
 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 1

STATION: 10+00

DRAINAGE AREA: .09 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA

Cross-Slope	S (m/m)	Sx (m/m)	n	Q (m ³ /s)	T (m)
-----	-----	-----	-----	-----	-----
Composite	0.0120	0.0200	0.016	0.020	1.827

GUTTER FLOW

W (m)	Sw (m/m)	a (mm)	Eo	d (mm)	V (m/s)
-----	-----	-----	-----	-----	-----
0.397	0.0250	N/A	0.679	39.611	0.582

INLET INTERCEPTION

Inlet Type	L (m)	W (m)	E	Qi (m ³ /s)	Qb (m ³ /s)
-----	-----	-----	-----	-----	-----
Curved Vane	0.879	0.397	0.782	0.015	0.005

HIGHWAY DRAINAGE DESIGN EXAMPLE

Figure 36-16B(1)

 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 2

STATION: 10+00

DRAINAGE AREA: .09 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA

Cross-Slope	S (m/m)	Sx (m/m)	n	Q (m ³ /s)	T (m)
-----	-----	-----	-----	-----	-----
Composite	0.0120	0.0200	0.016	0.020	1.827

GUTTER FLOW

W (m)	Sw (m/m)	a (mm)	Eo	d (mm)	V (m/s)
-----	-----	-----	-----	-----	-----
0.397	0.0250	N/A	0.679	39.611	0.582

INLET INTERCEPTION

Inlet Type	L (m)	W (m)	E	Qi (m ³ /s)	Qb (m ³ /s)
-----	-----	-----	-----	-----	-----
Curved Vane	0.879	0.397	0.782	0.015	0.005

HIGHWAY DRAINAGE DESIGN EXAMPLE
 (continued)

Figure 36-16B(1)

 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 3

STATION: 10+42.7

DRAINAGE AREA: .08 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA

Cross-Slope	S (m/m)	Sx (m/m)	n	Q (m ³ /s)	T (m)
Composite	0.0120	0.0200	0.016	0.020	1.827

GUTTER FLOW

W (m)	Sw (m/m)	a (mm)	Eo	d (mm)	V (m/s)
0.397	0.0250	N/A	0.679	39.611	0.582

INLET INTERCEPTION

Inlet Type	L (m)	W (m)	E	Qi (m ³ /s)	Qb (m ³ /s)
Curved Vane	0.879	0.397	0.782	0.015	0.005

HIGHWAY DRAINAGE DESIGN EXAMPLE
 (continued)

Figure 36-16B(1)

 ***** FHWA URBAN DRAINAGE DESIGN PROGRAMS *****
 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 4

STATION: Street

DRAINAGE AREA: .17 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA

Cross-Slope	Sx (m/m)	Sw (m/m)	n	W (m)	a (mm)
-----	-----	-----	-----	-----	-----
Composite	0.020	0.025	0.016	0.397	0.00

INLET INTERCEPTION

Inlet Type * Sag *	L (m)	W (m)	T (m)	d (m)	Qi (m ³ /s)
-----	-----	-----	-----	-----	-----
Curved Vane	1.760	0.397	2.004	0.042	0.034

HIGHWAY DRAINAGE DESIGN EXAMPLE
 (continued)

Figure 36-16B(1)

 ***** FHWA URBAN DRAINAGE DESIGN PROGRAMS *****
 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 5

STATION: Street

DRAINAGE AREA: .18 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA

Cross-Slope	Sx (m/m)	Sw (m/m)	n	W (m)	a (mm)
-----	-----	-----	-----	-----	-----
Composite	0.020	0.025	0.016	0.397	0.00

INLET INTERCEPTION

Inlet Type * Sag *	L (m)	W (m)	T (m)	d (m)	Qi (m ³ /s)
-----	-----	-----	-----	-----	-----
Curved Vane	1.760	0.397	2.043	0.043	0.035

HIGHWAY DRAINAGE DESIGN EXAMPLE
 (continued)

Figure 36-16B(1)

 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 6

STATION: 11+00

DRAINAGE AREA: .04 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA

Cross-Slope	S (m/m)	Sx (m/m)	n	Q (m ³ /s)	T (m)
-----	-----	-----	-----	-----	-----
Composite	0.0120	0.0200	0.016	0.017	1.715

GUTTER FLOW

W (m)	Sw (m/m)	a (mm)	Eo	d (mm)	V (m/s)
-----	-----	-----	-----	-----	-----
0.397	0.0250	N/A	0.708	37.358	0.560

INLET INTERCEPTION

Inlet Type	L (m)	W (m)	E	Qi (m ³ /s)	Qb (m ³ /s)
-----	-----	-----	-----	-----	-----
Curved Vane	0.879	0.397	0.807	0.013	0.004

HIGHWAY DRAINAGE DESIGN EXAMPLE
 (continued)

Figure 36-16B(1)

 ***** ROADWAY DRAINAGE DESIGN *****

DESIGNER: INDOT

DATE: 09-02-1998

PROJECT: Example

PROJECT NO.:

INLET NO.: 7

STATION: 1A+00

DRAINAGE AREA: .12 Hectares

DESIGN FREQUENCY: 10 Years

ROADWAY & DISCHARGE DATA					
Cross-Slope	S (m/m)	Sx (m/m)	n	Q (m ³ /s)	T (m)
-----	-----	-----	-----	-----	-----
Composite	0.0120	0.0200	0.016	0.020	1.827

GUTTER FLOW					
W (m)	Sw (m/m)	a (mm)	Eo	d (mm)	V (m/s)
-----	-----	-----	-----	-----	-----
0.397	0.0250	N/A	0.679	39.611	0.582

INLET INTERCEPTION					
Inlet Type	L (m)	W (m)	E	Qi (m ³ /s)	Qb (m ³ /s)
-----	-----	-----	-----	-----	-----
Curved Vane	0.879	0.397	0.782	0.015	0.005

HIGHWAY DRAINAGE DESIGN EXAMPLE
 (continued)

Figure 36-16B(1)