Example Calculations for Non-compliant Crossing Cost Sharing

Industrial Sites

Interior Lots

1. Frontage of 140 ft (42.7 m), one 35 ft (10.7 m) crossing with a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
10.7 x 4.0 = 42.8	$169.00	$7,233.20	12.7	$215.00	$2,730.50	$9,963.70	$1,425.60	$855.36	$570.24	$0	$9,393.46	$570.24
										Cost Sharing Totals:	**$9,393.46**	**$570.24**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- In this scenario, the City would pay for 30 ft (9.1 m) of asphalt crossing with an underlying culvert. Costs exceeding this standard amount are cost shared between the City (60%) and property owner (40%).

2. Frontage of 160 ft (48.8 m), one 35 ft (10.7 m) crossing with a culvert and one 45 ft (13.7 m) crossing without a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
10.7 x 4.0 = 42.8	$169.00	$7,233.20	12.7	$215.00	$2,730.50	$9,963.70	$0	$0	$0	$0	$9,963.70	$0
13.7 x 4.0 = 54.8	$169.00	$9,261.20	15.7	$215.00	$3,375.50	$12,636.70	$1,014.00	$608.40	$405.60	$3,375.50	$8,855.60	$3,781.10
										Cost Sharing Totals:	**$18,819.30**	**$3,781.10**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- In this scenario for the first crossing (10.7 m with a culvert), the crossing width is less than 12.2 m so the City would pay for this compliant crossing.
- In this scenario for the second crossing (13.7 m without a culvert), the crossing width exceeds the maximum amount (12.2 m), so the property owner would be responsible for 40% of the crossing reconstruction of 1.5 m, plus 100% of the culvert.

Corner Lots

1. Frontage of 160 ft (48.8 m), with one 45 ft (13.7 m) crossing with a culvert and one 35 ft (10.7 m) crossing without a culvert. Flankage is 140 ft (42.7 m), with one 35 ft (10.7 m) crossing without a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
13.7 x 4.0 = 54.8	$169.00	$9,261.20	15.7	$215.00	$3,375.50	$12,636.70	$1,336.50	$801.90	$534.60	$0	$12,102.10	$534.60
10.7 x 4.0 = 42.8	$169.00	$7,233.20	12.7	$215.00	$2,730.50	$9,963.70	$0	$0	$0	$2,730.50	$7,233.20	$2,730.50
10.7 x 4.0 = 42.8	$169.00	$7,233.20	12.7	$215.00	$2,730.50	$9,963.70	$1,081.60	$648.96	$432.64	$2,730.50	$6,800.56	$3,163.14
										Cost Sharing Totals:	**$26,135.86**	**$6,428.24**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- In this scenario, the frontage is over 45.7 m, so the City will pay for 12.2 m of crossing with an underlying culvert for each crossing with a culvert. The first crossing is over this amount, so the property owner pays 40% of the 1.5 m crossing and culvert reconstruction. The second crossing is smaller than 12.2 m, so the City pays for 100% of the crossing material reconstruction costs; however, the crossing doesn't have an existing culvert, so these costs are due to the property owner (100%).
- In this scenario, the flankage is less than 45.7 m with one crossing, the City is paying for 9.1 m of crossing. The crossing doesn't have an existing culvert, so these costs are due to the property owner.

Commercial Sites

Interior Lots

1. Frontage of 90 ft (27.4 m), with one 25 ft (7.6 m) crossing with a culvert and one 20 ft (6.1 m) crossing with a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
7.6 x 4.0 = 30.4	$169.00	$5,137.60	9.6	$215.00	$2,064.00	$7,201.60	$0	$0	$0	$0	$7,201.60	$0
6.1 x 4.0 = 24.4	$169.00	$4,123.60	8.1	$215.00	$1,741.50	$5,865.10	$3,949.45	$2,369.67	$1,579.78	$0	$4,285.32	$1,579.78
Cost Sharing Totals:											**$11,486.92**	**$1,579.78**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- In this scenario, the site's an interior commercial lot with a frontage of less than 30.5 m with two crossings. The City would pay for 9.75 m of crossing with underlying culverts as both crossings have an existing culvert. The property owner would cost share (40%) of the crossing and culvert widths that exceed the standard amount.

2. Frontage of 150 ft (45.7 m), with one 40 ft (12.2 m) crossing with a culvert and one 30 ft (9.1 m) crossing with a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
12.2 x 4.0 = 48.8	$169.00	$8,247.20	14.2	$215.00	$3,053.00	$11,300.20	$0	$0	$0	$0	$11,300.20	$0
9.1 x 4.0 = 36.4	$169.00	$6,151.60	11.1	$215.00	$2,386.50	$8,538.10	$3,103.00	$1,861.80	$1,241.20	$0	$7,296.90	$1,241.20
Cost Sharing Totals:											**$18,597.10**	**$1,241.20**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- In this scenario, the sites an interior commercial lot with a frontage between 30.5 m and 60.1 m with two crossings. The City would pay for 18.3 m of crossing with underlying culverts as both crossings have an existing culvert. The property owner would cost share (40%) of the crossing and culvert widths that exceed the standard amount.

3. Frontage of 210 ft (64.0 m), one crossing is 50 ft (15.2 m) with a culvert and one crossing is 35 ft (10.7 m) without a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
15.2 x 4.0 = 60.8	$169.00	$10,275.20	17.2	$215.00	$3,698.00	$13,973.20	$2,673.00	$1,603.80	$1,069.20	$0	$12,904.00	$1,069.20
10.7 x 4.0 = 42.8	$169.00	$7,233.20	12.7	$215.00	$2,730.50	$9,963.70	$0	$0	$0	$2,730.50	$7,233.20	$2,730.50
										Cost Sharing Totals:	**$20,137.20**	**$3,799.70**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- In this scenario, the interior commercial lot frontage is greater than 60.1 m. The City would pay for 12.2 m of asphalt crossing with an underlying culvert for each crossing that has a culvert. As the second crossing doesn't have an existing culvert, these costs would be due to the property owner (100%).

Corner Lots

1. A site with a 20 ft (6.1 m) crossing with a culvert, a 20 ft (6.1 m) crossing with a culvert, and a 40 ft (12.2 m) crossing without a culvert

Construction Cost							Cost Sharing					
Driveway			Culvert			Total Cost (G = C + F)	Cost Sharing Total (H = property specific)	Cost Sharing Breakdown				
Area (A)	Material Unit Rate (B)	Driveway Total (C = A x B)	Length (D)	Material Unit Rate (E)	Culvert Total (F = D x E)			City, 60% (I = H * .6)	Property Owner, 40% (J = H * .4)	Property Owner 100% Culvert Costs (if applicable) (K = F)	Total City Costs (L = property specific)	Total Property Owner Costs (M = property specific)
6.1 x 4.0 = 24.4	$169.00	$4,123.60	8.1	$215.00	$1,741.50	$5,865.10	$0	$0	$0	$0	$5,865.10	$0
6.1 x 4.0 = 24.4	$169.00	$4,123.60	8.1	$215.00	$1,741.50	$5,865.10	$0	$0	$0	$0	$5,865.10	$0
12.2 x 4.0 = 48.8	$169.00	$8,247.20	14.2	$215.00	$3,053.00	$11,300.20	$3,109.60	$1,865.76	$1,243.84	$3,053.00	$7,003.36	$4,296.84
										Cost Sharing Totals:	**$18,733.56**	**$4,296.84**

- Typically, the average length we are excavating into a crossing is 4.0 m. This dimension is used in the Area calculation in Cell A.
- This site is corner commercial lot, which the City would pay for 19.8 m of asphalt crossing with an underlying culvert for each crossing that has a culvert. This property owner would be responsible for 40% of the crossing exceeding this amount (4.6 m) plus the culvert (100%) for the third crossing as it does not have an existing culvert.