

Niagara Gorge Corridor

Robert Moses Parkway Removal

Main Street to Findlay Drive

Niagara Falls, NY

Design Report/

Environmental Assessment

Appendix C - Construction Cost Estimate

PIN 5761.90

July 2016

In cooperation with:

New York State Department of Transportation

New York Power Authority

USA Niagara Development Corporation

The City of Niagara Falls, NY



Preliminary Estimate Summary

NIAGARA GORGE CORRIDOR

Robert Moses Parkway Removal
Main Street to Findlay Drive
Niagara Falls, NY

PROJECT COSTS FOR YEAR 2015	
Item	PHASE 1
<i>Demolition</i>	\$ 7,741,920
<i>Roadways and Ramps</i>	\$ 12,302,300
<i>Multi-Use Paths and Sidewalks</i>	\$ 1,804,800
<i>Landscaping</i>	\$ 1,731,920
<i>Other Work Items</i>	\$ 2,318,500
Subtotal	\$ 25,899,440
<i>Mobilization</i> 5%	\$ 1,294,972
<i>MPT</i> 10%	\$ 2,589,944
<i>Design Contingency</i> 10%	\$ 2,589,944
<i>Construction Contingency</i> 10%	\$ 2,589,944
Total Cost	\$ 34,964,244
Rounded Total (Millions of Dollars)	\$ 35.0

Preliminary Estimate Cost Worksheet

NIAGARA GORGE CORRIDOR

Robert Moses Parkway Removal
Main Street to Findlay Drive
Niagara Falls, NY

PROJECT COSTS FOR YEAR 2015					
Item	Unit	Unit Cost 2015	Length/Area/Number	Total 2015	
Demolition					
<i>Roadway</i>					
Concrete Pav't including RMP	Sq Ft	\$ 1.60	965,000	\$ 1,544,000	
Misc. Pathways	Sq Ft	\$ 1.12	66,000	\$ 73,920	
Abandon Drainage Structures	EA	\$ 1,000.00	28	\$ 28,000	
<i>Bridge</i>					
Bridge over Whirlpool St.	Sq Ft	\$ 43.00	128,000	\$ 5,504,000	
Bridge over Pump Sta. Access Road	Sq Ft	\$ 20.00	7,000	\$ 140,000	
RR Bridge over Whirlpool St.	Sq Ft	\$ 20.00	20,000	\$ 400,000	
Misc Bridges	Sq Ft	\$ 20.00	2,600	\$ 52,000	
<i>subtotal</i>				\$ 7,741,920	
Roadways and Ramps					
New Park Roads	Sq Ft	\$ 12.60	12,000	\$ 151,200	
New City of Niagara Falls Streets	Sq Ft	\$ 15.00	418,000	\$ 6,270,000	
Curb along City Streets	FT	\$ 82.00	28,000	\$ 2,296,000	
New Parking Lots	Sq Ft	\$ 4.35	46,000	\$ 200,100	
Curb in parking lots	FT	\$ 82.00	2,500	\$ 205,000	
Drainage					
New Storm Sewers (2 sides of road)	LF	\$ 150.00	10,000	\$ 1,500,000	
New Storm Sewers (1 sides of road)	LF	\$ 120.00	2,000	\$ 240,000	
Underdrain Pipe (2 sides of road)	LF	\$ 11.90	10,000	\$ 1,200,000	
Underdrain Pipe (1 sides of road)	LF	\$ 6.00	2,000	\$ 240,000	
<i>subtotal</i>				\$ 12,302,300	
Multi-Use Paths and Sidewalks					
13 ft wide Trail	Sq Ft	\$ 5.10	240,000	\$ 1,224,000	
Misc. Trail Connections and Sidewalks	Sq Ft	\$ 5.10	5,000	\$ 25,500	
City Sidewalks	Sq Ft	\$ 6.17	90,000	\$ 555,300	
<i>subtotal</i>				\$ 1,804,800	
Landscaping					
Clearing and Grubbing	Sq-Yd	\$ 2.16	12,000	\$ 25,920	
Tree Removal	EA	\$ 200.00	160	\$ 32,000	
Grade and Plant Lawn Areas	Sq Ft	\$ 0.25	180,000	\$ 45,000	
Grade and Plant Meadow Areas	Sq Ft	\$ 0.25	505,000	\$ 126,250	
Prepare and Plant Reforested Areas	Sq Ft	\$ 0.80	630,000	\$ 504,000	
Primary Park Entrance Gateway	EA	\$ 85,000.00	3	\$ 255,000	
Secondary Park Entrance Gateway	EA	\$ 50,000.00	5	\$ 250,000	
Improved Gorge Overlooks	EA	\$ 32,000.00	11	\$ 352,000	
Allowance for Park Furniture and Accessories	LS	\$ 225,000.00	0.25	\$ 56,250	
Road Trees (One Side of Street)	EA	\$ 375.00	112.00	\$ 42,000	
Road Trees (Both Sides of Street)	EA	\$ 750.00	58.00	\$ 43,500	
<i>subtotal</i>				\$ 1,731,920	
Other Work Items					
Select Fill (@ Removed RMP pavement)	CY	\$ 45.00	33,500	\$ 1,507,500	
Allowance for Fence Removals	FT	\$ 2.00	2,500	\$ 5,000	
Allowance for Wall Removal	FT	\$ 15.00	0	\$ -	
Allowance for small traffic Signs	EA	\$ 200.00	80	\$ 16,000	
Large Traffic Signs	EA	\$ 25,000.00	2	\$ 50,000	
Traffic Signals	EA	\$ 40,000.00	2	\$ 80,000	
Street Lighting	Ft	\$ 30.00	12,000	\$ 360,000	
Repair of Sanitary Manholes and lateral connections	EA	\$ 10,000.00	5	\$ 50,000	
Relocation/Replacement of Hydrants and Water Lines	EA	\$ 10,000.00	10	\$ 100,000	
Remove/Plug existing Storm Inlets into Combined Sewer	EA	\$ 5,000.00	30	\$ 150,000	
<i>subtotal</i>				\$ 2,318,500	
Subtotal					
				\$ 25,899,440	
<i>Mobilization</i>					
MPT		5%		\$ 1,294,972	
Design Contingency		10%		\$ 2,589,944	
Construction Contingency		10%		\$ 2,589,944	
		10%		\$ 2,589,944	
Total Cost				\$ 34,964,244	
Rounded Total (Millions of Dollars)				\$ 35.0	

Preliminary Estimate Cost Backup

Viaduct Removal

Remove Existing Superstructure	
Location	Area (SF)
Whirlpool Bridge	127411

USE 128000 SF

Remove Existing Substructure	
Location	Volume (CF)
Whirlpool Bridge Pier 1	1366.08
Whirlpool Bridge Pier 2	1564.82
Whirlpool Bridge Pier 3	1697.10
Whirlpool Bridge Pier 4	1859.20
Whirlpool Bridge Pier 5	1951.84
Whirlpool Bridge Pier 6	2001.96
Whirlpool Bridge Pier 7	2049.38
Whirlpool Bridge Pier 8	2082.77
Whirlpool Bridge Pier 9	2087.48
Whirlpool Bridge Pier 10	2132.87
Whirlpool Bridge Pier 11	2406.35
Whirlpool Bridge Pier 12	2411.88
Whirlpool Bridge Pier 13	2339.67
Whirlpool Bridge Pier 14	2033.23
Whirlpool Bridge Pier 15	1994.07
Whirlpool Bridge Pier 16	1966.27
Whirlpool Bridge Pier 17	1864.30
Whirlpool Bridge Pier 18	1790.22
Whirlpool Bridge Pier 19	1718.08
Whirlpool Bridge Pier 20	1651.31
Whirlpool Bridge Pier 21	1576.66
Whirlpool Bridge Pier 22	1455.44
Whirlpool Bridge Pier 23	1391.96
Whirlpool Bridge Pier 24	1279.40
Whirlpool Bridge Abutments (x2)	4760.00
Whirlpool Bridge Wingwalls (x4)	3752.00
total	53184.34

----> 1969.79037 CY

USE 1970 CY

unit price (/CY) \$130

Cost \$256,100

Price as per SF pavement \$ 2.01

Bridge Removals

BRIDGE INFORMATION										REMOVAL	
Estimate ROW	BIN Number	Work Description	Feature Carried	Feature Crossed	Bridge Type	Spans	Travel Lanes	Area	Area (Used)		
Bridge over Whirlpool Bridge	1039539	Remove	RMP	Whirlpool Street Route 182	Steel Multi-Girder	45	4 – 12 ft lanes.	127411	128,000		
Bridge over pump sta access rd.	1068229	Remove	RMP	Sewage Plant Road	Concrete T-beam, Encased I Beam	1	4 – 12 ft lanes.	6932	7,000		
RR Bridge over Whirlpool Street	N/A	Remove	Railroad	Whirlpool Street Route 182	Steel Multi-Girder	6	N/A	19655	20,000		
Misc. Bridges	1068210	Remove	Pedestrian Bridge	RMP	Steel Box Beam	7	N/A	2541	2,600		
TOTALS:								156539	157600		

Sidewalk Removal

Remove Exist Sidewalk		
Location		Area (SF)
Park Rd-1		650.86
Park Rd-2		246.87
Park Rd-3		262.85
Whirl South 1		6924.09
Whirl south- Walnut		3457.22
Walnut-3RD		2198.55
3Rd-1		4115.06
3Rd-2		3489.34
3Rd-3		4932.15
3Rd-4		493.32
Whirl-1		805.71
Whirl-2		821.87
Whirl-3		1107.06
Whirl-4		902.47
Whirl-5		939.25
Whirl-6		651.91
Whirl-7		1597.81
Whirl-8		1684.69
Whirl-9		1787.66
Whirl-10		1638.19
Whirl-11		1711.17
Whirl-12		2774.93
Whirl-13		1195.7
Whirl-14		1621.56
Whirl-15		4193.44
Whirl-16		2131.08
Whirl-17		1099.21
Whirl-18		560.21
Whirl-19		323.81
Whirl-20		239.18
Whirl-21		318.67
Whirl-22		137.72
Whirl-23		2216.06
Whirl-24		1164.11
Whirl-25		277.51
Whirl-26		619.01
Whirl-27		353.71
Whirl-28		3028.62
Whirl-29		2341.28
Whirl-30		842.04
total		65855.95
USE		66,000 SF
	----	7317.328 sy

Tree Removal

FROM TOPO (Magenta layer)		Tree (EA)
Location		
Northern Limit to Chestnut Ave		3
Chestnut Ave to Chasm Ave		10
Chasm Ave to Spring Street		12
Spring Street to Bellevue Ave		6
Bellevue Ave to Ontario Ave		1
Ontario Ave to Cleveland Ave		7
Cleveland Ave to Lincoln Pl		1
Lincoln Pl to Division Ave		0
Division Ave to Linwood Ave		0
Linwood Ave to Willow Ave		0
Willow Ave to Pierce Ave		3
Pierce Ave to Orchard Pkwy		0
Orchard Pkwy to Chilton Ave		0
Chilton Ave to Ashland Ave		0
Ashlad Ave to Elmwood Ave		0
Elmwood Ave to Spruce Ave		0
Spruce Ave to Cedar Ave		0
Cedar Ave to Pine Ave		3
Pine Ave to Walnut Ave		9
Walnut Ave to Southern Limit		10
	total	65

FROM AERIAL (Cyan layer)		Tree (EA)
Location		
Northern Limit to Chestnut Ave		5
Chestnut Ave to Chasm Ave		1
Chasm Ave to Spring Street		0
Spring Street to Bellevue Ave		0
Bellevue Ave to Ontario Ave		0
Ontario Ave to Cleveland Ave		0
Cleveland Ave to Lincoln Pl		0
Lincoln Pl to Division Ave		0
Division Ave to Linwood Ave		8
Linwood Ave to Willow Ave		4
Willow Ave to Pierce Ave		5
Pierce Ave to Orchard Pkwy		15
Orchard Pkwy to Chilton Ave		4
Chilton Ave to Ashland Ave		0
Ashlad Ave to Elmwood Ave		8
Elmwood Ave to Spruce Ave		10
Spruce Ave to Cedar Ave		4
Cedar Ave to Pine Ave		25
Pine Ave to Walnut Ave		0
Walnut Ave to Southern Limit		0
	total	89

from topo	65	trees
from aerial	89	trees
total	154	trees
use	160	trees

Clearing and Grubbing

Clearin and Grubbing for Parking Lots	
Location	Area (SF)
Across from Cedar Ave	4818
Across from Willow Ave	12692
South side of RR Bridge	28002
	total (SF) 45512
	total (SY) 1685.63

Clearing and Grubbing Brush on W Side of Whirlpool Ave	
Location	Area (SF)
Cleveland Ave to Lincoln Pl	3000
Lincoln Pl to Division Ave	8030
Division Ave to Linwood Ave	11500
Linwood Ave to Willow Ave	6875
Willow Ave to Pierce Ave	7255
Pierce Ave to Orchard Pkwy	6500
Orchard Pkwy to Chilton Ave	4665
Chilton Ave to Ashland Ave	3100
Ashlad Ave to Elmwood Ave	3880
Elmwood Ave to Spruce Ave	13140
Spruce Ave to Cedar Ave	14510
	total (SF) 82455
Other Misc clearing (SF)	9500
	total (SY) 10217.22

TOTAL 11902.85 SY
USE 12,000 SY

Prop Pavement

Proposed Pavement	
Location	Area (SF)
Whirlpool north	37,582
Walnut-Whirl south-1	33,564
Service road	11,626
3rd-Whirl-1	345,410
total	428,182

Say 430,000 SF ----> 47575.8 SY
 9.82971 acres

USE 12,000 SF Service Road
 418,000 SF Other Roads

Prop Curb

Proposed Curb		
Location		Area (LF)
Main-1		113.04
Park Rd-1		1164.6
Park Rd-2		154.13
Park Rd Whirl South		2187.47
Walnut-1		449.92
Whirl South - Walnut		902.5
Walnut- 3RD-1		624.38
Walnut- 3RD-1		890.5
3RD-1		916.86
3RD-2		738.84
Whirl-1		5746.06
Whirl-2		214.26
Whirl-3		208.04
Whirl-4		260.74
Whirl-5		218.12
Whirl-6		385.14
Whirl-7		371.63
Whirl-8		419.29
Whirl-9		390.61
Whirl-10		363.7
Whirl-11		389.35
Whirl-12		612.52
Whirl-13		303.88
Whirl-14		318.09
Whirl-15		210.81
Whirl-16		754.53
Whirl-17		273.52
Whirl-18		142.41
Whirl-19		1066.21
Whirl-20		83.24
Whirl-21		97.61
Whirl-22		477.69
Whirl-23		558.31
Whirl-24		543.19
Whirl-25		2939.2
Whirl-26		605.84
Whirl-27		773.02
	total	26869.25
	USE	28,000 LF

Prop Sidewalk

Proposed Sidewalk		
Location	Area (SF)	
Main-1	167.68	
Park Rd-1	2903.57	
Park -Whirl-South-1	10511.71	
Whirl-South-2	4351.09	
3RD-1	2365.31	
Walnut-1	2310.74	
3RD-2	4313.71	
3RD-3	2954.2	
3RD-4	3749.94	
Whirl-1	814.32	
Whirl-2	847.92	
Whirl-3	1133.8	
Whirl-4	971.84	
Whirl-5	1831.64	
Whirl-6	1846.16	
Whirl-7	1873.35	
Whirl-8	1882.85	
Whirl-9	1687.01	
Whirl-10	1987.66	
Whirl-11	3055.27	
Whirl-12	1422.9	
Whirl-13	1644.44	
Whirl-14	4560.14	
Whirl-15	5215.89	
Whirl-16	2224.9	
Whirl-17	5397.97	
Whirl-18	1111.29	
Whirl-19	441.36	
Whirl-20	268.86	
Whirl-21	6207.44	
Whirl-22	2225.19	
Whirl-23	2600.5	
Whirl-24	2750.69	
Whirl-25	2146.05	
total	89777.39	
USE	90,000	SF
		---> 9975.266 SY

Prop Parking Lot

Proposed Parking Lot		Area (SF)
Location		
Across from Cedar Ave.		4818
Across from Willow Ave.		12692
South Side of RR Bridge		28002
total		45512
USE		46,000 SF

----> 5056.889 SY

Proposed Parking Lot Curb		Length (LF)
Location		
Across from Cedar Ave		359
Across from Willow Ave.		1268
South Side of RR Bridge		858
total		2485
USE		2500 SF

Select Fill

Fill-In Removed RMP Pavement	
Location	Area (SF)
RMP SB-1	112610.09
RMP SB-2	58521.39
RMP SB-3	78429.78
RMP NB-1	104984.27
RMP NB-2	49507.94
RMP NB-3	50477.4
total area	454530.87
Pavement depth	Use 10"
Subbase depth	Use 12"
total depth	(ft) 1.83
volume removed	(CF) 831791.4921
volume fill needed	(CY) 30807.0923
Other misc. fill needed	(CY) 2500
	FILL 33307.0923
	USE 33,500 CY

SELECT FILL	
NYSDOT Item # 203.06	
2014 price	
low	\$ 40.00
high	\$ 51.70
USE	\$ 45.00

Verge Areas

Proposed Verge	
Location	Area (SF)
Main -1	900.94
Main -2	94.94
Park Rd -1	2751.22
Park Rd -2	4248.46
Park Rd -3	320.36
Whirl South -1	3509.56
Whirl South -2	3278.98
Walnut-1	1638.27
Walnut-2	614.32
Walnut-3	771.62
Walnut-4	490.25
Walnut-5	647.87
3rd-1	2663.43
3rd-2	4086.27
3rd-3	2731.15
3rd-4	6779.29
Cedar-1	92.6
Cedar-2	140.49
Whirl-1	1836
Whirl-2	1038.59
Whirl-3	1554.88
Whirl-4	1644.15
Whirl-5	3580.05
Whirl-6	2160.95
Chiltin-1	12.68
Whirl-7	2315.96
Orchard-1	35.85
Orchard-2	66.71
Whirl-8	3777.23
Pierce-1	310.96
Pierce-2	94.68
Whirl-9	1950.44
Whirl-10	1987.66
Whirl-10	3055.27
Whirl-12	1422.9
Whirl-13	1644.44
Whirl-14	4552.23
Whirl-15	5215.9
Whirl-16	2224.9
Whirl-17	1111.3
Whirl-18	441.38
Whirl-19	268.86
Whirl-20	5397.97
Whirl-21	6207.44
Whirl-22	2225.19
Whirl-23	5920.36
Whirl-24	4334.85
Whirl-25	8520.19
total	110669.99

12296.666 SY

2.540 Acre

454530 SF

Total Area of removed RMP

Street Trees

Trees along Roadway (In Verge Areas)		
Item	Length of Roadway (LF)	# of Trees
Trees on 1 Side	7561.286	
total	7561.286	111.195382
Trees on 2 Sides	2772.054	
Trees on 2 Sides	452.617	
Trees on 2 Sides	730.442	
total	3955.113	58.1634265

112

58

Spacing

68 ft/tree

Park Gateway Features

Primary Proposed Gateway Features		
Locations	Item	Estimated Cost
1st Street	Textured Pavement/Crosswalk	\$20,000
Aquarium	Stone Columns/Landscape Walls	\$45,000
	Signage	\$5,000
Findlay Drive	Special Landscaping/Park Furniture/Trash Receptacles	\$15,000
Total Cost:		\$85,000

Secondary Proposed Gateway Features		
Locations	Item	Estimated Cost
Rainbow Bridge	Textured Pavement/Crosswalk	\$15,000
3rd Street	Stone Columns	\$25,000
Cedar Ave.	Signage	\$5,000
Willow Ave.	Special Landscaping	\$5,000
Ontario Ave.		
Total Cost:		\$50,000

Improved Gorge Overlooks

Gorge Overlooks	
Item	Estimated Cost
Brick Pavement (400 SF)	\$5,000
4 Rail Pedestrian Railing (100 LF)	\$17,000
Signage	\$5,000
Special Landscaping/Park Furniture/Trash Receptacles	\$5,000
Total Cost:	\$32,000

Locations
Discovery Center
Gorge Rim @ Cedar Ave.
Gorge Rim @ Spruce Ave.
Gorge Rim between Elmwood Ave. and Ashland Ave.
Gorge Rim @ Orchard Pkwy.
Gorge Rim @ Willow Ave.
Gorge Rim at Cleveland Ave.
Gorge Rim @ Ontario Ave.
Overlook on old Railroad Bridge
Gorge Rim @ Bellevue Ave.
Top of the Hill overlook at Bellevue Ave.

Plantings

Grade and Plant Lawn Areas	
Item	Qty (SF)
Verges along Roads	110670
15% of RMP replacement	68180
total	178850
USE	180,000 SF

Grade and Plant Meadow Areas	
Item	Qty (SF)
45% of RMP replacement	204540
Park Restoration	297480
total	502020
USE	505,000 SF

Prep and Plant Forrested Areas	
Item	Qty (SF)
40% of RMP replacement	181810
Park Restoration	445996
total	627806
USE	630,000 SF

Forested Prep and Planting (Based on a 8,000 SF area) installed				
Planting type	Unit	Qty	Cost	Sub-Total
Canopy Trees	EA	4	\$ 560	\$ 2,240
Ornamental Trees	EA	4	\$ 479	\$ 1,916
Evergreen Trees	EA	3	\$ 280	\$ 840
Shrubs	EA	22	\$ 45	\$ 990
Perennials/Grasses	EA	0	\$ 24	\$ 0
Mulch (3" Depth)	SY	18	\$ 9	\$ 162
total		9	\$	\$ 6,148
Cost			\$ 0.77	per SF
USE			\$ 0.80	per SF

Prop Traffic Signs

Traffic Sign Estimates									
SMALL SIGNS (98%)									
Section	length (ft)	length(mi)	signs/mi	signs	adjusted estimate		LARGE SIGNS (2%)		USE
							calc		
A	1345	0.254735	64	16.30303	20	0	0.4		1
B	7255	1.374053	64	87.93939	60	0	1.2		1
total				104.2424	80	80	1.6		2

RMP SB-1=112610.09 sf

RMP NB-1=104984.27 sf

3RD -Whirl =155241.22 sf

Whirl South=86181.01sf

Service rd=22830.62 sf

PAVEMENT REMOVAL BACKUPS

PAVEMENT REMOVAL BACKUPS

Whirl-1=157605.25 sf

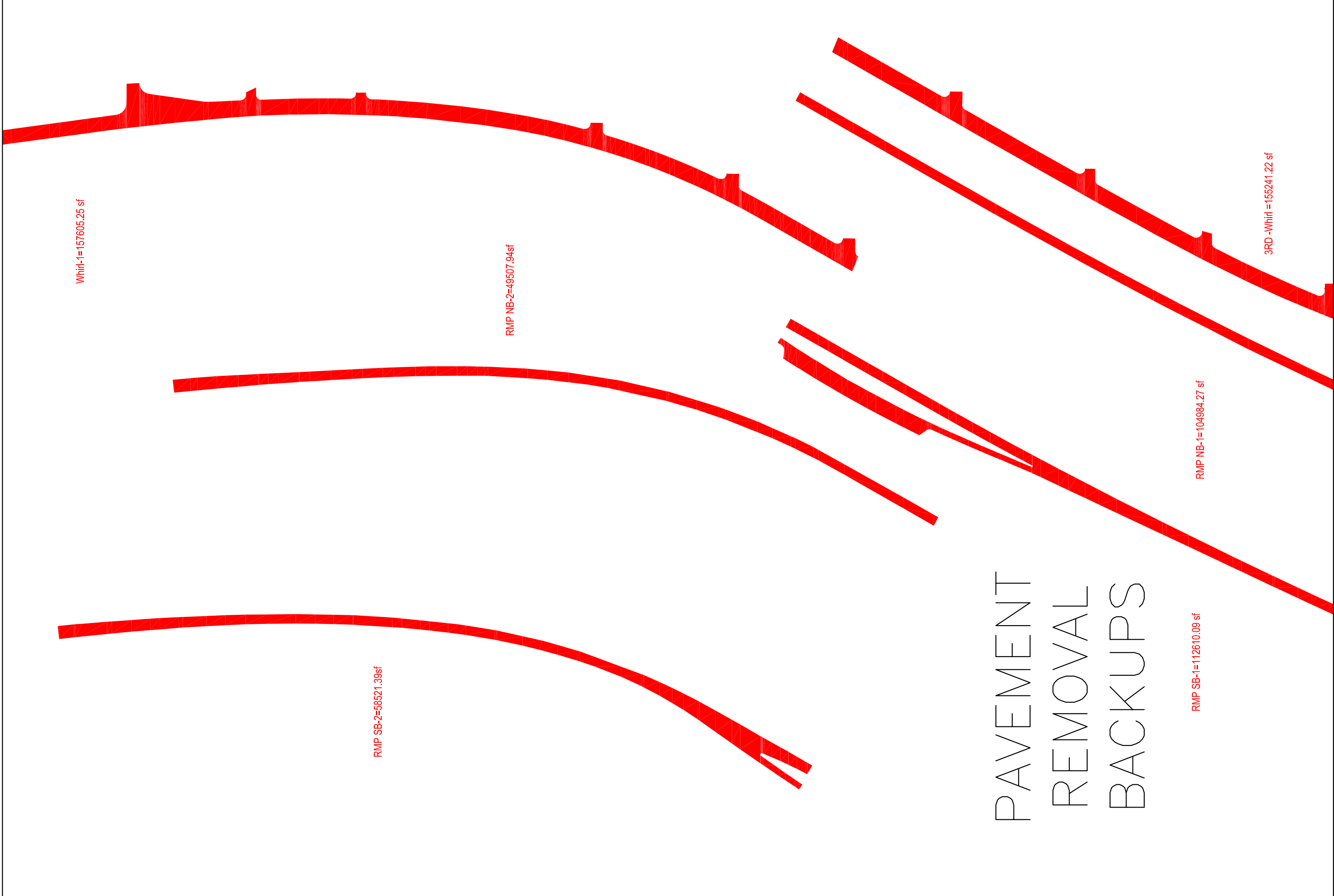
RMP SB-2=58521.39sf

RMP NB-2=49507.94sf

RMP SB-1=112610.09 sf

RMP NB-1=104984.27 sf

3RD -Whirl =155241.22 sf



Whirl-3=14045.43 sf

Findlay-1=17538.03 sf

Whirl-2=76827.11 sf

RMP NB-3=50477.40 sf

RMP SB-3=78429.78sf

Whirl-1=157605.25 sf

PAVEMENT REMOVAL BACKUPS

3RD-WHIRL-1
138,560 SF

SIDEWALK-1
41,365 SF

SERVICE ROAD
11,626 SF

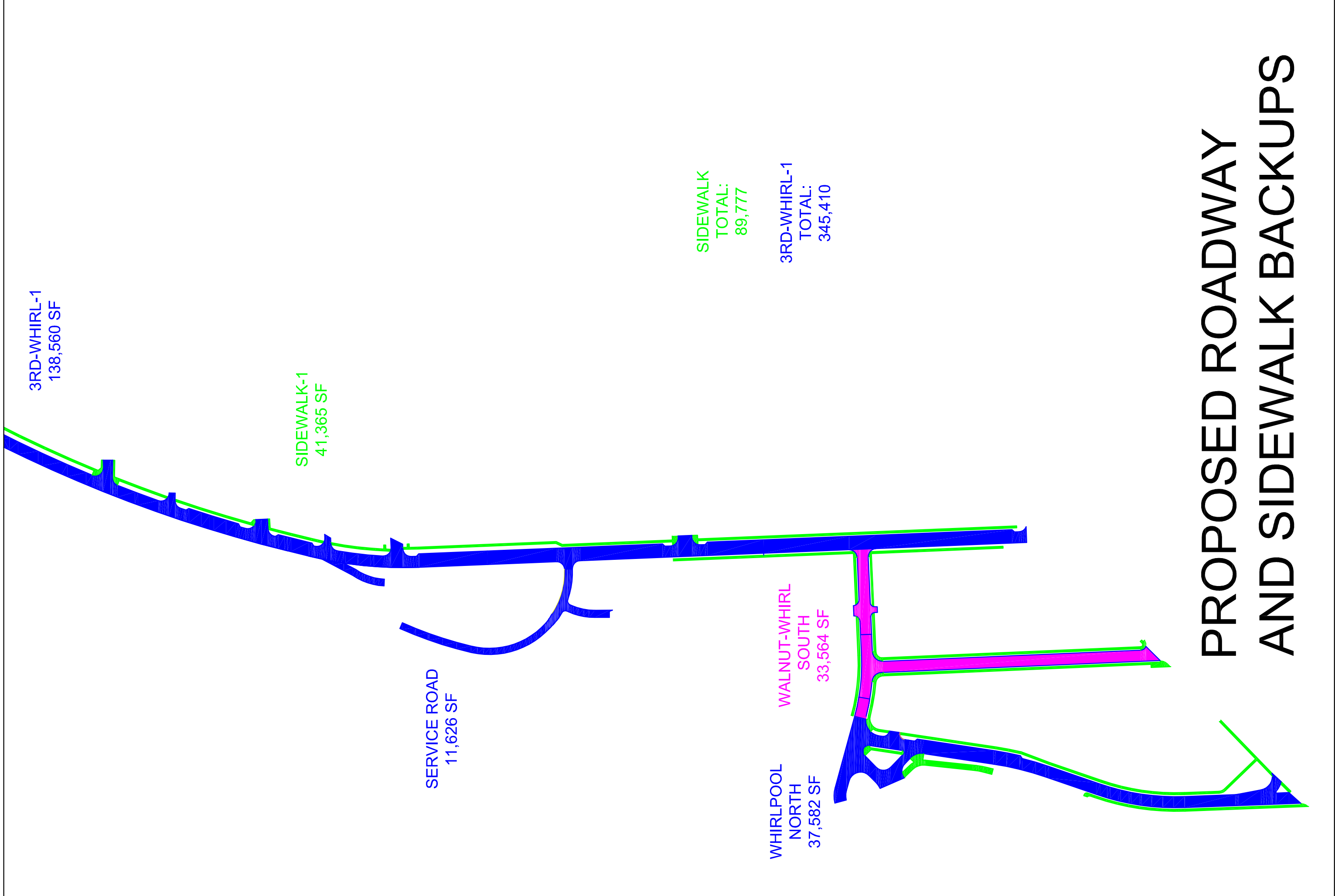
SIDEWALK
TOTAL:
89,777

WHIRLPOOL
NORTH
37,582 SF

WALNUT-WHIRL
SOUTH
33,564 SF

3RD-WHIRL-1
TOTAL:
345,410

PROPOSED ROADWAY AND SIDEWALK BACKUPS



PROPOSED ROADWAY AND SIDEWALK BACKUPS

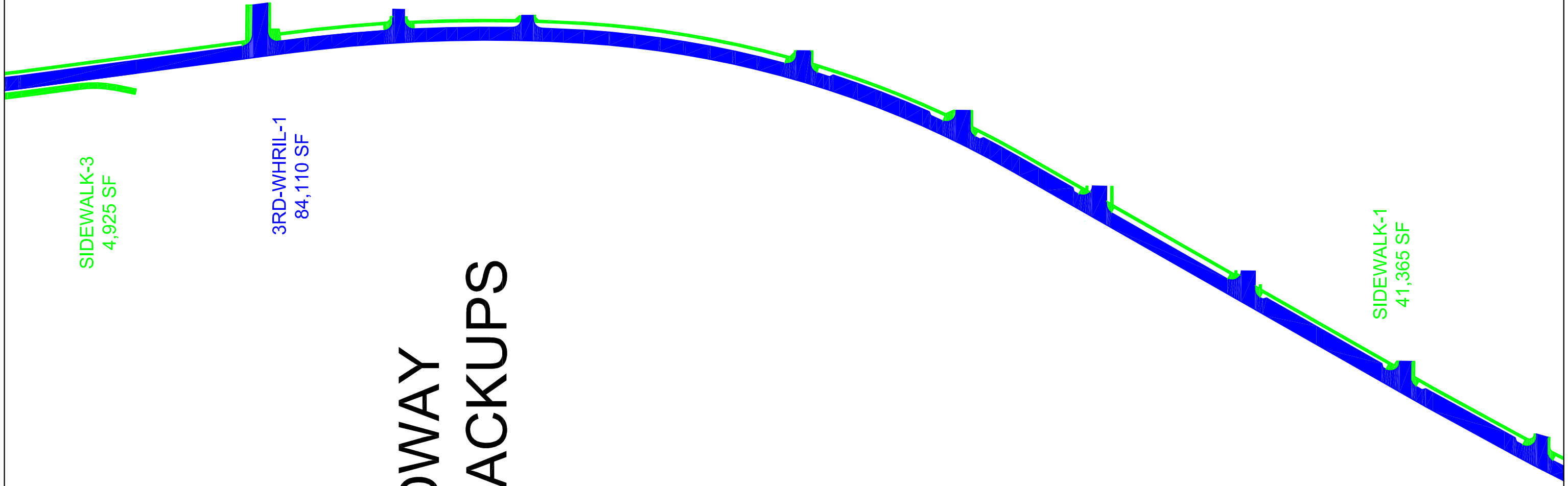
SIDEWALK-3
4,925 SF

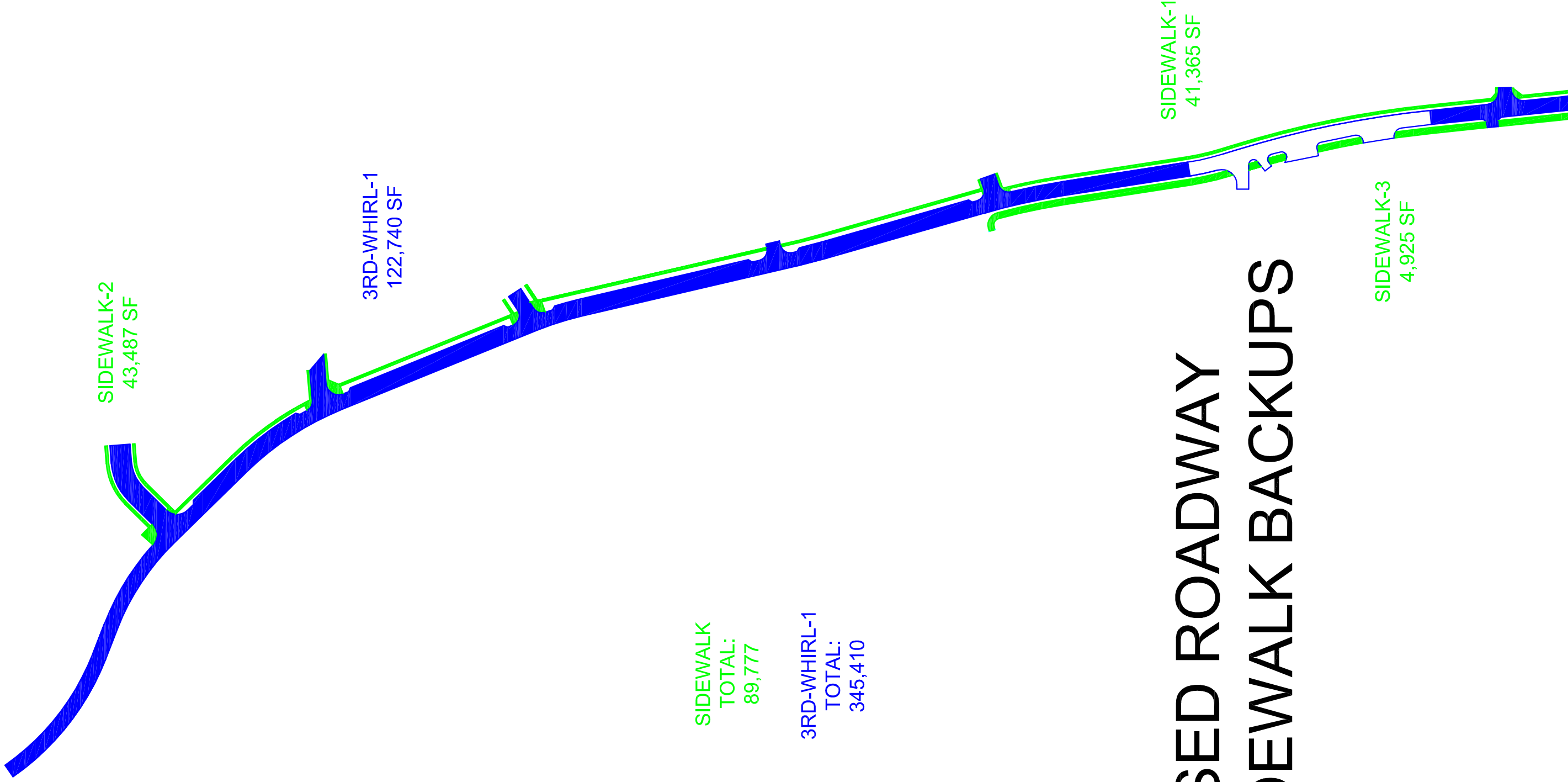
3RD-WHIRL-1
84,110 SF

SIDEWALK-1
41,365 SF

SIDEWALK
TOTAL:
89,777

3RD-WHIRL-1
TOTAL:
345,410





SIDEWALK-2
43,487 SF

3RD-WHIRL-1
122,740 SF

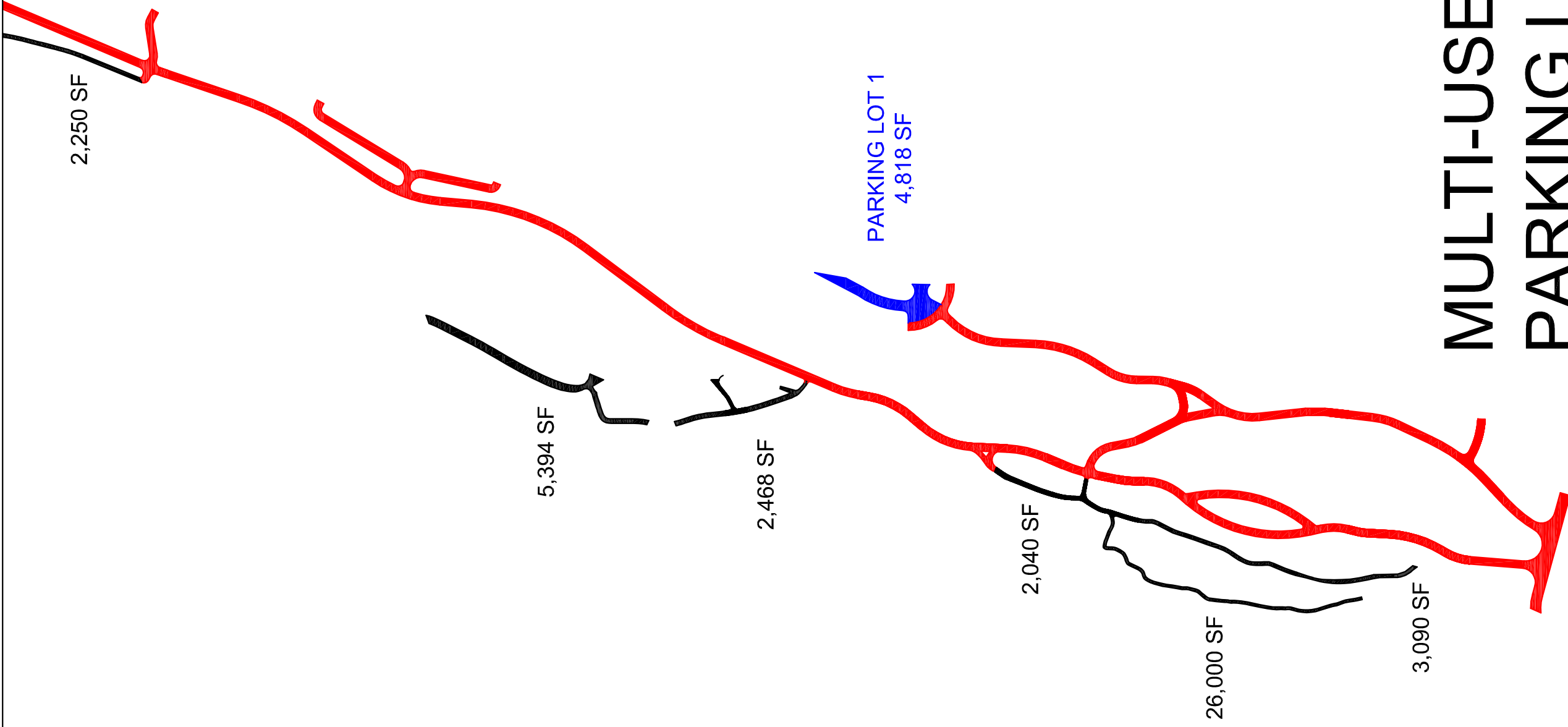
SIDEWALK-1
41,365 SF

SIDEWALK-3
4,925 SF

SIDEWALK
TOTAL:
89,777

3RD-WHIRL-1
TOTAL:
345,410

PROPOSED ROADWAY AND SIDEWALK BACKUPS



2,250 SF

5,394 SF

2,468 SF

PARKING LOT 1
4,818 SF

2,040 SF

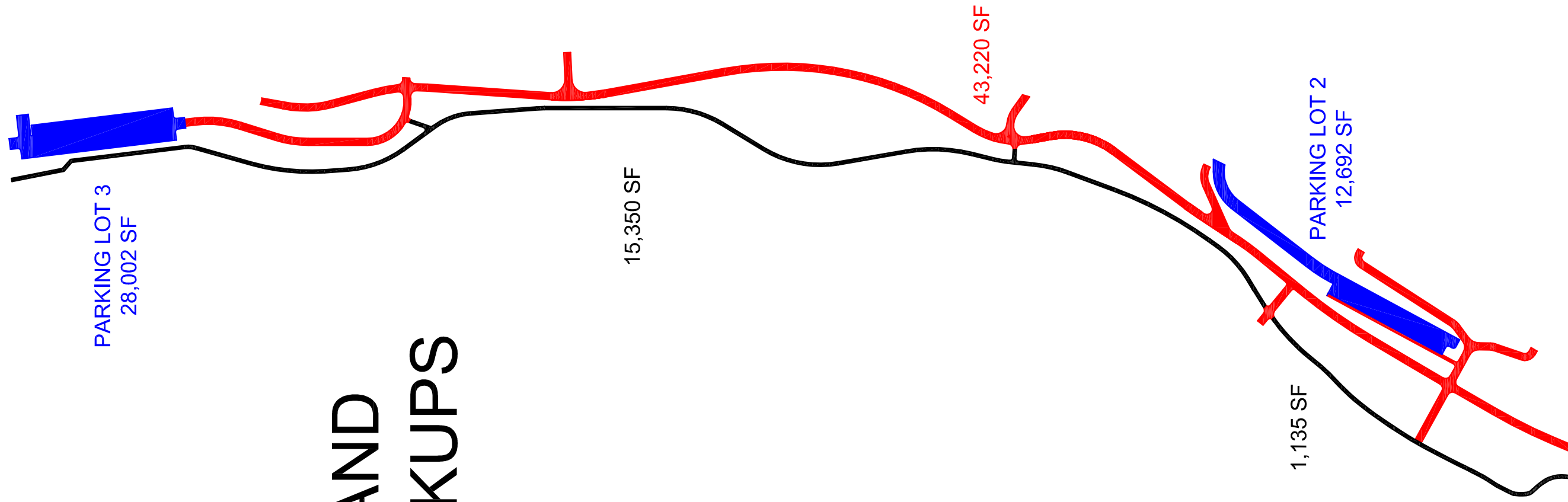
26,000 SF

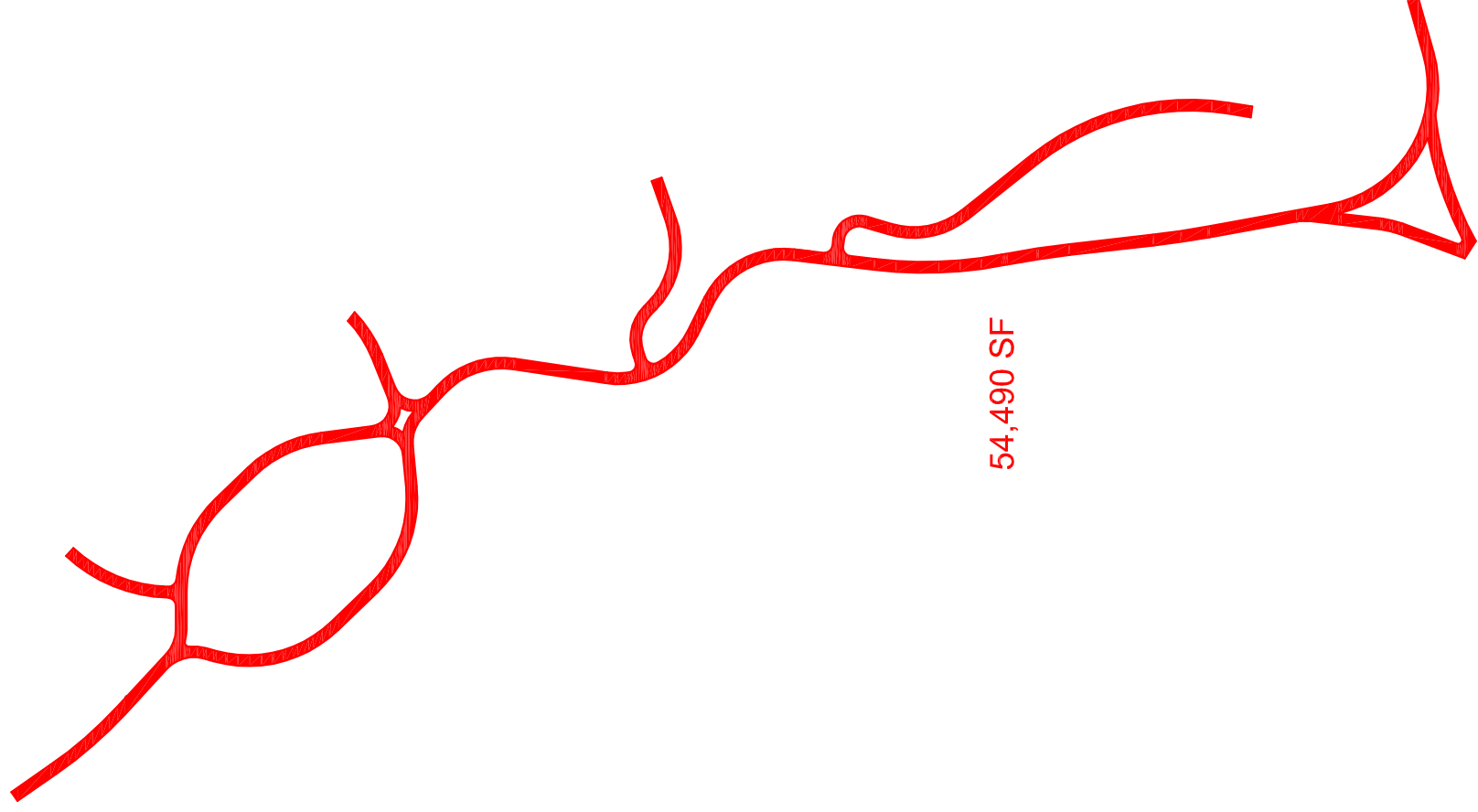
3,090 SF

89,155 SF

MULTI-USE TRAIL AND PARKING LOT BACKUPS

MULTI-USE TRAIL AND PARKING LOT BACKUPS





54,490 SF

MULTI-USE TRAIL AND PARKING LOT BACKUPS

Preliminary Estimate Unit Cost Worksheet

ROBERT MOSES PARKWAY ENGINEERS ESTIMATE UNIT COST WORK SHEET

PAVEMENT ITEM	2014		per	depth	Qty per SF	WABP "SAY"	Bid Price (2015)	Cost per SF 2011
	NYSDOT WABP LOW	NYSDOT WABP HIGH						
2015 cost for full depth asphalt pavement and Shoulders								
Excavation	\$11.99	\$40.99	CY	2.61	0.097	\$18.00	\$18.54	\$1.79
Select Subgrade	\$14.00	\$50.00	CY	1.00	0.037	\$25.00	\$25.75	\$0.95
Subbase	\$41.00	\$135.00	CY	1.00	0.037	\$95.00	\$87.55	\$3.24
Asph. Pavement (base)	\$72.54	\$90.66	Ton	0.33	0.0253	\$65.00	\$87.55	\$4.43
Asph. Pavement (binder)	\$76.06	\$104.61	Ton	0.16	0.0123	\$95.00	\$97.85	\$1.20
Asph. Pavement (Top)	\$72.61	\$116.81	Ton	0.12	0.0092	\$100.00	\$103.00	\$0.95
TOTAL			Total					\$12.57
							USE	\$12.60

2015 cost for City Street w/Asphalt pavement and Conc. Base

ITEM	2014		per	depth	Qty per SF	WABP "SAY"	Bid Price (2015)	Cost per SF 2011
	NYSDOT WABP LOW	NYSDOT WABP HIGH						
Excavation	\$11.99	\$40.99	CY	1.00	0.037	\$18.00	\$18.54	\$0.69
Subbase	\$41.00	\$135.00	CY	1.00	0.037	\$95.00	\$87.55	\$3.24
Conc. Base	\$227.00	\$550.00	CY	0.67	0.025	\$300.00	\$309.00	\$7.67
add 15%						\$45.00	\$46.35	\$1.15
Asph. Pavement (binder)	\$76.06	\$104.61	Ton	0.16	0.0123	\$95.00	\$97.85	\$1.20
Asph. Pavement (Top)	\$72.61	\$116.81	Ton	0.12	0.0092	\$100.00	\$103.00	\$0.95
TOTAL			Total					\$14.90
							USE	\$15.00

UNDERDRAIN

Assume all underdrain due to flat grading at most locations.

ITEM	2014		per	depth	Qty per LF	WABP "SAY"	Bid Price (2015)	Cost per LF 2011
	NYSDOT WABP LOW	NYSDOT WABP HIGH						
Exc. underdrain fitr. pipe	\$11.99	\$40.99	CY	1.25	0.05	\$18.00	\$18.54	\$0.86
underdrain fitr. pipe	\$35.00	\$106.01	CY	1.25	0.05	\$50.00	\$51.50	\$2.38
Total	\$2.23	\$4.75	LF	1.00	1.00	\$2.65	\$2.73	\$2.73
Subtotal								\$5.97
for 1 side							USE	\$6.00
for 2 sides							USE	\$11.90

DRAINAGE

For Drainage Structures along Lt & Rt Edge of Pav't

drainage components	Excavation Area (FT ²)	Excavation Volume (CY)	Backfill Area (FT ²)	Backfill Volume (CY)	Pipe (12") (FT)	Pipe (18") (FT)	Pipe (24") (FT)	drainage structure (FT)	Grate (EA)
trunk sewer									
12" pipe	7.500	51.944	7.500	51.944	187				
18" pipe	13.500	376.000	10.358	288.501		752			
24" pipe	21.000	290.889	16.091	222.894			374		
out fall									
2 each at 150 FT									
24" pipe	21.000	233.333	16.091	178.792			300		
Laterals									
8 laterals, 24 ft ea =	13.500	96.000	10.358	73.660		192			
Drainage Structures									
187' spacing and 1 per side (6 ft deep)									
1500/187 = 8 / side	53.876	191.558	42.720	151.893				96	
Frame and Grate									16.000
TOTALS		1239.724		967.684	187.000	944.000	674.000	96.000	16.000
UNIT COST		\$25.00		\$50.00	\$32.50	\$40.00	\$70.00	\$450.00	\$520.00
COST FOR 1500 LF	\$221,914.81	\$30,993.11		\$48,384.20	\$6,077.50	\$37,760.00	\$47,180.00	\$43,200.00	\$8,320.00
COST PER FOOT OF ROAD	\$147.94	Use \$150.00							

For Drainage Structures along one Edge of Pav't

Deduct 8 Drange Struct.	53.876	-95.779	42.720	-75.947					-48	-8.000
Deduct 8 Laterals	13.500	-96.000	10.358	-73.660						
Adjusted Totals		-191.779		-149.606	0.000	-192.000	0.000		-48.000	-8.000
		1047.946		818.078	187.000	752.000	674.000	48.000	8.000	
		\$25.00		\$50.00	\$32.50	\$40.00	\$70.00	\$450.00	\$520.00	
COST FOR 1500 LF	\$176,200.01	\$26,198.64		\$40,903.88	\$6,077.50	\$30,080.00	\$47,180.00	\$21,600.00	\$4,160.00	
COST PER FOOT OF ROAD	\$117.47	Use \$120.00								

RAILING (NOT USED)

ITEM	2014		per	depth	Qty per LF	WABP "SAY"	Bid Price (2015)	Cost per LF 2011
	NYSDOT WABP LOW	NYSDOT WABP HIGH						
Box Beam Guiderail	\$24.48	\$35.37	LF	-	1.0	\$28.00	\$28.84	\$28.84
TOTAL							USE	\$29.00

