

**Appendix F**  
**Costing Estimates**

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia

South High Street Intersection



(printed)

06/19/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
00100	Mobilization	LS	1	\$96,000	\$96,000
00101	Construction Surveying	LS	1	\$70,400	\$70,400
00110	Clearing and Grubbing	LS	1	\$4,000	\$4,000
00120	Regular Excavation	CY	1,000	\$36	\$36,000
00125	Grading	LS	1	\$4,500	\$4,500
00585	Underdrain UD-2	LF	250	\$15	\$3,750
00588	Underdrain UD-4	LF	400	\$12	\$4,800
00595	Outlet Pipe	LF	0	\$20	\$0
00596	Endwall EW-12	EA	0	\$390	\$0
01152	15" Conc. Pipe	LF	350	\$60	\$21,000
01182	18" Conc. Pipe	LF	100	\$85	\$8,500
01242	24" Conc. Pipe	LF	0	\$100	\$0
01302	30" Conc. Pipe	LF	0	\$140	\$0
06818	Drop Inlet DI-3B, L=6'	EA	5	\$3,500	\$17,500
09056	Manhole MH-1 or 2	LF	0	\$650	\$0
10099	Aggr. Matl. No. 21A or 21B	TON	700	\$26	\$18,200
10610	Asphalt Concrete Ty. IM-19.0A	TON	200	\$80	\$16,000
10628	Flexible Pave. Planing 0"-2"	SY	1,900	\$16	\$30,400
10635	Asphalt Concrete Ty. SM-9.5A	TON	300	\$120	\$36,000
10642	Asphalt Concrete Ty. BM-25.0A	TON	350	\$105	\$36,750
12020	Std. Curb CG-2	LF	0	\$20	\$0
12022	Radial Curb CG-2	LF	550	\$26	\$14,300
12600	Std. Comb. Curb & Gutter CG-6	LF	200	\$20	\$4,000
12610	Rad. Comb. Curb & Gutter CG-6	LF	700	\$30	\$21,000
12920	Entrance Gutter CG-9B	SY	150	\$70	\$10,500
13108	CG-12 Detectable Warning Surface	SY	70	\$250	\$17,500
13114	Entrance Gutter CG-13	SY	100	\$80	\$8,000

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia  
 South High Street Intersection



(printed) 06/19/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
13220	Hydr. Cement Conc. Sidewalk 4"	SY	300	\$45	\$13,500
13510	Directional Island Curb SI-3	LF	500	\$60	\$30,000
13520	Retaining Wall RW-2	CY	0	\$867	\$0
14100	Removal of Sidewalk and Entrance	SY	350	\$20	\$7,000
14120	Removal of Comb. Curb and Gutter	LF	600	\$15	\$9,000
24265	NS Maintenance of Traffic	LS	1	\$100,000	\$100,000
24430	Demo. of Pavement (Flexible)	SY	350	\$20	\$7,000
24535	NS Adjust Exist. Manhole	EA	1	\$600	\$600
24801	NS Remove Exist. Drop Inlet	EA	2	\$400	\$800
24834	NS Adjust Exist. Drop Inlet	EA	0	\$500	\$0
27022	Topsoil Class B 2"	ACRE	0.2	\$15,000	\$3,289
27300	Sod	SY	1,100	\$10	\$11,000
51910	Sawcut	LF	850	\$16	\$13,600
60403	Concrete Class A3	CY	70	\$750	\$52,500
85011	NS Stormwater management facility	LS	1	\$6,000	\$6,000
85011	NS Erosion and Sediment Control	LS	1	\$2,500	\$2,500
85011	NS Pavement Marking	LS	1	\$31,244	\$31,500
85011	NS Traffic Signage	LS	1	\$19,600	\$19,600
85011	NS Utility Relocation	LS	1	\$93,800	\$93,800
85011	NS Right of Way	LS	1	\$19,433	\$19,500

Subtotal (without Mobilization & Construction Surveying)		\$734,000
Mobilization & Construction Surveying		\$166,400
Contingency	35%	\$257,000
<b>Total, Construction</b>		<b>\$1,158,000</b>
Engineering Cost	25%	\$290,000
<b>Total Project Cost</b>		<b>\$1,448,000</b>

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia

South High Street Intersection



(printed)

06/19/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
00100	Mobilization	LS	1	\$73,000	\$73,000
00101	Construction Surveying	LS	1	\$48,700	\$48,700
00110	Clearing and Grubbing	LS	1	\$3,000	\$3,000
00120	Regular Excavation	CY	500	\$36	\$18,000
00125	Grading	LS	1	\$3,000	\$3,000
00585	Underdrain UD-2	LF	0	\$15	\$0
00588	Underdrain UD-4	LF	250	\$12	\$3,000
00595	Outlet Pipe	LF	0	\$20	\$0
00596	Endwall EW-12	EA	0	\$390	\$0
01152	15" Conc. Pipe	LF	0	\$60	\$0
01182	18" Conc. Pipe	LF	150	\$85	\$12,750
01242	24" Conc. Pipe	LF	250	\$100	\$25,000
01302	30" Conc. Pipe	LF	0	\$140	\$0
06818	Drop Inlet DI-3B, L=6'	EA	3	\$3,500	\$10,500
09056	Manhole MH-1 or 2	LF	0	\$650	\$0
10099	Aggr. Matl. No. 21A or 21B	TON	300	\$26	\$7,800
10610	Asphalt Concrete Ty. IM-19.0A	TON	150	\$80	\$12,000
10628	Flexible Pave. Planing 0"-2"	SY	2,550	\$16	\$40,800
10635	Asphalt Concrete Ty. SM-9.5A	TON	300	\$120	\$36,000
10642	Asphalt Concrete Ty. BM-25.0A	TON	150	\$105	\$15,750
12020	Std. Curb CG-2	LF	350	\$20	\$7,000
12022	Radial Curb CG-2	LF	100	\$26	\$2,600
12600	Std. Comb. Curb & Gutter CG-6	LF	550	\$20	\$11,000
12610	Rad. Comb. Curb & Gutter CG-6	LF	350	\$30	\$10,500
12920	Entrance Gutter CG-9B	SY	0	\$70	\$0
13108	Detectable Warning Surface CG-12	SY	50	\$250	\$12,500
13114	Entrance Gutter CG-13	SY	200	\$80	\$16,000

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia  
 South High Street Intersection



(printed) 06/19/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
13220	Hydr. Cement Conc. Sidewalk 4"	SY	150	\$45	\$6,750
13510	Directional Island Curb SI-3	LF	0	\$60	\$0
13520	Retaining Wall RW-2	CY	0	\$867	\$0
14100	Removal of Sidewalk and Entrance	SY	200	\$20	\$4,000
14120	Removal of Comb. Curb and Gutter	LF	450	\$15	\$6,750
24265	NS Maintenance of Traffic	LS	1	\$80,000	\$80,000
24430	Demo. of Pavement (Flexible)	SY	150	\$20	\$3,000
24535	NS Adjust Exist. Manhole	EA	1	\$600	\$600
24801	NS Remove Exist. Drop Inlet	EA	2	\$400	\$800
24834	NS Adjust Exist. Drop Inlet	EA	0	\$500	\$0
27022	Topsoil Class B 2"	ACRE	0.2	\$15,000	\$3,406
27300	Sod	SY	1,100	\$10	\$11,000
51910	Sawcut	LF	500	\$16	\$8,000
60403	Concrete Class A3	CY	10	\$750	\$7,500
85011	NS Stormwater management facility	LS	1	\$6,000	\$6,000
85011	NS Erosion and Sediment Control	LS	1	\$2,000	\$2,000
85011	NS Pavement Marking	LS	1	\$29,046	\$29,500
85011	NS Traffic Signage	LS	1	\$14,000	\$14,000
85011	NS Utility Relocation	LS	1	\$63,800	\$63,800
85011	NS Right of Way	LS	1	\$15,959	\$16,000

Subtotal (without Mobilization & Construction Surveying)		\$511,000
Mobilization & Construction Surveying		\$121,700
Contingency	35%	\$179,000
<b>Total, Construction</b>		<b>\$812,000</b>
Engineering Cost	25%	\$203,000
<b>Total Project Cost</b>		<b>\$1,015,000</b>

## Concept Level Construction Cost Estimate

Gordonsville, Virginia

South High Street Intersection

(printed) 06/19/13



### Assumptions:

- 1 Reflects estimated pavement section of 2" SM, 2" IM, 6" BM over 12" 21 A or B base course.
- 2 Contingency includes costs related to erosion and sediment control, miscellaneous items, and aspects of work unidentified or unquantified to date.
- 3 Costs do not include VDOT administrative costs, financing, or staffing.
- 4 Estimate reflects development of preliminary design work products as of the date shown.
- 5 Estimate does not include the environmental mitigation measures.
- 6 Assumes compliance with current state statutes and DCR regulations regarding storm water management.
- 7 Assumes no lighting improvements.
- 8 Assumes all existing features to remain are ADA compliant.
- 9 Assumes that design waivers and design exceptions for the proposed layout will be approved by VDOT, as needed.
- 10 For NS Pavement Marking: Ty. B CL IV Pave. Line Mark 4" 4.5\$ per LF for pavement marking and 220\$ per arrows

### Roundabout specific:

- 11 For NS Traffic Signage: 56 signs 30"X30" 40\$ per square feet raise by 1.4 to account for ground mount sign post
- 12 NS Utility Relocation: 1200 to relocate fire hydrant, 1300 to adjust water manhole, 15000 to relocate utility pole
- 13 NS Right of Way: 75000 per acre and raise by 1.3 to account for temporary easement. R/W take from OC F&R 2665 SF and from Mr. A.W 6020 SF

### Conventional Intersection Improvement specific:

- 14 For NS Traffic Signage: 40 signs 30"X30" 40\$ per square feet raise by 1.4 to account for ground mount sign post
- 15 NS Utility Relocation: 1200 to relocate fire hydrant, 1300 to adjust water manhole, 15000 to relocate street lighting pole
- 16 NS Right of Way: 75000 per acre and raise by 1.3 to account for temporary easement. R/W take from OC F&R 229 SF and from Mr. A.W 6828 SF

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia

Alternative I: North High Street Intersection (Roundabout)



(printed)

06/18/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
00100	Mobilization	LS	1	\$115,000	\$115,000
00101	Construction Surveying	LS	1	\$91,500	\$91,500
00110	Clearing and Grubbing	LS	1	\$4,000	\$4,000
00120	Regular Excavation	CY	2,550	\$36	\$91,800
00125	Grading	LS	1	\$6,500	\$6,500
00585	Underdrain UD-2	LF	200	\$15	\$3,000
00588	Underdrain UD-4	LF	700	\$12	\$8,400
00595	Outlet Pipe	LF	0	\$20	\$0
00596	Endwall EW-12	EA	1	\$390	\$390
01152	15" Conc. Pipe	LF	150	\$60	\$9,000
01182	18" Conc. Pipe	LF	300	\$85	\$25,500
01242	24" Conc. Pipe	LF	200	\$100	\$20,000
01302	30" Conc. Pipe	LF	0	\$140	\$0
06818	Drop Inlet DI-3B, L=6'	EA	6	\$3,500	\$21,000
09056	Manhole MH-1 or 2	LF	0	\$650	\$0
10099	Aggr. Matl. No. 21A or 21B	TON	1,150	\$26	\$29,900
10610	Asphalt Concrete Ty. IM-19.0A	TON	300	\$80	\$24,000
10628	Flexible Pave. Planing 0"-2"	SY	2,400	\$16	\$38,400
10635	Asphalt Concrete Ty. SM-9.5A	TON	400	\$120	\$48,000
10642	Asphalt Concrete Ty. BM-25.0A	TON	600	\$105	\$63,000
12020	Std. Curb CG-2	LF	400	\$20	\$8,000
12022	Radial Curb CG-2	LF	650	\$26	\$16,900
12600	Std. Comb. Curb & Gutter CG-6	LF	800	\$20	\$16,000
12610	Rad. Comb. Curb & Gutter CG-6	LF	650	\$30	\$19,500
12920	Entrance Gutter CG-9B	SY	0	\$70	\$0
13108	CG-12 Detectable Warning Surface	SY	40	\$250	\$10,000
13114	Entrance Gutter CG-13	SY	100	\$80	\$8,000

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia

Alternative I: North High Street Intersection (Roundabout)



(printed)

06/18/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
13220	Hydr. Cement Conc. Sidewalk 4"	SY	450	\$45	\$20,250
13510	Directional Island Curb SI-3	LF	450	\$40	\$18,000
13520	Retaining Wall RW-2	CY	100	\$867	\$86,700
14100	Removal of Sidewalk and Entrance	SY	100	\$20	\$2,000
14120	Removal of Comb. Curb and Gutter	LF	1,200	\$15	\$18,000
24265	NS Maintenance of Traffic	LS	1	\$100,000	\$100,000
24430	Demo. of Pavement (Flexible)	SY	250	\$20	\$5,000
24535	NS Adjust Exist. Manhole	EA	0	\$600	\$0
24801	NS Remove Exist. Drop Inlet	EA	0	\$400	\$0
24834	NS Adjust Exist. Drop Inlet	EA	1	\$500	\$500
27022	Topsoil Class B 2"	ACRE	0	\$15,000	\$5,720
27300	Sod	SY	1,850	\$10	\$18,500
51910	Sawcut	LF	1,050	\$16	\$16,800
60403	Concrete Class A3	CY	90	\$750	\$67,500
85011	NS Stormwater management facility	LS	1	\$6,000	\$6,000
85011	NS Erosion and Sediment Control	LS	1	\$2,500	\$2,500
85011	NS Pavement Marking	LS	1	\$24,534	\$25,000
85011	NS Traffic Signage	LS	1	\$21,000	\$21,000
85011	NS Utility Relocation	LS	1	\$56,500	\$56,500
85011	NS Right of Way	LS	1	\$30,924	\$31,000

Subtotal (without Mobilization & Construction Surveying)		\$973,000
Mobilization & Construction Surveying		\$206,500
Contingency	35%	\$341,000
<b>Total, Construction</b>		<b>\$1,521,000</b>
Engineering Cost	25%	\$381,000
<b>Total Project Cost</b>		<b>\$1,902,000</b>



**Concept Level Construction Cost Estimate**

Gordonsville, Virginia

Alternative 2: North High Street Intersection (Conventional Intersection)



(printed)

06/18/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
00100	Mobilization	LS	1	\$100,000	\$100,000
00101	Construction Surveying	LS	1	\$74,500	\$74,500
00110	Clearing and Grubbing	LS	1	\$3,000	\$3,000
00120	Regular Excavation	CY	1,400	\$36	\$50,400
00125	Grading	LS	1	\$6,000	\$6,000
00585	Underdrain UD-2	LF	0	\$15	\$0
00588	Underdrain UD-4	LF	650	\$12	\$7,800
00595	Outlet Pipe	LF	0	\$20	\$0
00596	Endwall EW-12	EA	0	\$390	\$0
01152	15" Conc. Pipe	LF	0	\$60	\$0
01182	18" Conc. Pipe	LF	150	\$85	\$12,750
01242	24" Conc. Pipe	LF	100	\$100	\$10,000
01302	30" Conc. Pipe	LF	0	\$140	\$0
06818	Drop Inlet DI-3B, L=6'	EA	3	\$3,500	\$10,500
09056	Manhole MH-1 or 2	LF	0	\$650	\$0
10099	Aggr. Matl. No. 21A or 21B	TON	1,000	\$26	\$26,000
10610	Asphalt Concrete Ty. IM-19.0A	TON	300	\$80	\$24,000
10628	Flexible Pave. Planing 0"-2"	SY	3,700	\$16	\$59,200
10635	Asphalt Concrete Ty. SM-9.5A	TON	500	\$120	\$60,000
10642	Asphalt Concrete Ty. BM-25.0A	TON	550	\$105	\$57,750
12020	Std. Curb CG-2	LF	450	\$20	\$9,000
12022	Radial Curb CG-2	LF	150	\$26	\$3,900
12600	Std. Comb. Curb & Gutter CG-6	LF	1,000	\$20	\$20,000
12610	Rad. Comb. Curb & Gutter CG-6	LF	550	\$30	\$16,500
12920	Entrance Gutter CG-9B	SY	50	\$70	\$3,500
13108	CG-12 Detectable Warning Surface	SY	30	\$250	\$7,500
13114	Entrance Gutter CG-13	SY	100	\$80	\$8,000

**Concept Level Construction Cost Estimate**

Gordonsville, Virginia

Alternative 2: North High Street Intersection (Conventional Intersection)



(printed)

06/18/13

Item Code	Description	Unit	Rounded Quantity	Unit Price	Amount
13220	Hydr. Cement Conc. Sidewalk 4"	SY	400	\$45	\$18,000
13510	Directional Island Curb SI-3	LF	250	\$60	\$15,000
13520	Retaining Wall RW-2	CY	100	\$867	\$86,700
14100	Removal of Sidewalk and Entrance	SY	100	\$20	\$2,000
14120	Removal of Comb. Curb and Gutter	LF	850	\$15	\$12,750
24265	NS Maintenance of Traffic	LS	1	\$80,000	\$80,000
24430	Demo. of Pavement (Flexible)	SY	300	\$20	\$6,000
24535	NS Adjust Exist. Manhole	EA	0	\$600	\$0
24801	NS Remove Exist. Drop Inlet	EA	0	\$400	\$0
24834	NS Adjust Exist. Drop Inlet	EA	1	\$500	\$500
27022	Topsoil Class B 2"	ACRE	0	\$15,000	\$3,353
27300	Sod	SY	1,100	\$10	\$11,000
51910	Sawcut	LF	1,000	\$16	\$16,000
60403	Concrete Class A3	CY	20	\$750	\$15,000
85011	NS Stormwater management facility	LS	1	\$6,000	\$6,000
85011	NS Erosion and Sediment Control	LS	1	\$2,000	\$2,000
85011	NS Pavement Marking	LS	1	\$27,198	\$27,500
85011	NS Traffic Signage	LS	1	\$14,000	\$14,000
85011	NS Utility Relocation	LS	1	\$56,500	\$56,500
85011	NS Right of Way	LS	1	\$25,617	\$26,000

Subtotal (without Mobilization & Construction Surveying)		\$795,000
Mobilization & Construction Surveying		\$174,500
Contingency	35%	\$279,000
<b>Total, Construction</b>		<b>\$1,249,000</b>
Engineering Cost	25%	\$313,000
<b>Total Project Cost</b>		<b>\$1,562,000</b>

## Concept Level Construction Cost Estimate

Gordonsville, Virginia

North High Street Intersection

(printed) 06/18/13



### Assumptions:

- 1 Reflects estimated pavement section of 2" SM, 2" IM, 6" BM over 12" 21 A or B base course.
- 2 Contingency includes costs related to erosion and sediment control, miscellaneous items, and aspects of work unidentified or unquantified to date.
- 3 Costs do not include VDOT administrative costs, financing, or staffing.
- 4 Estimate reflects development of preliminary design work products as of the date shown.
- 5 Estimate does not include the environmental mitigation measures.
- 6 Assumes compliance with current state statutes and DCR regulations regarding storm water management.
- 7 Assumes no lighting improvements.
- 8 Assumes all existing features to remain are ADA compliant.
- 9 Assumes that design waivers and design exceptions for the proposed layout will be approved by VDOT, as needed.
- 10 Retaining Wall, average height 4.5'
- 11 For NS Pavement Marking: Ty. B CL IV Pave. Line Mark 4" 4.5\$ per LF for pavement marking and 220\$ per arrows

### Roundabout specific:

- 12 For NS Traffic Signage: 60 signs 30"X30" 40\$ per square feet raise by 1.4 to account for ground mount sign post
- 13 NS Utility Relocation: 1200 to relocate fire hydrant, 1300 to adjust water manhole, 15000 to relocate utility pole
- 14 NS Right of Way: 75000 per acre and raise by 1.3 to account for temporary easement. R/W take from Church 7645 SF and from School 6175 SF

### Conventional Intersection Improvement specific:

- 15 For NS Traffic Signage: 40 signs 30"X30" 40\$ per square feet raise by 1.4 to account for ground mount sign post
- 16 NS Utility Relocation: 1200 to relocate fire hydrant, 1300 to adjust water manhole, 15000 to relocate street lighting pole, 8000 to relocate telephone line pole
- 17 NS Right of Way: 75000 per acre and raise by 1.3 to account for temporary easement. R/W take from Church 5160 SF and from School 6290 SF