: This column indicates if a sidewalk currently exists or not. When a sidewalk does exist, place a “Y” in the corresponding spreadsheet cell, and if a sidewalk does not exist, place a “N” in the cell. This field is not collected when using the mobile GPS application, because only currently existing sidewalks are inventoried for the 1R initiative.

3) Surface: This is denoted as either black, white, or other. Sidewalks are usually either concrete or asphalt: asphalt = black, concrete = white, brickwork, paving stones, etc = other. Unpaved sidewalks are not inventoried.

4) Buffer: The buffer = the Furniture Zone. A buffer separates the sidewalk from the roadway. The buffer, or furniture zone, may be paved, grassy or landscaped, or it can be used for drainage, as in a swale. The buffer can be made of the same material as the rest of the sidewalk. When the buffer is paved, it is included in the width of the sidewalk; otherwise, it is not included in the sidewalk width. This column answers the question, “Does a buffer exist?” Depending on whether or not a buffer exists, you will enter a “Y” for Yes or “N” for No. **Note:** Any sidewalk that is wider than 6’ has a de facto buffer and a “Y” is to be placed in the column. The buffer width and type should be written in the notes field.

5) Width: Sidewalk width is measured in feet from the back of the curb to the edge of the paved surface or to the face of a building. Sidewalk Width = Furniture Zone + Pedestrian Zone + Frontage Zone (*see The Zone System diagram on page 13*). A paved buffer or frontage zone is included in the calculation of the sidewalk width rounded down to the nearest whole foot. A furniture or frontage zone that is grassy or used for drainage as in a swale is not factored into the sidewalk width. A curb is not factored into the sidewalk width. **Note:** When filling in the spreadsheet do not enter the prime symbol (’).

Examples:



5' Curbside Sidewalk – Notice there is no buffer (furniture zone). The grass to the right in the picture is the frontage zone.



Sidewalk Behind a Drainage Swale - Here, the swale is the buffer and it is not included in the measurement of the sidewalk width.



Downtown Area Sidewalk – Here, the brick pavers are the buffer. The sidewalk width should be measured from the back of the curb to the face of the building. In other words, the furniture zone (buffer) is included in the measurement of the width.



5' Setback Sidewalk – The grass between the street and the sidewalk is the buffer (furniture zone). Remember, the buffer is not included in the sidewalk width unless it is paved and intended to be utilized by foot traffic.

6) Condition: Sidewalk condition is a statement of the physical condition of the pavement, and should be determined by asking yourself, “Would I feel safe walking on this surface?” There are four ratings:

- Good (G)** – Smooth, new pavement. Only to be used for new construction.
- Fair (F)** – Reasonably smooth pavement, safe to walk on.
- Poor (P)** – Pavement that is badly cracked, heaved, eroded, etc. Pavement which is dangerous to walk on or which is impassable by a wheelchair or stroller.
- Blank (B)** – There is no sidewalk currently at this location. This is a placeholder rating and should not be used when inventorying a currently existing sidewalk.

7) Notes: This column is used to record pertinent information about the sidewalk in addition to the required inventory data. See *Appendix A* for a list of the standard notes. This is the only field that can accept special characters (. , ‘ - / etc). Please separate each note with a semicolon (;).

8) Functional Condition: The functional condition refers to the compliance of the sidewalk with the current standards. Functional Condition is derived from the other attributes after data collection is complete. This field is not available to be filled in; it is provided here for your information. Possible conditions are Good (G), Fair (F), and Poor (P). Sidewalks must have a buffer to be considered functionally good (G).

SHARED-USE PATH: This refers to a path intended for shared use by bicyclists and pedestrians; it is not a sidewalk. A shared-use path may be adjacent to a roadway, or it may have a separate alignment. This type of path is typically wider than a sidewalk; usually 8-14 feet wide. In some locations, a shared use path exists, while a sidewalk or bike lane also exists. However, it is more common that the shared use path takes the place for both the pedestrian facility and the bicycle facility. In these scenarios, the corresponding bike need or sidewalk need should be adjusted to show that one of the modes is not needed. When collecting inventory data for a Shared-Use Path you will need to gather the three attributes listed below. *Note:* Shared-Use Paths are not inventoried when using the mobile GPS 1R applications and are not available from FACS-STIP.

Surface: Black, White, Other

Width (ft): Numerical Value

Condition: G, F, P, B

Examples of a shared-use path:



Shared-Use Path adjacent to a roadway.



Shared-Use Path on a separate alignment

1) Surface: This is denoted as either black or white. Shared-use paths are either concrete or asphalt: asphalt = black, concrete = white. Unpaved paths are listed as “other”.

2) Width: Shared-use path width is measured in feet from one edge of the path to the other. Adjacent soft surfacing, such as that provided for runners or horses, should not be included in the path width. **Note:** When filling in the spreadsheet do not enter the prime symbol (').

3) Condition: Path condition is a statement of the condition of the pavement, and should be determined by asking yourself, “Would I feel safe walking or bicycling on this surface?” There are four ratings: Good, Fair, Poor, and Blank.

Good (G) – Smooth, new pavement. Only to be used for new construction.

Fair (F) – Reasonably smooth pavement, safe to walk or ride on.

Poor (P) – Pavement that is badly cracked, heaved, eroded, etc. Pavement which is dangerous to walk or ride on or which is impassable by a wheelchair or stroller.

Blank (B) - This should only be used when the multi-use path is either non-existent or unpaved.

MID-BLOCK CROSSING: A mid-block pedestrian crossing is a marked crosswalk located anywhere other than a street intersection. The crossing must include pavement markings. Other elements, such as curb extensions, an island or median, flashing or overhead lights may also be present. The only attribute field to be collected for this asset is the existence of the asset. However, when a mid-block crossing is present other features such as a sidewalk and ramps will also be present and inventory is to be collected for those features separately. **A marked crosswalk at a T-intersection is NOT a mid-block crossing.** Mid-Block Crossings are not inventoried using the mobile GPS applications. There is no easily accessible source of current data on mid-block crossings or function for uploading newly collected data. Region 1 is currently working on a method for collecting data on mid-block crossings. This section is likely to change soon. For the most up to date information on this asset, contact the data owner.

Examples of mid-block crossings:



Mid-Block Crossing with Curb Extensions & Island



Mid-Block Crossing – Striping Only

PARKING: When parking spaces are present, the attribute fields below should be collected. There is no easily accessible source of current data on parking or function for uploading newly collected data. There is no mobile GPS application for collecting parking data. For information on this asset, contact the data owner.

1) Type: There are 5 parking types: Parking Area (PA), Diagonal Parking (DP), Parallel Parking (PP), Orthogonal Parking (OP), and Unmarked (UM). Parking which is unmarked and unused may be deduced from the pavement width and is inventoried.

2) Width: Parking width is measured in feet from the edge of the pavement or face of curb to the middle of the parking lane striping, tick marks, or the edge of the motor vehicle lane or bicycle lane. The road is wide enough for parking and the curb is not painted yellow or red, but there are no markings indicating the edge of the parking lane, enter NS - not striped. **Note:** When filling in the spreadsheet do not enter the prime symbol (').

Examples:



Parallel Parking (with markings)



Unmarked Parallel Parking



Diagonal Parking

Diagonal Parking

3) Condition: Parking condition is a statement of the physical condition of the pavement. There are three ratings: Good, Fair and Poor.

Good (G) – Smooth, new pavement. Only to be used for new construction.

Fair (F) – Reasonably smooth pavement.

Poor (P) – Pavement that is badly cracked, heaved, eroded, etc.

ADA RAMPS: A ramp is a sloped section of sidewalk for the use of wheelchairs and strollers at a street intersection.

ADA RAMPS NEEDED	RAMP CORNER	INSPECTION YEAR	RAMP TYPE	PHYSICAL CONDITION	FUNCTIONAL CONDITION
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RUNNING SLOPE	COUNTER SLOPE	CROSS SLOPE	LIP HEIGHT	DETECTABLE WARNING	CLEAR WIDTH	LEVEL LANDING	SLOPE DIFFERENTIAL
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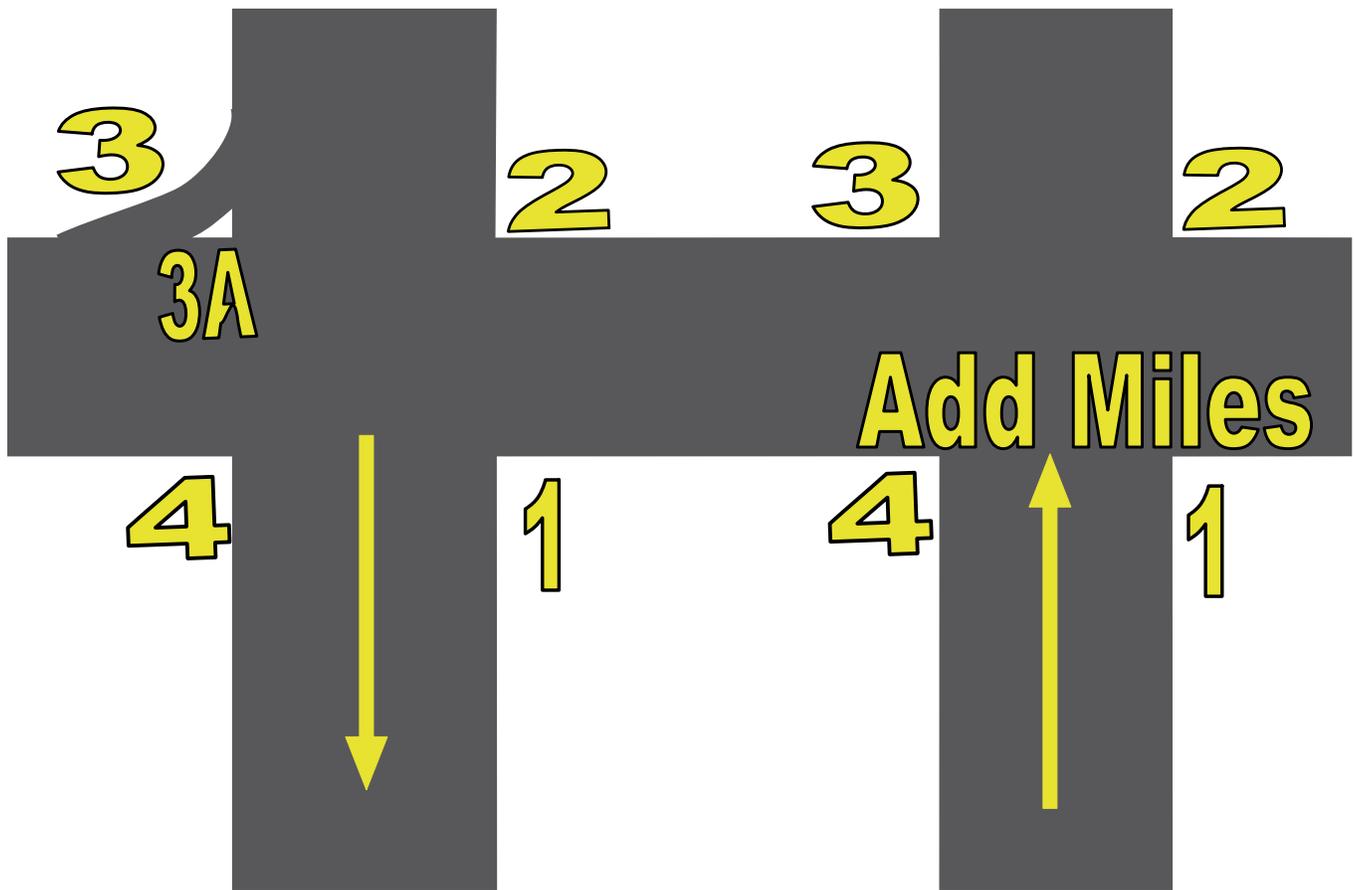
1) Cross Street Name (XST_NM): Enter the name of the cross street that forms the intersection. There are no special characters allowed in this text box. For example, entering “3rd st.” would cause an error while “3rd st” would not.

2) ADA Ramp Needed or Needed Indicator: ADA Ramps Need is expressed as “Y” for Needed and “N” for Not Needed. When sidewalks are present at intersection corners or by mid-block crosswalks, ramps are needed. When an island is present, look for cut-throughs. If there are no cut-throughs, ramps are needed.

3) Ramp Corner or Position: Ramps are located by the intersection milepoint, as defined in the Field Inventory Manual. Each ramp is assigned a number beginning with “1” and increasing in the counter-clockwise direction. If an island exists, it is numbered with an “A” following the closest corner number. In the example, corners 1 and 3 have right turn channelization islands; therefore, the numbering in the example includes 1A and 3A. All possible numbers that can be assigned are: 1, 1A, 2, 2A, 3, 3A, 4, 4A, 5, 5A, 6, 6A, 7, and 7A. This field is located under the location tab of the mobile GPS application.



The illustration above depicts how corners are numbered (the corner location code) for a two-way highway with a Roadway “T” only (i.e., not a couplet).



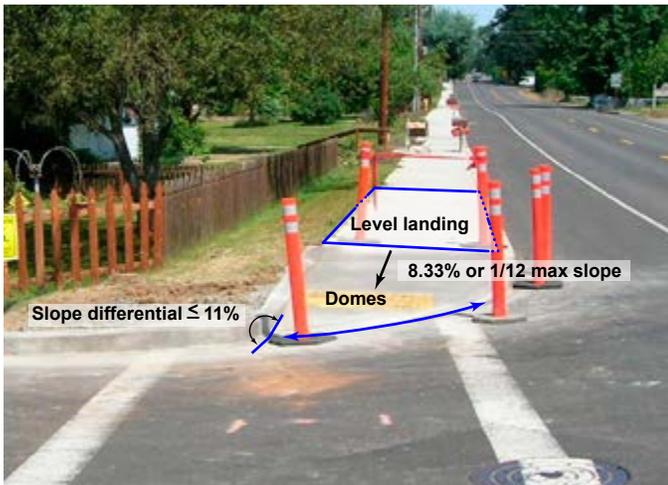
The illustration above depicts how corners are numbered (the corner location code) for a divided highway (i.e. a couplet) where both a Roadway “I” and Roadway “D” are present.

Ramps may also be inventoried by a mid-block crossing. the ramp on the right side of the road (based on the add-mileage direction) is position 1, and the ramp on the left is position 4. Any center island for a mid-block crossing is 1A. **Note:** There is no entry for ramp location.

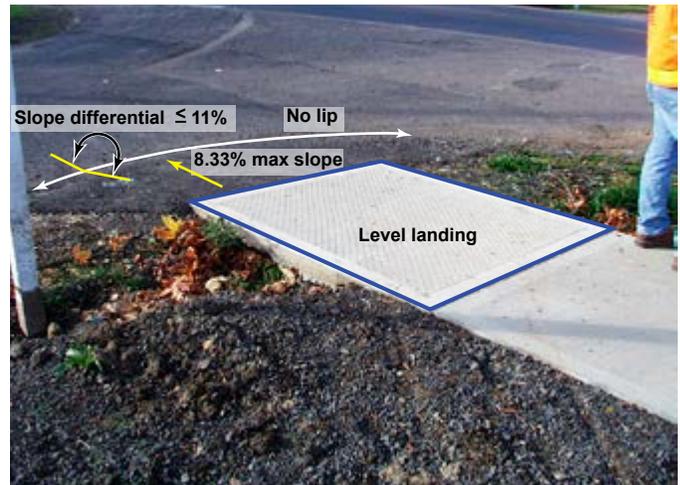
4) Inspection Year: Please fill in the current year, once you have inventoried the ramp. This will be automatically filled in on the Mobile GPS application when you tap the Verify Data button on the Finalize tab.

5) Type: The next step is to identify the type of ramp you are inventorying. It is important to mention that when determining the type of ADA ramp there are two main factors to consider: (1) the direction(s) of travel being served – which actually refers to a two-way direction such as north-south, or east-west; and (2) the number of ramps present on a corner. There are eight types of ramps, all of which are described below.

1. **Continuous Single (CS)** – A lone ramp on a corner that is in line with one direction of travel (e.g., the north-south direction) and one crosswalk only (*Note: A ramp along the straight side of a T-intersection is always a continuous single*). This ramp is only functional when a sidewalk is present on only one of the two streets feeding the corner.



Functional Continuous Single

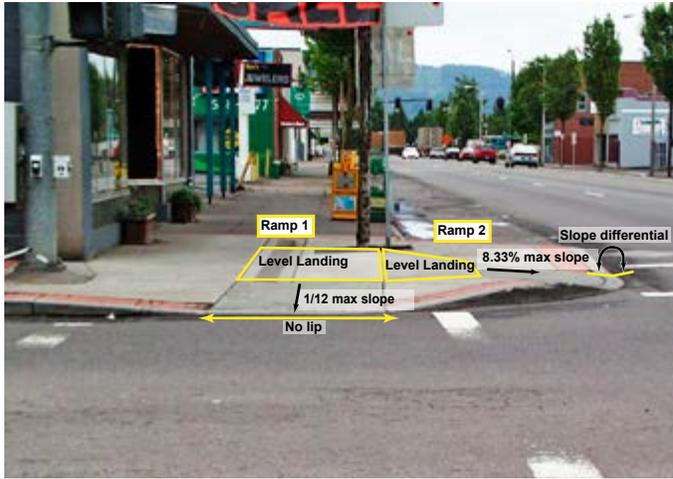


Non-functional Continuous Single (missing truncated domes)

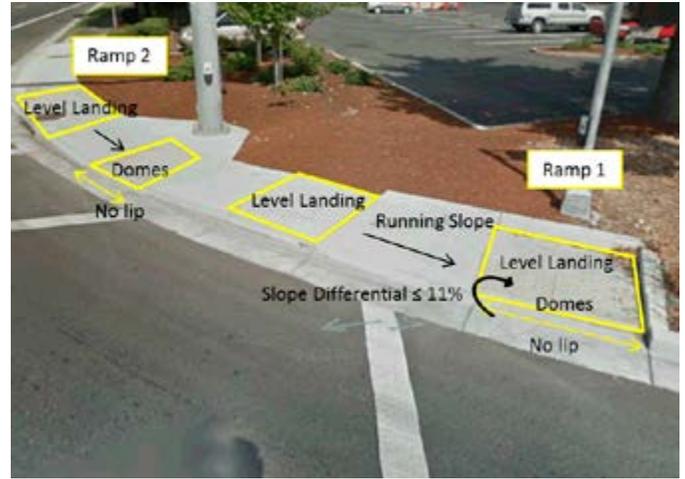


Non-functional Continuous Single (level landing does not feed directly to the running slope of the ramp)

2. **Continuous Double (CD)** – Defined by a corner that has two ramps which are each in line with a separate direction of travel and each serves a different crosswalk.



Non-functional Continuous Double (missing truncated domes)



Functional Continuous Double



Non-functional Continuous Double (missing truncated domes, no paved level landing)



Non-functional Continuous Double (level landing is interrupted by the signal pole)

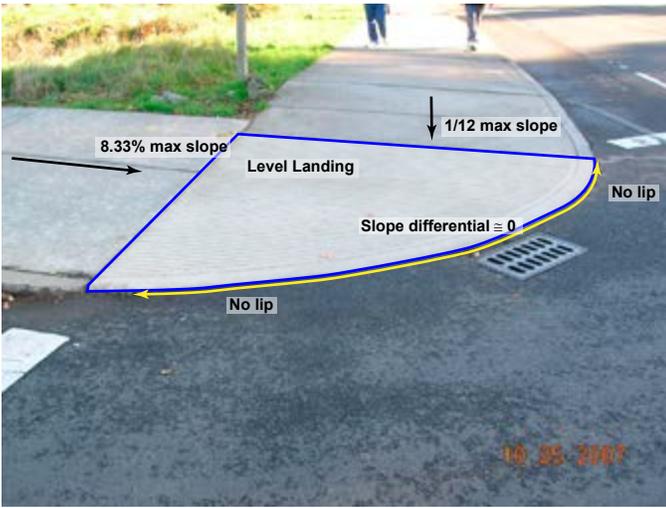
3. **Diagonal (D)** – Refers to one ramp that serves two directions of travel and two crosswalks.



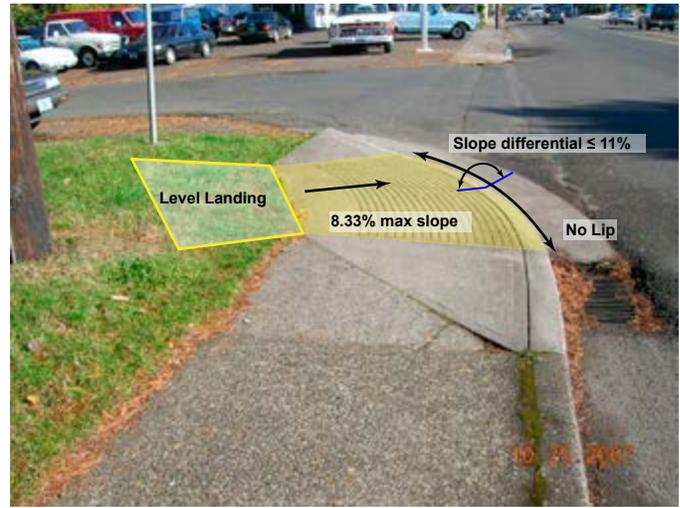
Non-functional Diagonal (missing truncated domes)



Non-functional Diagonal (level landing is interrupted by a pole)



Non-functional Diagonal (missing truncated domes)



Non-functional diagonal (missing truncated domes, no paved level landing)



Functional Diagonal

The next two ramp types (4 and 5) refer to those located on Island corners and are described together below.

4. **Island Double (ID)** – Refers to an island with two ramps.

5. **Island Triple (IT)** – Refers to an island with three ramps.

Note: The direction of travel is not considered when inventorying island ramps, and an island that merely has cut-throughs, and not ramps, is not inventoried.



Island Double



Island Triple



Incomplete

6. **Incomplete (I)** – Refers to a corner where there is a sidewalk in both the north-south and east-west directions and only one continuous ramp is present.

7. **None (N)** – Refers to a corner where ramps are needed but not present.

8. **Blank (B)** - Refers to a corner where a ramp is both not needed and not present.

6) Physical Condition: This is an assessment of the physical condition of the ramp pavement. There are four classifications.

- Good (G)** – Smooth, new pavement. Only used for new construction.
- Fair (F)** – Reasonably smooth pavement, safe to walk on.
- Poor (P)** – Pavement that is badly cracked, heaved, eroded, etc. Pavement which is dangerous to walk on or which is impassable by a wheelchair or stroller. Type of ramp is Incomplete (I).
- Blank (B)** – The type of ramp is None (N). This is a filler value for ramps that are needed but do not yet exist.



If you are using the mobile GPS Device, you will need to move on to the Compliance Tab at this point.

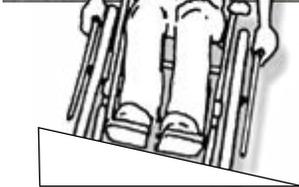


7) Running Slope: The Running Slope is a measure of the slope in the direction of travel. The path of the wheelchair must slope in only one direction at a time, either toward or away from the level landing. The running slope must be 1:12 (8.3%) or less over a maximum length of 15 feet, 10% or less over a maximum length of 5 feet, or 12% or less over a maximum length of 2 feet to be **Compliant (C)** with ADA standards; otherwise, it is **Not Compliant (NC)**.

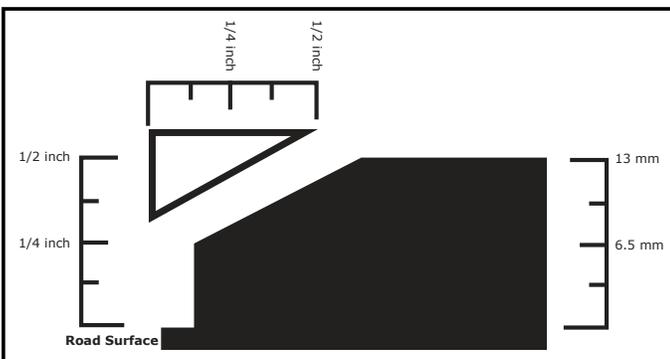
8) Counter Slope: The counter slope is the slope opposite the ramp grade, but not including the slope of the gutter if one exists. The counter slope must be 1:20 (5%) or less to rate **Compliant (C)**; otherwise, it is **Not Compliant (NC)**.



9) Cross Slope: The cross slope is the slope perpendicular to the direction of travel. The cross slope must be 1:50 (2%) or less to be **Compliant (C)** with ADA standards; otherwise, the ramp is **Not Compliant (NC)**.



10) Lip Height: The Lip Height of the ramp shall not exceed 1/4 inch to be **Compliant (C)**. The lip refers to any kind of drop-off between the end of the ramp and the beginning of the roadway pavement, including, drop-offs as small as 1/4 inch. If the height difference is between 1/4 and 1/2 inch, it can be beveled at 1:2 slope, as shown. Otherwise, the ramp is **Not Compliant (NC)**.



Lip Height is Not Compliant

11) Clear Width: The whole ramp structure, including the landing and slopes, must be clear of obstacles. If the ramp has a space of at least 4 feet clear of obstructions, it complies with the 2011 ADA standards and earns a value of “C” for **Compliant**. If the ramp has a space of at least 3 feet clear of obstructions, it meets requirements for the 1991 ADA standards and earns a value of “CC” for **Conditionally Compliant**. If the clear width is smaller than 3 feet, it earns a value of “NC” for **Not Compliant**.



Clear Width is Not Compliant



Clear Width is Not Compliant



Truncated Domes

12) Detectable Warning: Truncated Domes are must be present at the base of a ramp and installed per Roadway Standard Drawing RD759 Sidewalk Ramp Details found here: http://www.oregon.gov/ODOT/hwy/engservices/Pages/roadway_drawings.aspx#Roadway_700_-_Curbs,_etc. Truncated domes are 1/2 spheres with the tops cut off – see ODOT standard drawings. Truncated domes are required along the full width of the lowered ramp surface. Patterned, stamped, or textured concrete is not ADA compliant and cannot take the place of the

truncated domes. The ramp is **Compliant (C)** if truncated domes are present and **Not Compliant (NC)** if they are not.

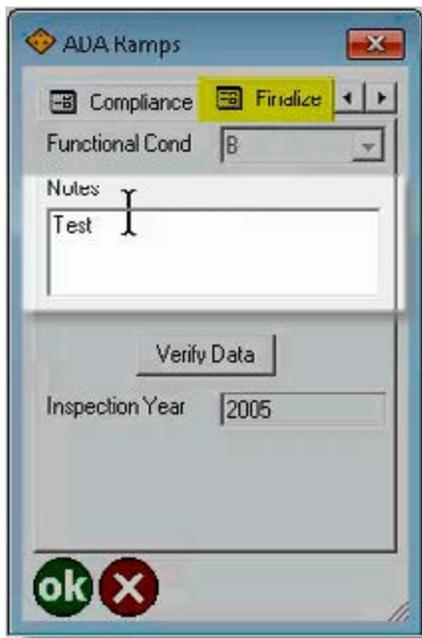


13) Level Landing: The ramp must have a Level Landing accessible for wheelchairs to use as a turning space. To qualify as **Compliant (C)**, the landing must be at least 4' by 4' with a slope less than or equal to 2% in all directions. If the landing is butted up against a curb or other constraint, it must be at least 4' by 5' to be compliant. Otherwise, the ramp is **Not Compliant (NC)**.

14) Slope Differential: The slope differential is the algebraic difference in slopes, or change in grade, at the ramp/street interface (ramp to street where there is no curb, or ramp to gutter pan where there is a curb). The slope differential is not to exceed 11%. If the ramp and street grades are in opposite directions, add the ramp grade to the street grade. If the ramp and street grades are in the same direction, subtract one grade from the other. If the result is 11% or less, the ramp is **Compliant (C)** with the slope differential. If the result is greater than 11%, the ramp is **Not Compliant (NC)**.



If the slope differential is not compliant, add a 2 foot level strip.
Designing Sidewalks and Trails for Access, 7.3.7 pages 7-29.



If you are using the mobile GPS Device, move on to the Finalize Tab.

15) Functional Condition: The functional condition for ADA ramps reveals if the ramp is up to required standards or not. The functional condition for ramps is determined per corner, and receives a classification of Good (G), Fair (F), or Poor (P). A classification of Blank (B) is assigned if the ramp is listed as Not Needed. All ramps at a corner must be functionally Good in order for the corner to be classified as Good (G) in this field. To be considered functionally Good (G), a corner must have a value of “C” for all 8 compliance fields for all ramps. A corner that is compliant for all compliance fields except Detectable Warning is considered functionally Fair (F). If any other compliance fields do not have a value of “C”, the corner is functionally Poor (P).

Once you have entered any notes you wish to make, click the Verify Data button. This will update the Inspection Year to the current year. This step is REQUIRED, whether you have changed other information or not, in order to show the ramp was inspected.

Curbs: There is no mobile GPS application for inventorying curbs. There is no easily accessible source of current data on curbs or function for uploading newly collected data. For information on this asset, contact the data owner. Track Curbs both left and right on couplets and divided highways where the median type is 3 – Landscape.

1) Type: There are three types of curbs. A curb can either be classified as: (1) a Standard Curb (SC), no gutter; (2) a Curb and Gutter (CG) – one that has an integral concrete gutter; (3) a Low Profile Mountable Curb (M); or (4) RICS (RC). See Standard Drawing AD700 for curb types.

Low Profile **Mountable Curb (M)** – per Standard Drawing RD700 – is constructed 4” high. The typical condition would be “Fair” unless significantly or obviously less than 4” (i.e., 1-2”) exposure, in which case, list as “Poor”. **Note:** There are two other types of Mountable Curbs. One looks nearly identical to the Standard Curb and for our purposes here will be identified as a Standard Curb type (SC). The other Mountable Curb and Gutter is not used by ODOT.

2) Height: Curb height is measured in inches from the top of the pavement to the top of the curb. There are three classifications:

Good (G) – Greater than 6 inches

Fair (F) – Between 4 inches and 6 inches

Poor (P) – Less than 4 inches

3) Condition: The curb condition describes the physical condition of the concrete. There are four classifications:

Good (G) – Refers to a curb with no visible cracks or chipping.

Fair (F) – Refers to a curb with minor cracking or chipping.

Poor (P) – Refers to a curb that is badly cracked or chipped and/or the curb is out of alignment with the sidewalk.

Not Needed (B) – There is no need for a sidewalk at this location.

Unknown (U) – The physical condition of the pavement here is unknown.

Example of how to classify a curb and gutter with mixed conditions: If a curb and gutter has a Poor Physical Condition for the Gutter (Pan) but the curb is Good Physical Condition, indicate the Condition as “Fair.”

Note: A distance of 0.02 miles is needed to delineate a change in Type, Height or Condition. Also, don’t start/stop curbs at intersections – no breaks in section.

PROCEDURES FOR STORING, UPLOADING, & ACCESSING ROAD INVENTORY INFORMATION

STORING INVENTORY DATA

While collecting roadside inventory data, the information will be stored in the mobile GPS device or the excel spreadsheets used for collection purposes.

UPLOADING DATA INTO DATABASE

Data collected by the Trimble Handheld device will be uploaded into the system by the processes described in the Business System Process document for 1R Asset Handheld Applications. Data collected by spreadsheet should be uploaded to the FACS-STIP tool as a comment under the 1R heading. This upload will start the process of notifying the data owner for that asset, and they will add the information to the asset database. For specific instructions of how to upload comments in FACS-STIP, see the current FACS-STIP Tool User Guide located in the right hand menu here:

<http://transnet.odot.state.or.us/hwy/techserv/Web%20Pages/FACS-STIP%20Home.aspx>.

ACCESSING DATA

Asset data can be accessed and downloaded from the FACS-STIP tool available on the intranet. For information on how to view and export data using the FACS-STIP Data To Go Tool, see the current FACS-STIP Tool User Guide located in the right hand menu here:

<http://transnet.odot.state.or.us/hwy/techserv/Web%20Pages/FACS-STIP%20Home.aspx>.

The data shown in the FACS-STIP Tool is not updated continuously. For the most up-to-date data, contact the data steward for the asset of interest.

FREQUENTLY ASKED QUESTIONS

1. Why do we need to collect road inventory?

As ODOT moves toward an asset management approach, it is important that we have an accurate record of the existing transportation infrastructure. Not only are there performance measures and legislative requirements regarding the features in this manual, but knowing what we have will help in the effort to move toward ensuring that there are bike facilities, sidewalks, and ADA ramps throughout 100% of the Urban Growth Boundary (UGB) areas. This information will also help ODOT maintain and upgrade assets in a cost-effective way. In addition, maintaining a record of current inventory data is also important for funding and mapping purposes.

2. Why is there a difference between the "ODOT Highway Number" and the highway "Route Number"?

The ODOT highway number is a three-digit ODOT number that is assigned to a length of highway. The highway number is used by ODOT transportation staff to identify a particular road for inventory or for research purposes. A route number is assigned to a particular route and is used to follow a particular path through a road network. This route number is mainly used by drivers for traveling purposes.

3. How accurate does the milepoint data need to be?

Just be sure to record the milepoint number shown on the DVL screen. Even though the DVL displays milepoints to the thousandth decimal place your number should be identified to the hundredth decimal place (e.g. 7.35).

4. What is the best way to estimate the width of roadway features from the video log? How accurate does the estimate need to be?

Use your best judgment; estimates do not need to be exact for the purpose of collecting basic inventory since there will be future efforts to refine and improve the data. However, you may find objects on the screen which you can use as references to improve your estimate. For example, when estimating the width of roadway features such as bike lanes and sidewalks it is useful to know the standard size of such things as the following:

- Motor Vehicle Lane Width – 12 ft.
- Avg. Car Width (sedan) – 6 ft.
- Avg. Car Width (Truck/SUV) – 7 ft.
- Semi-Truck/18 Wheeler Width – 9 to 10 ft.
- Avg. height of a man – 5 ft. 10 in.
- Standard Bike Lane Width – 6 ft.
- Standard Sidewalk Width (old) – 5 ft.
- Standard Sidewalk Width (new) – 6 ft.
- Avg. height of a woman – 5 ft. 4 in.

5. Why are there more attribute fields available in the Data To Go Spreadsheet than using the ArcPad application in the Trimble GeoXT Handheld device?

The ArcPad applications for data collection were designed specifically for use with the 1R Inventory project. To increase efficiency of data collection for this effort, only the basic, most necessary attributes were included in the mobile GPS application for each asset. This does not mean that you cannot collect other attributes if you are using the Data To Go spreadsheet method.

6. When should a change in a feature be recorded (i.e., a new line of data needed on the collection sheet)?

You do not need to record a change in a feature that occurs for less than 1 two-hundredth of a mile (0.02 miles, or about 100 feet). However, depending on the situation, you may need to place a comment in either the “Bike Facility Notes” column or the Pedestrian Facility “Notes” to record a pertinent piece of information about a feature. See *Appendix A* for a list of standard comments and when to use them.

7. If a crosswalk corresponds to a midblock crossing on one side of the road, but to an intersection on the other side of the road how do I label the crosswalk?

This is actually considered a T-intersection and will not be labeled as a midblock crossing. For this type of intersection you record inventory data as if it were a 4-way intersection.

8. When should I inventory beyond the Urban Growth Boundary (UGB)?

When a sidewalk or bike lane continues past the UGB you need to stop inventory at the UGB and then start a new line of data. Continue to record inventory data for a sidewalk until it ends, or for an additional 1 tenth of a mile (.1 mile) for a bike facility.

9. When a bike facility or sidewalk is present along with a shared-use path, which feature should I inventory?

You need to collect inventory data for all features that are present.

10. When a shared-use path is present, is a sidewalk needed?

The answer depends on the land use for the area you are inventorying. Sidewalk need should be evaluated independent of the shared-use path. To determine if a sidewalk is needed review the “Needed” definition under Pedestrian Facility on page 13.

11. Are there roadway features that we do not inventory?

No. All bike facilities, pedestrian facilities, parking, ADA ramps, and curbs located along a highway need to be inventoried. Parking, Curbs, and Pedestrian Facilities other than Sidewalks currently do not have download-able spreadsheets or mobile GPS applications to simplify data collection.

12. How do I determine milepoint information for a road inventory feature that starts on a mainline and ends on a ramp or side street, or vice versa (both with the DVL and in the field)?

This milepoint location on a ramp is estimated. Allow DMI meters to run when driving on or off a ramp, record this milepoint - which may be inaccurate - but it gives some documentation. However, in the database, crew members are allowed to enter additional information by putting in the location. In this case, milepoints are not always put into the database, because of the distorted figure, so crew members rely on the location and type of feature to make adjustments.

13. If I want more information on Bicycle and Pedestrian Facilities, where can I look?

The Oregon Highway Design Manual Appendix L is the Bicycle and Pedestrian Design Guide. It includes many detailed definitions and images for your use.

CONTACTS & OTHER USEFUL RESOURCES

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WEBSITES:

- Bicycle & Pedestrian Program – ADA (Americans with Disabilities Act): http://www.oregon.gov/ODOT/HWY/BIKEPED/ada.shtml#Sidewalk_Ramps_
- ODOT, Roadway Engineering: <http://www.oregon.gov/ODOT/HWY/ENGSERVICES/index.shtml>
- Highway Inventory Summary Report: http://highway.odot.state.or.us/cf/highwayreports/aml_summary_parms_by_route_no.cfm
- Transportation Development Division: ODOT intranet link: <http://intranet.odot.state.or.us/tdb/index.htm>
ODOT internet link: <http://www.oregon.gov/ODOT/td/Pages/index.aspx>
- Road Inventory and Classification Services Unit: http://www.oregon.gov/ODOT/TD/TDATA/TDATA_All_Contacts.shtml#Road_Inventory___Classification_Services
- ODOT Travel Guide is useful for planning trips: <http://www.tripcheck.com/>
- Roadway Standard Drawing RD759 Sidewalk Ramp Details: http://egov.oregon.gov/ODOT/HWY/ENGSERVICES/roadway_drawings.shtml

APPENDIX A

PEDESTRIAN AND, BICYCLE & ADA RAMP FACILITY STANDARD NOTES AND COMMENTS

The following is a list of standard comments to place in the “Notes” columns:

Bike Facility Comments	
1	Narrows to ## ft.
2	Widens to ##ft.
3	Width Varies
4	Poor Striping
5	No Stencil
6	Construction
7	Becomes turning lane
8	Bridge crossing
9	Rough/ gravel
10	Drainage grate
11	##mph (used when there is a shoulder or marked bike lane and speeds of 25mph or less)
12	Check speed (used when assuming a shared lane, but unsure of speed - this may be used as a temporary note, but speed should be checked and entered before submitting the data)
13	Parking included (used when measuring a shoulder for bike facility which is also used as undesignated parking)

Sidewalk Comments	
1	Narrows to ##ft
2	Widens to ##ft
3	Width Varies
4	Missing segments (used when mostly continuous, with missing segments < 0.01 miles)
5	Unusual Material (i.e. brick, tile, and etc - - type in the actual material)
6	Construction
7	Obstructions in sidewalk (used when there are light poles, mailboxes, etc. in sidewalk)
8	Bridge crossing
9	Hard to see in DVL (this is only a temporary note and should be removed once the asset has been field checked)
10	Overgrown landscaping
11	# foot gravel buffer

APPENDIX B

HOW TO USE THE DIGITAL VIDEO LOG

Background

How to Use the Log

How to Use Display Images Feature

How to Use the Play Images Feature

Reading the Milepoint Log

Update Schedule

Printing

Saving an Image

Note: Press “ctrl” and click on titles above to instantly scroll to desired section.

Background

The Digital Video Log (DVL) is a pictorial record of state highway system from a driver’s perspective. The DVL consists of digital images taken every five thousandth of a mile. The DVL proceeds from mile point zero to the end of the highway. You can reverse the direction (end of highway to mile point zero) with the Increasing Mile Points and Decreasing Mile Points radio buttons. By using these two radio buttons you can view the highway in both directions of travel.

Most of the highways were driven in the right lane with a single camera mounted in the center of the vehicle. The shoulders and side conditions of the road are visible, though the perspective may be skewed a bit. Most people find they can get information about road conditions, shoulder width, etc. from the DVL.

For instructions in greater detail, go to the “How to Use the Oregon Department of Transportation Digital Video Log (DVL)” instruction sheet located here:

http://rssa.odot.state.or.us/cf/dvl/DigitalVideoLog_Instr.htm

How to Use the Digital Video Log

1) From the DVL home page: <http://rssa.odot.state.or.us/cf/dvl/index.cfm>

Click on, “Click Here to Begin” to activate the Digital Video Log.

2) Choose from the following options on the next screen. Keep in mind that the default settings are the most commonly used. **Most people will only need to adjust the Highway Number, Season, and Starting Milepoint** to view the images they need.

1. *Highway* – The highways are listed by the official ODOT highway number (not the route number found on maps). Choose any available highway from the drop down menu.

To find the official ODOT Highway Number Use the State Highway Cross Reference: (http://www.oregon.gov/ODOT/TD/TDATA/otms/Route_Hwy_CrossRef.shtml) (Also located in Appendix F)

The list of available highways is based on the criteria selected in the fields 2, 3 and 4. For example, if you uncheck Highways and check Frontage Roads in the Road Type Field, the highway list will only contain Frontage Roads.

2. *Road Type* – Accept the default – Highways.
3. *Mileage Type* – This is an internal code and is of no use or concern to the lay user. Accept the defaults.
4. *Season* – The Digital Video Log will automatically default to the most current images for your chosen highway, and will list other available years in the Season pull down list. You can view images from previous seasons by choosing a different year from the Season pull down list. DVL seasons run from May 1 – April 30 each year. Approximately one half of the state highway system is taped annually.

5. *Starting Milepoint* – This will default to the beginning milepoint for the chosen highway and year, but you may choose a different starting milepoint from the pull down list, or enter a milepoint in the entry field. East-West roads “begin” (mile point zero) in the West. North-South roads “begin” in the North. I-5 is an exception. It “begins” at the California border.
6. *Direction* – The DVL is taped in both traffic directions, so images may be viewed in either Increasing or Decreasing Milepoint direction. The increasing milepoint is the default direction. The DVL proceeds from mile point zero to the end of the highway. You can reverse the direction (end of highway to mile point zero) with the Increasing Mile Points and Decreasing Mile Points radio buttons. By using these two radio buttons you can view the highway in both directions of travel.

3) Choose one of the following to start viewing images:

Display Image button – This will display the images on the same screen as the milepoint DVL for the highway, and will allow the user to scroll through images one at a time. (See below for further information about how to use this feature.)

Play Images button – Allows you to play the images of your selected highway consecutively. (See below for further information about how to use this feature.)

Reset – Resets all fields on the page back to the default settings.

How to Use Display Image

Once the video image is displayed, you can move through the images one at a time by clicking the <<< (Previous Image) or >>> (Next Image) buttons below the image. The size of the image can be increased by clicking on the image.

Select New Highway – Goes back to highway selection screen where you can choose a different highway or change options for the same highway (such as choose a different year).

Increment (aka. Inc Amt): The images will change by increments of 0.05 mile by default, but you can change the Increment Amount. For example, entering 10 in the increment box will change the frame by 0.10 mile and 100 will change the frame by 1.00 mile.

Increasing/Decreasing: You can choose to view the highway in either increasing (Eastbound or Southbound, except I-5) or decreasing direction Westbound or Northbound, except I-5) by clicking the appropriate direction button.

<<< – Moves to the previous image by increment amount

>>> – Moves to the next image by increment amount

Play Images – Goes to the Play Image tool where the images are played automatically. (aka. Incr and Decr)

Home – Returns to the DVL home page

Milepoint Log – The milepoint log that corresponds to the year of the images is displayed at the bottom of the screen. You can scroll through the log to look for a particular feature, like a City’s name or a side street. You can jump directly to the image of a specific milepoint by clicking the shaded milepoint button in the milepoint log below the image. See below for more detailed instructions for reading the milepoint log.

How to Use Play Images

Use this feature to play images of the selected highway consecutively. This works much like a VCR, with play, pause and rewind.

Increment: The images will change by increments of 0.015 mile by default, but you can change the Increment Amount. For example, entering 10 in the increment box will change the frame by 0.10 mile and 100 will change the frame by 1.00 mile. To change the increment amount, select a new increment from the pull down list.

Select New Highway - Goes back to highway selection screen where you can choose a different highway or change options for the same highway (such as choose a different year).

||<<< – Jumps to the beginning of the highway. You will need to select Play or Rewind after clicking on this choice.

|<<< – Jumps to the start of the currently selected images (+/- 2 miles of the requested milepoint) You will need to select Play or Rewind after clicking on this choice.

Rewind – Plays images backwards

Pause – Pause playing of images

Play – Plays images forward

>>> – Jumps to the end of the currently selected images (+/- 2 miles of the requested milepoint). You will need to select Play or Rewind after clicking on this choice.

>>>| – Reposition to the end of the highway. You will need to select Play or Rewind after clicking on this choice.

Display Image – Goes to the Display Image page

Home – Goes to the DVL home page

Increase / Decrease MP – Click on selection – then click on Play or Rewind

Starting MP – Click on selection – then click on Play or Rewind

Increment – Changes increment between each image.

Play Speed – The default play speed is 1 image every 3.5 second. You can choose between .25 – 5 seconds / image.

Milepoint Log - Clicking on the Highway Log button will open up a new window with a corresponding milepoint log. You can scroll through the log to look for a particular feature, and jump directly to the image of a specific milepoint by clicking the shaded milepoint button in the milepoint log. After clicking on a milepoint, minimize the milepoint log window to uncover the Play Images screen.

Reading the Milepoint Log:

Roadside features on the state highway system change regularly. With this in mind, the DVL displays the milepoint log that matches the year the pictures were taken.

The Milepoint log displays the following information for each milepoint:

Rdwy ID (Roadway ID) – This number identifies the alignment on which this milepoint exists. Rdwy ID 1 is the increasing mileage direction for traffic and Rdwy ID 2, the decreasing mileage traffic direction. The exception being Hwy. 001 (I-5), on which Rdwy 1 (southbound) is the decreasing mileage direction. *Don't even pay attention to this feature. It's an internal coding system of no consequence to the lay user.*

Mlge Type (Mileage Type) – Z = overlapping, Y = Spur, T = Temporary *Don't even pay attention to this feature. It's an internal coding system of no consequence to the lay user.*

Overlap Cd (Overlap Code) – Used with 'Z' mileage only. The milepoint overlapping code indicates the sequential order in which 'Z' mileage was added to a highway. *Don't even pay attention to this feature. It's an internal coding system of no consequence to the lay user.*

Milepoint – A number that represents the distance in miles from the original beginning of the highway. This distance, measured along the contours of the traveled roadway, is derived from construction plans and field inventory.

Dup (Duplicate) – A number of 10, 20, etc. in this column indicates multiple features at the same milepoint and engineering station.

Roadway Codes – These codes indicate the direction (left or right) and jurisdiction of intersecting roads, culverts, structures, boundaries, etc. *(The codes have been omitted from these instructions for brevity.)*

Update Cycles

Approximately one half of the state highway system is taped annually, with emphasis on Interstate and US Routes. The annual Video Log seasons run from May 1 to April 30.

The highway milepoint log report is a snapshot of data from the TransInfo. A yearly snapshot is taken at the beginning of the taping season in May.

Printing

- To print the whole page as seen on your computer screen including the menu, image and beginning of the milepoint log on one page – change to landscape mode under File/Print/Preferences, and click OK. Then choose "As laid out on screen" under Print/Options/Print Frames/OK
- To print just the menu, the image or the milepoint log alone – first click in the section you want, then click File/Print/"Only the selected frame" under Options/Print Frames/Print.
- To print everything, but each on a different page – click on File/Print/"All frames individually" under Options/Print Frames/OK.
- To print only a selected portion of the milepoint log – Highlight the section of the milepoint log wanted, click on File/Print/Change from "All" to "Selection" under Print Range/OK.

Saving an Image

- Right click on the image.
- Click on "Save Picture as"
- Go to the drive/folder you want the image saved in
- Name the file
- Choose to save it as a .jpg file
- Click save

To view the .jpg file, either double click on the file name, or open the file from within Microsoft Photo Editor.

DVL FREQUENTLY ASKED QUESTIONS (FAQ'S)

1. Why is there an occasional lag while I am viewing a highway?

The DVL automatically goes out and collects images + or - 2 miles on either side of your selected milepoint. This is done to enable faster loading speeds for viewing. Once you reach the outside range of the requested milepoint, the DVL will go out and collect the next set of images. This will result in a short pause while the needed images are stored.

2. Why do I get the error “Auto Play has been exceeded”?

This message may appear while in play mode. The purpose is to stop continuous playing of a highway by accidentally leaving the DVL playing, which can slow down the server for others. If someone begins playing a highway and the DVL reloads the +/- 2 mile images 21 times then this error message will appear.

3. Where did my buttons go on the display image screen?

Sometimes when the display image screen is in a minimized window the buttons will be below the viewable area in order to allow room to show the image. Simply drag the lower silver dividing bar directly under the image down and your buttons will appear.

4. While in 2006 season can I open both images in separate windows?

Yes you can. Simply click on each image to enlarge and they will open in their own windows. The enlarged images will automatically update to reflect the selected milepoint on the main screen.

5. Is there a web address where customers can access the DVL via the internet?

Yes there is. Direct them to

<https://zigzag.odot.state.or.us/>

[unique019ee525c2417660010f455a2e7b493f99328119c098c695358162b70c69eaec/unique0/cf/dvl/](https://zigzag.odot.state.or.us/unique019ee525c2417660010f455a2e7b493f99328119c098c695358162b70c69eaec/unique0/cf/dvl/)

6. Why do I sometimes see a red X?

This is due to a missing image. Due to the large amount of images collected occasionally one is not collected or is corrupted.

7. Why can't the images be larger on my screen while viewing the milepoint log?

Users of the DVL have various needs for display. The application was developed to be viewed in many different resolutions and screens.

8. Can I use the milepoints displayed on the video log for measuring?

Depending on your needs, the Video Log may be used to obtain or verify milepoints. Please keep in mind that the accuracy of the Video Log is +/- .02 miles. In addition, since not all highways are taped each year, there may have been construction work since the last Video Log that could have an effect on the milepoints. The most accurate and up to date milepoints can be obtained through the TransViewer reports located at http://www.oregon.gov/ODOT/TD/TDATA/pages/otms/OTMS_Highway_Reports.aspx

Why doesn't the milepoint log reflect a new construction project?

The milepoint log is a snapshot of data each May 1. Due to the timing of the milepoint log snapshot, the collection of the images and the entry of the construction plans, not all projects will be represented in the DVL.

9. Why is the route on the DVL different than I would expect?

There is not enough room on the images to list all of the routes so a hierarchy is followed: Interstates, US and then Oregon. When there is more than one kind (such as two Oregon Routes) then the lowest route number is used. There are a few exceptions to this rule where the State Highway Engineer has designated which route will be shown such as US97 in Bend instead of US20.

10. Why doesn't the DVL always show two images?

The addition of a second camera did not occur until the 2006 season. Images collected prior to 2006 utilized the single camera system.

11. I can't see the milepoints on the JPEGs while in "Play Images" mode.

This situation can occur if your monitor resolution is too low. In addition to not being able to view the milepoints, the buttons on the bottom of the page may also disappear. To remedy both of these situations check to make sure your monitor resolution is set to 1024 x 762, or above.

12. How can I get only one image to display?

This functionality has been included for those who only want to view a single image on their screen while in "Play Images" mode. You simply uncheck "Display Image" for whichever camera you would like to disappear. Recheck the box and the camera will reappear. While in "Display Images" mode, click on the image you want to display. When the new window opens, the same options for advancing images are available as in the dual image window.

APPENDIX C

STATE DISTRICT & REGION MAPS

A variety of maps are available, in both electronic and hard copy version:

City Maps	Pavement Condition Maps
County Maps	Seismic Lifeline Maps
Statewide Maps	SPIS Maps (2013)
ODOT Region Maps	Microstation Map Files
ODOT District Maps	

To access, go to the following website:

<http://www.oregon.gov/ODOT/TD/TDATA/Pages/gis/odotmaps.aspx>

APPENDIX D

HIGHWAY INVENTORY SUMMARY

Below is a screen print of the web page which you will utilize to access Highway Inventory Summary Reports. As you can see there are several different ways to search for a report; by route, by highway, or by district. Only the search by highway is addressed here.

Note: The Highway Inventory Summary is working from an outdated system. There is currently an initiative to replace this site, but we are still waiting on results. Please contact RICS to get the most updated information on this project.

You can choose to search by either the highway name or the highway number. Once you have selected the appropriate highway all you need to do is click on the search arrow in the upper left corner of the “Search by Highway” section and a list of information about the entire stretch of highway will pop up in a new window. However, you may choose to narrow your search by entering in the milepoints for the segment of road you are inventorying. You could also narrow, or even expand, your search by checking or un-checking the boxes below under “Road Type,” “Roadway ID,” and “Mileage Type.” **Note:** When you need a report containing ramp information, be sure to check the “Connections” box.

The following web page can be accessed with the following web link: http://highway.odot.state.or.us/cf/highwayreports/aml_summary_parms_by_route_no.cfm.

A variety of other reports are available here: <http://highway.intranet.odot.state.or.us/cf/highwayreports/>

Highway Inventory Summary
Data source refreshed on 12/26/2014

You can now search by route, highway or district.

Search by Signed Route

1. Select either a US or OR or Interstate Route from the pulldown boxes below.

US Route:	OR Route:	Interstate Route:
<div style="border: 1px solid #ccc; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">-- Select a US Route --</div> <ul style="list-style-type: none"> 101 101B 197 199 20 </div>	<div style="border: 1px solid #ccc; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">-- Select an OR Route --</div> <ul style="list-style-type: none"> 10 103 104 104S 11 </div>	<div style="border: 1px solid #ccc; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">-- Select an IS Route --</div> <ul style="list-style-type: none"> 105 205 405 5 82 </div>

Search by Highway

The Highway numbers seen below are the ODOT highway numbers. These numbers are not what you would see on road side signs when driving on our highways. For those not familiar with our highway numbering system there is a [Highway Cross Reference Table](#) available.

	Highway #: <input type="text" value="001"/>	Beginning Mile Point: <input type="text" value="0.00"/>
Search	Highway Name: <input type="text" value="PACIFIC"/>	Ending Mile Point: <input type="text" value="308.63"/>
Road Type	Roadway ID	Mileage Type
<input checked="" type="checkbox"/> Highways	<input checked="" type="checkbox"/> 1 Primary Roadway -- add	<input checked="" type="checkbox"/> Blank - Regular
<input type="checkbox"/> Connections	<input checked="" type="checkbox"/> 2 Primary Roadway -- non add	<input checked="" type="checkbox"/> Z - Overlap
<input type="checkbox"/> Frontage Roads	<input checked="" type="checkbox"/> 3 Split Roadway -- add	
	<input checked="" type="checkbox"/> 4 Split Roadway -- non add	
	<input checked="" type="checkbox"/> 5 Located Line	

Search by District

	District: <input type="text" value="01"/>
Search	

This section is maintained by OTMS. For change requests and questions or to report problems with an application or web site contact if you have any questions or problems please contact [RICS Unit by email](#) or call (503) 986-4251.

APPENDIX E

LIST OF ROUTES CROSS-REFERENCED WITH HIGHWAY NUMBERS & HIGHWAY NAMES

Also available online at http://www.oregon.gov/ODOT/TD/TDATA/Pages/otms/Route_Hwy_CrossRef.aspx

ODOT Hwy No. (rd_id)	Hwy Name (rd_name)	Routes
001	PACIFIC	I-5 OR138 OR99 OR99E US30
002	COLUMBIA RIVER	I-84 US30 US395 US730
003	OSWEGO	OR43
004	THE DALLES-CALIFORNIA	OR216 US197 US26 US30 US97
005	JOHN DAY	OR19 OR206 OR207 US26 US395
006	OLD OREGON TRAIL	I-84 OR203 US30 US395
007	CENTRAL OREGON	OR201 US20 US26 US395
008	OREGON-WASHINGTON	OR11 US30
009	OREGON COAST	OR255 US101
010	WALLOWA LAKE	OR82
011	ENTERPRISE-LEWISTON	OR3
012	BAKER-COPPERFIELD	OR7 OR86 OR86S
014	CROOKED RIVER	OR27
015	MCKENZIE	OR126 OR126B OR242 US20
016	SANTIAM	OR126 US20
017	MCKENZIE-BEND	US20 US97B
018	WILLAMETTE	OR58 OR99
019	FREMONT	OR140 OR31 US395
020	KLAMATH FALLS-LAKEVIEW	OR140 OR39 US97B
021	GREEN SPRINGS	OR140 OR66
022	CRATER LAKE	OR62
023	DAIRY-BONANZA	OR70
025	REDWOOD	OR99 US199
026	MT. HOOD	OR35 US26
027	ALSEA	OR34
028	PENDLETON-JOHN DAY	OR37 US395
029	TUALATIN VALLEY	OR47 OR8
030	WILLAMINA-SALEM	OR22
031	ALBANY-CORVALLIS	US20
032	THREE RIVERS	OR22
033	CORVALLIS-NEWPORT	OR34 US20
035	COOS BAY-ROSEBURG	OR42 OR99
036	PENDLETON-COLD SPRINGS	OR37

ODOT Hwy No. (rd_id)	Hwy Name (rd_name)	Routes
037	WILSON RIVER	OR6
038	OREGON CAVES	OR46
039	SALMON RIVER	OR18 OR22 OR233
040	BEAVERTON-HILLSDALE	OR10
041	OCHOCO	OR126 US26
042	SHERMAN	US97
043	MONMOUTH-INDEPENDENCE	OR51
044	WAPINITIA	OR216
045	UMPQUA	OR38 OR99
046	NECANICUM	OR53
047	SUNSET	OR47 US26
048	JOHN DAY-BURNS	US395
049	LAKEVIEW-BURNS	US395
050	KLAMATH FALLS-MALIN	OR140 OR39 US97B
051	WILSONVILLE-HUBBARD	OR551
052	HEPPNER	OR207 OR74
053	WARM SPRINGS	US26
054	UMATILLA-STANFIELD	US395
058	ALBANY-JUNCTION CITY	OR99E US20
060	ROGUE RIVER	OR99
061	STADIUM FREEWAY	I-405 US26 US30
062	FLORENCE-EUGENE	OR126
063	ROGUE VALLEY	OR99
064	EAST PORTLAND FREEWAY	I-205 OR213 OR224
066	LA GRANDE-BAKER	OR203 OR237 OR7 US30
067	PENDLETON	OR37 US30
068	CASCADE HWY NORTH	OR213
069	BELTLINE	OR69 OR126 OR569
070	MCNARY	I-82 US395
071	WHITNEY	OR7
072	SALEM	OR22 OR99EB
081	PACIFIC HIGHWAY EAST	OR214 OR99E
091	PACIFIC HIGHWAY WEST	OR10 OR126 OR126B OR219 OR34 OR99 OR99W US20
092	LOWER COLUMBIA RIVER	US30
100	HISTORIC COLUMBIA RIVER	OR35 US30
102	NEHALEM	OR202 OR47 US101B
103	FISHHAWK FALLS	OR103
104	FORT STEVENS	OR104

ODOT Hwy No. (rd_id)	Hwy Name (rd_name)	Routes
105	WARRENTON-ASTORIA	US101B
110	MIST-CLATSKANIE	OR47
120	SWIFT	OR120
123	NORTHEAST PORTLAND	US30BY
130	LITTLE NESTUCCA	OR130
131	NETARTS	OR131
138	NORTH UMPQUA	OR138 OR99
140	HILLSBORO-SILVERTON	OR214 OR219 OR99W
141	BEAVERTON-TUALATIN	OR141
142	FARMINGTON	OR10
143	SCHOLLS	OR210
144	BEAVERTON-TIGARD	OR217
150	SALEM-DAYTON	OR221
151	YAMHILL-NEWBERG	OR240
153	BELLEVUE-HOPEWELL	OR153 OR99W
154	LAFAYETTE	OR154 OR233
155	AMITY-DAYTON	OR233
157	WILLAMINA-SHERIDAN	OR18B
160	CASCADE HWY SOUTH	OR213
161	WOODBURN-ESTACADA	OR211
162	NORTH SANTIAM	OR22
163	SILVER CREEK FALLS	OR214
164	JEFFERSON	OR164
171	CLACKAMAS	OR211 OR212 OR213 OR224
172	EAGLE CREEK-SANDY	OR211
173	TIMBERLINE	OR173
174	CLACKAMAS-BORING	OR212
180	EDDYVILLE-BLODGETT	OR180
181	SILETZ	OR229
189	DALLAS-RICKREALL	OR223
191	KINGS VALLEY	OR223
193	INDEPENDENCE	OR51
194	MONMOUTH	OR194
200	TERRITORIAL	OR200
201	ALSEA-DEADWOOD	OR501
210	CORVALLIS-LEBANON	OR34 US20
211	ALBANY-LYONS	OR226
212	HALSEY-SWEET HOME	OR228

ODOT Hwy No. (rd_id)	Hwy Name (rd_name)	Routes
215	CLEAR LAKE-BELKNAP SPRINGS	OR126
222	SPRINGFIELD-CRESWELL	OR222
225	MCVAY	OR225
226	GOSHEN-DIVIDE	OR99
227	EUGENE-SPRINGFIELD	I-105 OR126
228	SPRINGFIELD	OR528
229	MAPLETON-JUNCTION CITY	OR36
230	TILLER-TRAIL	OR227
231	ELKTON-SUTHERLIN	OR138
233	WEST DIAMOND LAKE	OR230
240	CAPE ARAGO	OR540
241	COOS RIVER	OR241
242	POWERS	OR542
244	COQUILLE-BANDON	OR42S
250	CAPE BLANCO	OR250
251	PORT ORFORD	OR251
255	CARPENTERVILLE	OR255
260	ROGUE RIVER LOOP	OR260
270	LAKE OF THE WOODS	OR140
271	SAMS VALLEY	OR234 OR99
272	JACKSONVILLE	OR238
273	SISKIYOU	OR273
281	HOOD RIVER	OR281
282	ODELL	OR282
290	SHERARS BRIDGE	OR216
291	SHANIKO-FOSSIL	OR218
292	MOSIER-THE DALLES	US30
293	ANTELOPE	OR293
300	WASCO-HEPPNER	OR206 OR207
301	CELILO-WASCO	OR206
320	LEXINGTON-ECHO	OR207
321	HEPPNER-SPRAY	OR207
330	WESTON-ELGIN	OR204
331	UMATILLA MISSION	OR331
332	SUNNYSIDE-UMAPINE	OR332
333	HERMISTON	OR207
334	ATHENA-HOLDMAN	OR334
335	HAVANA-HELIX	OR335

ODOT Hwy No. (rd_id)	Hwy Name (rd_name)	Routes
339	FREEWATER	OR339
340	MEDICAL SPRINGS	OR203
341	UKIAH-HILGARD	OR244
342	COVE	OR237
350	LITTLE SHEEP CREEK	OR350
351	JOSEPH-WALLOWA LAKE	OR351
360	MADRAS-PRINEVILLE	US26
361	CULVER	OR361
370	O'NEIL	OR370
380	PAULINA	OR380
390	SERVICE CREEK-MITCHELL	OR207
402	KIMBERLY-LONG CREEK	OR402
410	SUMPTER	OR410
413	HALFWAY-CORNUCOPIA	OR413
414	PINE CREEK	OR414
415	DOOLEY MOUNTAIN	OR245
422	CHILOQUIN	OR422
424	SOUTH KLAMATH FALLS	OR140
426	HATFIELD	OR39
429	CRESCENT LAKE	OR429
431	WARNER	OR140
440	FRENCHGLEN	OR205
442	STEENS	OR78
449	HUNTINGTON	US30
450	SUCCOR CREEK	OR201
451	VALE-WEST	OR451
453	ADRIAN-ARENA VALLEY	OR453
454	ADRIAN-CALDWELL	OR454
455	OLDS FERRY-ONTARIO	OR201
456	I.O.N.	US95
480	REDMOND SPUR	US97B
481	BAKER-COPPERFIELD SPUR	OR86S
483	MCMINNVILLE SPUR	OR18
484	ESPLANADE SPUR	US97B
485	FORT STEVENS SPUR	OR104S
486	GOLD HILL SPUR	OR99 OR234
488	CHILOQUIN SPUR	OR422S
489	PARMA SPUR	OR452

ODOT Hwy No. (rd_id)	Hwy Name (rd_name)	Routes
490	HOMEDALE SPUR	OR201
491	WEISER SPUR	US95S
492	PAYETTE SPUR	OR52
493	ONTARIO SPUR	US30 US30B