

Stormwater Standards

Clackamas County Service District No. 1

APPENDIX I

DETENTION ACCESS STANDARDS FOR PUBLIC MAINTAINED FACILITY

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DETENTION ACCESS STANDARDS FOR PUBLIC MAINTAINED FACILITY

I.1 Introduction

Access roads are for maintenance purposes. The following criteria are considered to be the minimum required by Water Environment Services. Other permitting jurisdictions may have more restrictive requirements.

I.2 Specification Table

SLOPE	WIDTH		SURFACE MATERIAL	ACCESS 80,000 LB	STRUCTURAL
	EASMT.	GRVL.	MINIMUM		
SL < 8%	15-ft	12-ft	GRAVEL	N/A	8-INCH GRAVEL FILTER FABRIC
SLOPE	TRACT	PVMT.	SURFACE MATERIAL	ACCESS 80,000 LB	STRUCTURAL
SL >8% < 12%	15	12	GRAVEL	W/ TURNAROUND	8-INCH GRAVEL FILTER FABRIC
SL >8% < 12%	15	12	2-INCH A.C.	W/O TURNAROUND	8-INCH GRAVEL FILTER FABRIC
SL >12% <15%	20	15	2-INCH A.C.	W/ TURNAROUND W/ LANDING	8-INCH GRAVEL FILTER FABRIC
CONTACT DISTRICT					
SLOPE	TRACT	PVMT.	SURFACE MATERIAL	ACCESS 80,000 LB	STRUCTURAL
SL >15% <20%	20	13	3-INCH A.C.	W/ TURNAROUND W/ LANDING	8-INCH GRAVEL FILTER FABRIC

I.3 General Requirements

A Profile of the access road is required.

Maximum grade:

- 15-percent with a maximum 3-percent cross-slope.
- Special permission is required for grades over 15-percent.

Minimum width of surface:

- 12-feet on straight runs and 15-feet on curves.
- Curves will be designed with a minimum 40-foot interior radius.
- Access will extend to within 10-feet of all Pollution control structures unless otherwise approved by the District.
- Access roads in excess of 150-ft in length is required to have a turnaround.
- Turnaround is required when access is taken from a collector or arterial roadway.

I.4 Tracts

All access roads shall be placed in a Tract unless prior permission is received from the District. The applicant shall provide additional protection for the access roads, including fencing, signs and access when an Easement is granted.

I.5 Design**Access Road:**

- a) Horizontal curves a) Minimum Radius for (inside) = 40-feet
 - i. Vertical Curves a) Crest maximum K = 4
- b) Vertical Curves
 - i. Crest maximum K = 4
 - ii. Sag maximum K = 6
 - a. Where $K = L/A$
 L= algebraic difference in grades percent
 A= length of vertical curve (feet)

Landing:

- c) Maximum slope = 4%
- d) Minimum length of 40-ft

Turnaround:

- e) Design per Clackamas County Roadway Standards – Detail C350
- f) Maximum cross slope = 4%
- g) Minimum width of the access road 12-ft
 - i. Minimum radius for (inside) = 30-ft

Typical Surface:

- h) Three 3-inches of class “B” asphaltic concrete and 2-inches of $\frac{3}{4}$ ”-0” compacted crushed rock; over 8-inches of $1\frac{1}{2}$ ”-0” compacted crushed rock; over subgrade compacted to 95-percent AASHTO T-99.
- i) The design engineer may submit a certified road design capable of supporting a 30-tons maintenance vehicle in all weather conditions.

Driveway Access:

- j) All access roads shall have a standard driveway with 6” of concrete over 2” of gravel. The plan will include design of strengthened sidewalk sections (6-inches of Concrete minimum) where maintenance vehicles will cross. (See D600 Clackamas County Department of Transportation).

Driveway Access:

- k) The final plan will have to show how maintenance equipment will safely access the pond. At least one side of the detention pond is required to have an access suitable for maintenance equipment (backhoe etc.). We require direct access to the pond of 15-feet wide and slopes of 4:1 or flatter.