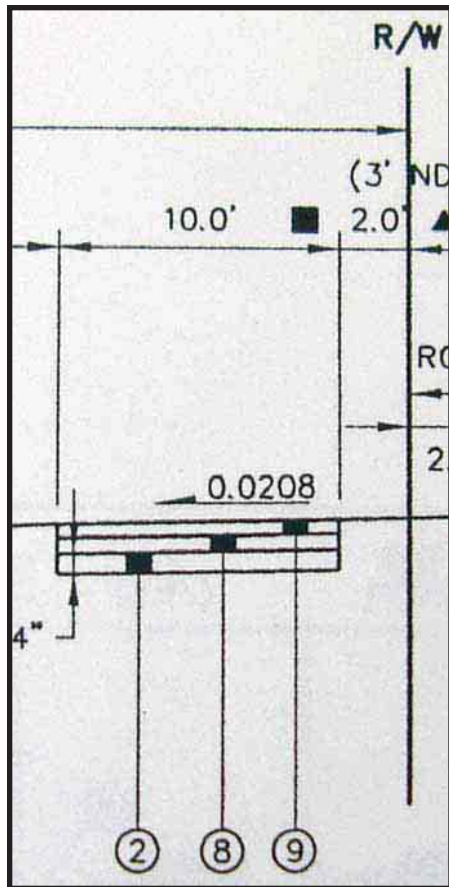




Appendix A: Justification of Trail Width



- 2. ITEM 304 - AGGREGATE BASE
- 8. ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
- 9. ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

Construction drawing showing the Som Center Rd. trail was designed as 10' wide.

The Mayfield Village Greenway Trail is proposed to be a 10' wide asphalt all-purpose trail. The ten foot width is consistent with the existing SOM Center roadside trail as well as other regional Metroparks trail systems.

An asphalt pavement surface all-purpose trail is suitable for walking, running, biking, in line skating, wheelchair, as well as emergency or maintenance vehicle use. Asphalt pavement prevents weed growth and will reduce annual maintenance requirements.



Photos displaying the existing 10' wide All-Purpose Trail along Som Center Road as ideal for biking, running and other recreational activities.

Appendix B: Green Infrastructure & Sewer Fees



- Parking Lot Impervious Surface
- Building Impervious Surface
- Sidewalk Impervious Surface
- Driveway Impervious Surface

Stormwater Fee

The Northeast Ohio Regional Sewer District will institute a Stormwater Utility and begin assessing a stormwater fee in July 2010 to fund maintenance of the Regional Stormwater System.

Stormwater fees will be assessed on all public and private facilities based on paved (impervious) surface area or “the more you pave, the more you pay”. Stormwater fees will be based on an “Equivalent Residential Unit or ERU” of 3,000 square feet of pavement. Monthly fees of \$4.75/ERU/month are currently proposed.

Fee Calculation

Stormwater Fee Credits of up to 75% will be offered for facilities which provide quantity and quality control of stormwater runoff.

The Civic Center Impervious Area Breakdown:

Building:
16,950 sq. ft.

Parking Lots:
70,571 sq. ft.

Driveways:
4,411 sq. ft.

Sidewalks:
1,768 sq. ft.

Total Impervious Surface:
93,700 sq. ft.

Calculated Yearly Fee for City:
\$00.00

Appendix C: 2009 Preliminary Cost of Construction - Overall Summary

		TOTAL COST
Summary Estimate:		
Main Proposed Trail <i>(Contingency and Engineering Fee's included)</i>		
Segment A		\$90,324
Segment B		\$296,874
Segment C		\$335,046
Segment D		\$110,799
Segment E		\$71,906
Segment F		\$172,016
Main Proposed Trail Subtotals (2009 Cost)		\$1,076,965
3 Yr Inflation to 2012, @ 8% per year as per ODOT		\$1,356,666
Trail Enhancements <i>(Contingency and Engineering Fee's included)</i>		
Cascade Overlook		\$113,132
Beechers Brook Restoration		\$415,949
Amphitheater (with building)		\$1,420,201
The Civic Center Raingardens		\$73,153
Trail Connector Options		\$62,843
Highland Road Sidewalk		\$78,279
Enhancements Subtotals (2009 Cost)		\$2,163,557
3 Yr Inflation to 2012, @ 8% per year as per ODOT		\$2,725,459
Project Total (2009)		\$3,240,522
3 Yr Inflation to 2012, @ 8% per year as per ODOT		\$4,082,124

Appendix C: 2009 Preliminary Cost of Construction - Segment A

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$5,000.00	\$5,000
Demolition (fence removal)	1	LUMP	\$1,000.00	\$1,000
Clearing & Grubbing	1	LUMP	\$3,000.00	\$3,000
Excavation & Haul	572	CY	\$18.00	\$10,290
10' All-Purpose Asphalt Trail	1,103	LF	\$18.00	\$19,845
Deciduous Shade Trees, 2" cal.	30	EA	\$350.00	\$10,500
Seeding (10' on each side where applicable)	3,000	SY	\$1.00	\$3,000
Garbage Cans	3	EA	\$1,250.00	\$3,750
Trail Signage	1	LUMP	\$3,000.00	\$3,000
Construction Costs (2009)				
Trail Segment A Construction Subtotal				\$59,385
10% Contingency				\$5,939
Trail Segment A Construction Total				\$65,324
Engineering Costs (2009)				
Survey				\$5,000
Engineering Fees				\$15,000
Construction Administration				\$5,000
Trail Segment A Engineering Total				\$25,000
Project Total (2009)				\$90,324
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$113,782

Appendix C: 2009 Preliminary Cost of Construction - Segment B

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$10,000.00	\$10,000
Saw Cut Asphalt	1	LUMP	\$5,000.00	\$5,000
Utility Improvement	1	LUMP	\$1,000.00	\$1,000
Clearing, Grubbing and some Tree Removal	1	LUMP	\$10,000.00	\$10,000
Pole Relocation	1	EA	\$3,000.00	\$3,000
Excavation & Haul	569	CY	\$18.00	\$10,241
10' All-Purpose Asphalt Trail	1,097	LF	\$18.00	\$19,751
10' All-Purpose Asphalt Trail (tacking on existing asphalt)	704	LF	\$5.00	\$3,518
Chain Link Fence Relocation & Replacement	100	LF	\$50.00	\$5,000
Curb Reconstruction	30	LF	\$25.00	\$750
Bridge Construction	60	LF	\$1,415.00	\$84,900
Planting Strip (10' wide)	513	SY	\$20.00	\$10,260
Planting Strip Curb Installation	465	LF	\$22.00	\$10,230
Deciduous Shade Trees, 1" cal.	50	EA	\$285.00	\$14,250
Bioswale Perennials	500	EA	\$15.00	\$7,500
Misc. Plantings	200	EA	\$15.00	\$3,000
Seeding (10' on each side where applicable)	1,100	SY	\$1.00	\$1,100
Trash Receptacles	3	EA	\$1,250.00	\$3,750
Trail Signage	1	LUMP	\$3,000.00	\$3,000
Construction Costs (2009)				
Trail Segment B Construction Subtotal				\$206,249
10% Contingency				\$20,625
Trail Segment B Construction Total				\$226,874
Engineering Costs (2009)				
Survey				\$10,000.00
Geotechnical				\$5,000.00
Engineering Fees				\$35,000.00
Construction Administration				\$20,000.00
Trail Segment C Engineering Total				\$70,000.00
Project Total (2009)				\$296,874
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$373,976

Appendix C: 2009 Preliminary Cost of Construction - Segment C

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$10,000	\$10,000
Saw Cut Asphalt	1	LUMP	\$8,000	\$8,000
Clearing, Grubbing, and some Tree Removal	1	LUMP	\$8,000	\$8,000
Excavation & Haul	414	CY	\$18	\$7,448
10' All-Purpose Asphalt Trail	798	LF	\$18	\$14,364
10' All-Purpose Asphalt Trail (tacking on existing asphalt)	410	LF	\$5	\$2,048
Bridge Construction	110	LF	\$1,415	\$155,650
Planting Strip (10' wide)	440	SY	\$20	\$8,800
Planting Strip Curb Installation	396	LF	\$22	\$8,712
Replace Existing Masonry Dumpster Enclosure	1	LUMP	\$15,000	\$15,000
Seeding (10' on each side where applicable)	670	SY	\$1	\$670
Trash Receptacle	1	EA	\$1,250	\$1,250
Trail Signage	1	LUMP	\$3,000	\$3,000
Beta Road Crossing				
Beta Rd Striping	1	EA	\$500	\$500
ADA Ramp	2	EA	\$3,000	\$6,000
Roadway Signs	2	EA	\$300	\$600
Construction Costs (2009)				
Trail Segment C Construction Subtotal				\$250,042
10% Contingency				\$25,004
Trail Segment C Construction Total				\$275,046
Engineering Costs (2009)				
Survey				\$10,000
Geotechnical				\$5,000
Engineering Fees				\$30,000
Construction Administration				\$15,000
Trail Segment C Engineering Total				\$60,000
Project Total (2009)				\$335,046
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$422,061

Appendix C: 2009 Preliminary Cost of Construction - Segment D

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$5,000.00	\$5,000
Excavation & Haul	482	CY	\$18.00	\$8,673
10' All-Purpose Asphalt Trail	929	LF	\$18.00	\$16,727
Fence Construction/Installation	700	LF	\$50.00	\$35,000
Deciduous Shade Trees, 2" cal.	25	EA	\$350.00	\$8,750
Trail Signage	1	LUMP	\$3,000.00	\$3,000
Seeding (10' wide each side where applicable)	850	SY	\$1.00	\$850
Construction Costs (2009)				
Trail Segment D Construction Subtotal				\$78,000
10% Contingency				\$7,800
Trail Segment D Construction Total				\$85,799
Engineering Costs (2009)				
Survey				\$5,000
Engineering Fees				\$15,000
Construction Administration				\$5,000
Trail Segment D Engineering Total				\$25,000
Project Total (2009)				\$110,799
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$139,575

Appendix C: 2009 Preliminary Cost of Construction - Segment E

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$10,000.00	\$10,000
Clearing & Grubbing	1	LUMP	\$3,000.00	\$3,000
Excavation & Haul	389	CY	\$9.00	\$3,500
4' Existing Gravel Path to 10' Asphalt Pavement	1,050	LF	\$10.00	\$10,500
Gravel	272	CY	\$30.00	\$8,167
Proofrolling	1,050	LF	\$5.00	\$5,250
Seeding (10' on each side)	2,225	SY	\$1.00	\$2,225
Construction Costs (2009)				
Trail Construction Subtotal				\$42,642
10% Contingency				\$4,264
Updated Trail Construction Total				\$46,906
Engineering Costs (2009)				
Survey				\$5,000
Engineering Fees				\$15,000
Construction Administration				\$5,000
Updated Trail Engineering Total				\$25,000
Project Total (2009)				\$71,906
3 Yr Inflation to 2011, @ 8% per year as per ODOT				\$90,581

Appendix C: 2009 Preliminary Cost of Construction - Segment F

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$10,000.00	\$10,000
Clearing & Grubbing	1	LUMP	\$3,000.00	\$3,000
Excavation & Haul	1641	CY	\$9.00	\$14,770
4' Existing Gravel Path to 10' Asphalt Pavement	4,431	LF	\$10.00	\$44,310
Gravel	1,149	CY	\$30.00	\$34,463
Proofrolling	4,431	LF	\$5.00	\$22,155
Seeding (10' on each side)	2,225	SY	\$1.00	\$2,225
Construction Costs (2009)				
Trail Construction Subtotal				\$130,923
10% Contingency				\$13,092
Updated Trail Construction Total				\$144,016
Engineering Costs (2009)				
Survey				\$5,000
Engineering Fees				\$15,000
Construction Administration				\$8,000
Updated Trail Engineering Total				\$28,000
Project Total (2009)				\$172,016
3 Yr Inflation to 2011, @ 8% per year as per ODOT				\$216,690

Appendix C: 2009 Preliminary Cost of Construction - Trail Connector Options

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Segment "A" Connector Option Trail	1,090	LF	\$18.00	\$19,620
Segment "A" Connector Option Trail (tackcoat on existing asphalt)	525	LF	\$5.00	\$2,625
Segment "B" Connector Option Trail	435	LF	\$18.00	\$7,830
Segment "D" Connector Option Trail (tackcoat on existing asphalt)	320	LF	\$5.00	\$1,600
Construction Costs (2009)				
Trail Segment B Construction Subtotal				\$31,675
10% Contingency				\$3,168
Trail Segment B Construction Total				\$34,843
Engineering Costs (2009)				
Survey				\$5,000.00
Engineering Fees				\$15,000.00
Construction Administration				\$8,000.00
Trail Segment C Engineering Total				\$28,000.00
Project Total (2009)				\$62,843
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$79,163

Appendix C: 2009 Preliminary Cost of Construction - The Civic Center

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
The Civic Center Raingardens				
Mobilization	1	LUMP	\$3,000.00	\$3,000
Demolition	1	LUMP	\$3,000.00	\$3,000
Excavation & Haul	255	CY	\$18.00	\$4,590
Curb Removal	65	LF	\$25.00	\$1,625
Catch Basin Relocation	1	LUMP	\$3,000.00	\$3,000
Rain Garden Soil/ Bed Prep	255	CY	\$40.00	\$10,200
Rain Garden Curb Installation	490	LF	\$22.00	\$10,780
Rain Garden Plant Selection	300	EA	\$15.00	\$4,500
Rain Garden Signage	1	LUMP	\$3,000.00	\$3,000
Seeding	80	SY	\$1.00	\$80
Construction Costs (2009)				
Rain Garden Construction Subtotal				\$43,775.00
10% Contingency				\$4,377.50
Rain Garden Construction Total				\$48,152.50
Engineering Costs (2009)				
Survey				\$5,000.00
Engineering Fees				\$15,000.00
Construction Administration				\$5,000.00
Rain Garden Engineering Total				\$25,000.00
Project Total (2009)				\$73,152.50
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$92,151.08

Appendix C: 2009 Preliminary Cost of Construction - Cascade Overlook

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Cascade Overlook				
Mobilization	1	LUMP	\$5,000.00	\$5,000
Clearing & Grubbing	1	LUMP	\$1,000.00	\$1,000
Excavation & Embankment	30	CY	\$18.00	\$540
Topsoil Strip & Place	90	CY	\$15.00	\$1,350
10' All-Purpose Asphalt Trail	110	LF	\$18.00	\$1,980
Overlook Structure (10'x20')	200	SF	\$350.00	\$70,000
Seeding (10' on each side)	250	SY	\$1.00	\$250
Construction Costs (2009)				
Overlook Construction Subtotal				\$80,120
10% Contingency				\$8,012
Overlook Construction Total				\$88,132
Engineering Costs (2009)				
Survey				\$5,000
Engineering Fees				\$15,000
Construction Administration				\$5,000
Overlook Engineering Total				\$25,000
Project Total (2009)				\$113,132
2 Yr Inflation to 2011, @ 8% per year as per ODOT				\$131,957

Appendix C: 2009 Preliminary Cost of Construction - Beechers Brook Stream Restoration

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Beechers Brook				
Mobilization	1	LUMP	\$15,000.00	\$15,000
Clearing & Grubbing	1	LUMP	\$5,000.00	\$5,000
Debris Removal	1	LUMP	\$3,000.00	\$3,000
Temporary Flow Diversion	1	LUMP	\$8,000.00	\$8,000
Excavation & Embankment	4500	CY	\$18.00	\$81,000
Rock Channel Protection	400	CY	\$90.00	\$36,000
Rock Step Pool	5	EA	\$6,000.00	\$30,000
Erosion Mat	2400	SY	\$2.00	\$4,800
Topsoil Strip & Place	400	CY	\$15.00	\$6,000
Joint Plantings	600	EA	\$15.00	\$9,000
Trees	40	EA	\$350.00	\$14,000
Shrubs	150	EA	\$18.00	\$2,700
Seeding	2,700	SY	\$1.00	\$2,700
Beechers Brook Cascade Erosion Control				
Debris Removal	1	LUMP	\$250.00	\$250
Excavation & Embankment	50	CY	\$30.00	\$1,500
Rock Channel Protection	75	CY	\$90.00	\$6,750
Fill Dirt	35	CY	\$25.00	\$875
Topsoil Furnish & Place	16	CY	\$35.00	\$560
Erosion Mat	100	SY	\$2.00	\$200
Joint Plantings	40	EA	\$15.00	\$600
Seeding	200	SY	\$1.00	\$200
Construction Costs (2009)				
Riparian Restoration Construction Subtotal				\$228,135
10% Contingency				\$22,814
Riparian Restoration Construction Total				\$250,949
Engineering Costs (2009)				
Survey				\$15,000
Geotechnical				\$5,000
Permitting				\$10,000
Engineering Fees				\$85,000
Construction Administration				\$25,000
Post Construction Monitoring				\$25,000
Riparian Restoration Engineering Total				\$165,000
Project Total (2009)				\$415,949
3Yr Inflation to 2012, @ 8% per year as per ODOT				\$523,975

Appendix C: 2009 Preliminary Cost of Construction - Amphitheater

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Phase 1: Amphitheater Grounds				
Mobilization	1	LUMP	\$10,000.00	\$10,000
Demolition	1	LUMP	\$3,000.00	\$3,000
Clearing & Grubbing	1	LUMP	\$2,000.00	\$2,000
Topsoil Strip & Place	1610	CY	\$15.00	\$24,150
Excavation & Embankment	6550	CY	\$9.00	\$58,950
Earth Borrow	3640	CY	\$25.00	\$91,000
Conc. seat wall	713	LF	\$50.00	\$35,646
Basic Electrical Service	1	LUMP	\$50,000.00	\$50,000
Curb Cut	144	LF	\$25.00	\$3,600
Catch Basin	4	EA	\$1,500.00	\$6,000
12" Culvert, HDPE	570	LF	\$30.00	\$17,100
Access Drive, Asphalt Concrete	680	SY	\$35.00	\$23,800
Stage Wall	165	LF	\$60.00	\$9,900
Stage Fill Earth	74	CY	\$25.00	\$1,850
Stage Aggregate Fill	37	CY	\$40.00	\$1,480
Stage Concrete Slab 6"	222	SY	\$60.00	\$13,320
Stage Ramps & Steps	1	LUMP	\$5,000.00	\$5,000
8' All-Purpose Asphalt Trail	850	LF	\$15.00	\$12,750
Trees, 2" cal.	20	EA	\$350.00	\$7,000
Signage	1	LUMP	\$3,000.00	\$3,000
Seeding	12,000	SY	\$1.00	\$12,000
Construction Costs (2009)				
Amphitheater Subtotal				\$391,546
10% Contingency				\$39,155
Amphitheater Construction Total				\$430,701
Phase 1 Engineering Costs (2009)				
Survey				\$10,000
Engineering Fees				\$50,000
Construction Administration				\$25,000
Amphitheater Engineering Total				\$85,000
Phase 1 Project Total (2009)				\$515,701
3 Yr Inflation to 2011, @ 8% per year as per ODOT				\$649,634

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Phase 2: Amphitheater Structures				
Building	2,500	SF	\$250.00	\$625,000
Bandstand Structure	2,000	SF	\$45.00	\$90,000
Construction Costs (2009)				
Amphitheater Subtotal				\$715,000.00
10% Contingency				\$71,500
Amphitheater Construction Total				\$786,500
Phase 2 Engineering Costs (2008)				
Geotech				\$8,000
Engineering Fees				\$75,000
Construction Administration				\$35,000
Amphitheater Engineering Total				\$118,000
Phase 2 Project Total (2009)				\$904,500
3 Yr Inflation to 2012, @ 8% per year as per ODOT				\$1,139,410

Appendix C: 2009 Preliminary Cost of Construction - Highland Road Sidewalk

	QUAN	UNIT	UNIT PRICE	TOTAL COST
Preliminary Greenway Estimate:				
Main Proposed Trail				
Mobilization	1	LUMP	\$5,000.00	\$5,000
Clearing & Grubbing	1	LUMP	\$2,000.00	\$2,000
Excavation & Haul	575	CY	\$18.00	\$10,356
Concrete Sidewalk (6' width, 4" depth)	518	SY	\$39.00	\$20,202
Gravel (6" depth)	259	CY	\$30.00	\$7,770
Seeding (6' on each side)	3,108	SY	\$1.00	\$3,108
Construction Costs (2009)				
Trail Segment A Construction Subtotal				\$48,436
10% Contingency				\$4,844
Trail Segment A Construction Total				\$53,279
Engineering Costs (2009)				
Survey				\$5,000
Engineering Fees				\$15,000
Construction Administration				\$5,000
Trail Segment A Engineering Total				\$25,000
Project Total (2009)				\$78,279
2 Yr Inflation to 2011, @ 8% per year as per ODOT				\$91,305