

Appendix A-4
Pavement Evaluation and Treatment
Selection Report (PETSR)

I-81 Viaduct Project

PIN 3501.60

I-81 Pavement Evaluation and Treatment Selection Report (PETSr)

Syracuse, NY



October 2016

Prepared For:



New York State
Department of Transportation

Prepared By:

PARSONS

Contents

Introduction	4
Background	4
Data Collection and Reduction	5
Traffic	5
Subgrade	7
Drainage Layer	8
ESAL Based Pavement Thickness Design	8
Field Observations	8
Alternative Selection.....	8
Pavement Thickness Design.....	8
Local Streets.....	10
Shoulders	10
Typical Sections.....	10
Life-Cycle Costs (Timelines and Cost Summaries).....	11
Rehabilitation and Future Treatment	12
Cost Summary	12
Analysis Summary	14
Recommendations	14
Appendices.....	15
Appendix A- Traffic.....	15
Appendix B- Drainage Layer Verification	22
Appendix C-Life Cycle Cost Analysis.....	24
Unit Costs	24
Initial Costs.....	25
Life Cycle Costs- Flexible Pavement	30
Life Cycle Costs- Rigid Pavement	35
Appendix D-Unit Costs	40

List of Tables

Table 1: CG Alternative AADT, flexible ESALs, and Rigid ESALs.	7
Table 2: Viaduct Alternative AADT, flexible ESALs, and Rigid ESALs.....	7
Table 3: Flexible Pavement CG-2 Alternative	8
Table 4: Flexible Pavement V-4 Alternative.....	9
Table 5: Rigid Pavement CG-2 Alternative	9
Table 6: Rigid Pavement V-4 Alternative	9
Table 7: Flexible Pavement Future Interventions	12
Table 8: Rigid Pavement Future Interventions	12
Table 9: LCCA Summary	13
Table 10: Percent Cost Difference in Pavement Alternatives.....	14

List of Figures

Figure 1: Project Area Map	5
Figure 2: Full-Depth PCC Shoulder with Full-Depth PCC Mainline (Figure 7-1 of NYSDOT Pavement Design Manual)	10
Figure 3: Full-Depth HMA Shoulder with Full-Depth HMA Mainline (Figure 7-4 of NYSDOT Pavement Design Manual)	11

Introduction

This report provides recommendations regarding pavement type, flexible or concrete, and pavement thickness design for new/reconstruction of interstate, ramps, state routes, and local roads for the I-81 Viaduct Project. The pavement type selection and design is based on the following references:

- NYSDOT Comprehensive Pavement Design Manual
 - o Chapter 3: Pavement Evaluation and Treatment Type Selection Process. Revision 5 (November 15, 2013).
 - o Chapter 4: New Construction/Reconstruction. Revision 1-Limited Revisions. (July 2, 2002).
 - o Chapter 5: Appendix 5a- Part 3 Life Cycle Cost Analysis.
 - o Chapter 6: Materials. Revision 6 (May 14, 2014).
 - o Chapter 7: Shoulders. Revision 1 (July 2, 2002).
 - o Chapter 8: Appendix 8a- PCC Standard Sheets.
 - o Chapter 9: Subsurface Pavement Drainage. Revision 1-Limited Revisions. (July 2, 2002).
- Traffic data was developed using techniques to combine existing traffic counts available on the NYSDOT website with forecasts from the SMTc regional travel demand model.
- Limited subgrade information from the I-81 Tunnel Feasibility Study prepared by Parsons and AKRF (July 2016).

Evaluation and rehabilitation recommendations for the existing pavement will be performed by NYSDOT for inclusion in the EIS, per scope of work.

Background

The purpose of the I-81 Viaduct Project is to address the structural deficiencies and non-standard highway features in the I-81 corridor, while creating an improved corridor through the City of Syracuse that meets transportation needs and provides the transportation infrastructure to support long-range planning efforts.

The Federal Highway Administration (FHWA) and the New York State Department of Transportation [NYSDOT] are in the Environmental Impact Statement (EIS) stage in accordance with the National Environmental Policy Act (NEPA) and New York State Environmental Quality Review Act for the I-81 Viaduct Project (the “Project”).

The Project is located entirely within Onondaga County, New York and may involve segments of I-81, I-690, I-481, and local streets. Currently, the two options being analyzed for the project are:

- CG-2 Alternative: This would remove the I-81 viaduct between the New York, Susquehanna and Western Railway Bridge (at Renwick Street) and the I-81/I-690 interchange and replace it with a street-level urban arterial.
- V-4 Alternative: This would be a new viaduct with considerable design improvements, and would involve the reconstruction of all highway elements to meet 60 MPH design standards except for three curves within the I-81/I-690 interchange that would meet 55 MPH and two curves that would meet 50 MPH design standards for horizontal stopping sight distance.

The project boundaries are shown in **Figure 1**.



Figure 1: Project Area Map

Data Collection and Reduction

Traffic

2050 ADT was developed by combining existing traffic counts available on the NYSDOT website with forecasts from the SMTC regional travel demand model. This data was used to calculate the Equivalent Single Axle Loads (ESALs).

The following steps/inputs were used to calculate the ESALs:

- 1) The provided 2050 ADT was adjusted for 2025 using a -1% growth factor.
- 2) The truck classification and percent heavy vehicles are from New York State Department of Transportation Classification Count Average Weekday Data Reports as shown in Appendix A.
- 3) The flexible and rigid 50-year ESALs were calculated using the ESAL Calculator (Excel) provided in the Comprehensive Pavement Design Manual. The following inputs were used to calculate the rigid and flexible ESALs:
 - a. Construction Year: 2025
 - b. ESAL Factor for Flexible Pavement: 1.35
 - c. ESAL Factor for Rigid Pavement: 1.85
 - d. Annual truck weight growth factor: 0.5%
 - e. Annual truck volume growth: 1%
 - f. Percent trucks in design lane: 85-100% (depending on number of lanes)
 - g. Directional split:
 - i. 50% (mainline and local streets)
 - ii. 100% (ramps and connector)
 - h. Design life: 50-years

Tables 1 and 2 show the 2050 Average Annual Daily Traffic (AADT) and percent heavy vehicles used for the CG-2 and V-4 alternatives, respectively. The heaviest traffic was used to represent these areas. See Appendix A for additional information.

Table 1: CG Alternative AADT, flexible ESALs, and Rigid ESALs.

CG Alternative	Location	% Heavy Vehicles	2050 AADT	Flexible ESALs	Rigid ESALs
Heaviest mainline section of 81	I-81 between Court On-Off ramps	13.61*	102,187	139,907,135	191,724,592
Heaviest mainline section of 690	I-690 EB between Irving and 81	10.69	126,979	136,551,255	187,125,793
Heaviest interconnect ramp	I-81 SB to I-690 EB	13.61*	20,828	81,474,881	111,650,763
Heaviest local ramp	Irving On ramp to I-690 WB	10.69	27,788	85,379,388	117,001,384
Heaviest location on Almond St	Almond St between Castle and Van Buren	13.61*	34,646	60,987,634	83,575,646
*Average of 15.56% and 11.66% heavy vehicles shown in the Data Reports. See Appendix A.					

Table 2: Viaduct Alternative AADT, flexible ESALs, and Rigid ESALs.

Viaduct Alternative	Location	% Heavy Vehicles	2050 AADT	Flexible ESALs	Rigid ESALs
Heaviest mainline section of 81	I-81 between Court On-Off ramps	13.61*	120,378	164,812,951	255,854,785
Heaviest mainline section of 690	I-690 between Teall and Almond	10.69	106,724	114,769,341	157,276,504
Heaviest interconnect ramp	I-690 WB to I-81 NB	10.69	13,046	40,084,191	54,930,188
Heaviest local ramp	Harrison on ramp to I-81 NB	13.61*	19,563	76,526,460	104,869,593
Heaviest location on Almond St	Almond St between Harrison and Adams	13.61*	32,914	57,938,780	79,397,587
*Average of 15.56% and 11.66% heavy vehicles shown in the Data Reports. See Appendix A.					

Subgrade

Due to lack of sufficient subgrade data, the default subgrade modulus value of 34 MPa was selected, as shown in the Department's ESAL Calculator worksheet. Additionally, the Tunnel Feasibility Study report on the East Syracuse Channel and extending to the west beneath Onondaga was reviewed. Based on the mentioned study, the subgrade contains a mixture of sand/silt and clay, which confirms the proposed 34 MPa subgrade value is a reasonable assumption at this time.

Drainage Layer

Subsurface pavement drainage via 100mm permeable base with continuous edge drains outletting approximately every 75m is assumed for both flexible and rigid pavements. This design feature is based on chapter 4 of the NYSDOT Comprehensive Pavement Design Manual and was verified by NYSDOT personnel, see Appendix B.

ESAL Based Pavement Thickness Design

Per the requirements of Section 4.5.1.1 of the NYSDOT Pavement Design Manual, 50 year ESAL based pavement design was selected for all the new pavement.

The flexible pavement thickness was designed using the ESAL Calculator worksheet provided in the NYSDOT Pavement Design Manual.

The rigid pavement thickness was selected using Table 4-4 of the NYSDOT Pavement Design Manual. The thickness design was based on a widened slab (4.2-m).

Both flexible and rigid pavement designs were confirmed using the 1993-AASHTO DARWin 3.1 Software.

Field Observations

Since this report is for new construction, field observations are not applicable.

Alternative Selection

Both rigid and flexible pavement alternatives were considered for new/reconstruction of interstate, connector, ramp, and local streets.

Pavement Thickness Design

Tables 3 and 4 show the flexible pavement thicknesses for the CG and viaduct alternatives, respectively. As shown in Tables 3 and 4, the thickness of HMA layers remain constant for the various roadway classifications, because when traffic is greater than 23 million ESALs, the thickness of HMA remains constant, per NYSDOT Pavement Design Manual.

Table 3: Flexible Pavement CG-2 Alternative

	I-81 Mainline mm (inches)	I 690 Mainline mm (inches)	Connector mm (inches)	Ramp mm (inches)	Local mm (inches)
ESALs	139,907,135	136,551,255	81,474,881	85,379,388	60,987,634
AC Top Course	40 (1.5)	40 (1.5)	40 (1.5)	40 (1.5)	40 (1.5)
AC Binder Course	65 (2.5)	65 (2.5)	65 (2.5)	65 (2.5)	65 (2.5)
AC Base Course	150 (6)	150 (6)	150 (6)	150 (6)	150 (6)
ATPB	100 (4)	100 (4)	100 (4)	100 (4)	-
Gravel	300 (12)	300 (12)	300 (12)	300 (12)	300 (12)
Select Granular Subgrade	450 (18)	450 (18)	300 (12)	300 (12)	150 (6)

Table 4: Flexible Pavement V-4 Alternative

	I-81 Mainline mm (inches)	I 690 Mainline mm (inches)	Connector mm (inches)	Ramp mm (inches)	Local mm (inches)
ESALs	164,812,951	114,769,341	40,084,191	76,526,460	57,938,780
AC Top Course	40 (1.5)	40 (1.5)	40 (1.5)	40 (1.5)	40 (1.5)
AC Binder Course	65 (2.5)	65 (2.5)	65 (2.5)	65 (2.5)	65 (2.5)
AC Base Course	150 (6)	150 (6)	150 (6)	150 (6)	150 (6)
ATPB	100 (4)	100 (4)	100 (4)	100 (4)	-
Gravel	300 (12)	300 (12)	300 (12)	300 (12)	300 (12)
Select Granular Subgrade	450 (18)	300 (12)	150 (6)	300 (12)	150 (6)

Tables 5 and 6 show the rigid pavement thicknesses for the CG and viaduct alternatives, respectively. The thickness of the rigid pavement varies for different roadway classifications.

Table 5: Rigid Pavement CG-2 Alternative

	ESALs	PCC Widened Slab mm (inches)	PCTPB with Edge Drain mm (inches)	Subbase mm (inches)
I-81	191,724,592	300 (11.75)	100 (4)	300 (12)
I-690	187,125,793	300 (11.75)	100 (4)	300 (12)
Connector	111,650,763	275 (10.75)	100 (4)	300 (12)
Ramp	117,001,384	275 (10.75)	100 (4)	300 (12)
Local	83,575,646	250 (9.75)	-	300 (12)

Table 6: Rigid Pavement V-4 Alternative

	ESALs	PCC Widened Slab mm (inches)	PCTPB with Edge Drain mm (inches)	Subbase mm (inches)
I-81	255,854,785	325 (12.75)	100 (4)	300 (12)
I-690	157,276,504	275 (10.75)	100 (4)	300 (12)
Connector	54,930,188	225 (8.75)	100 (4)	300 (12)
Ramp	104,869,593	275 (10.75)	100 (4)	300 (12)
Local	79,397,587	250 (9.75)	-	300 (12)

Local Streets

Local streets were designed for the traffic of Almond Street. The City of Syracuse standard pavement sections comprise of:

1.5-inch HMA Top Course
2-inch HMA Binder Course
8-inch PCC or HMA Base Course

Using the ESAL based pavement design, the HMA base layer can be reduced to have the following section:

1.5-inch HMA Top Course
2-inch HMA Binder Course
6-inch HMA Base Course

Therefore, the ESAL based design was used for the LCCA.

Shoulders

Per Table 7.1 of the NYSDOT Pavement Design Manual, full depth PCC and full depth HMA shoulders are recommended for the new/reconstruction. Full depth shoulders are designed to have the same 50-year design life as the mainline pavement.

Typical Sections

Proposed typical sections are shown in Figures 2 and 3.

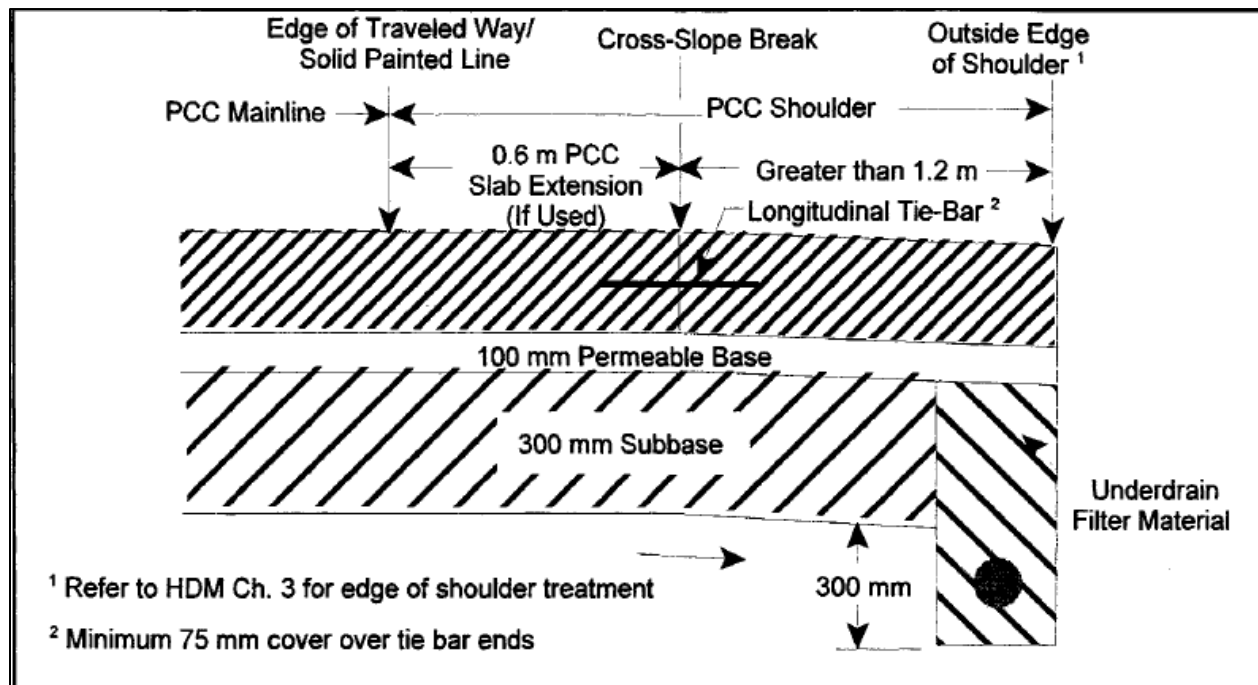
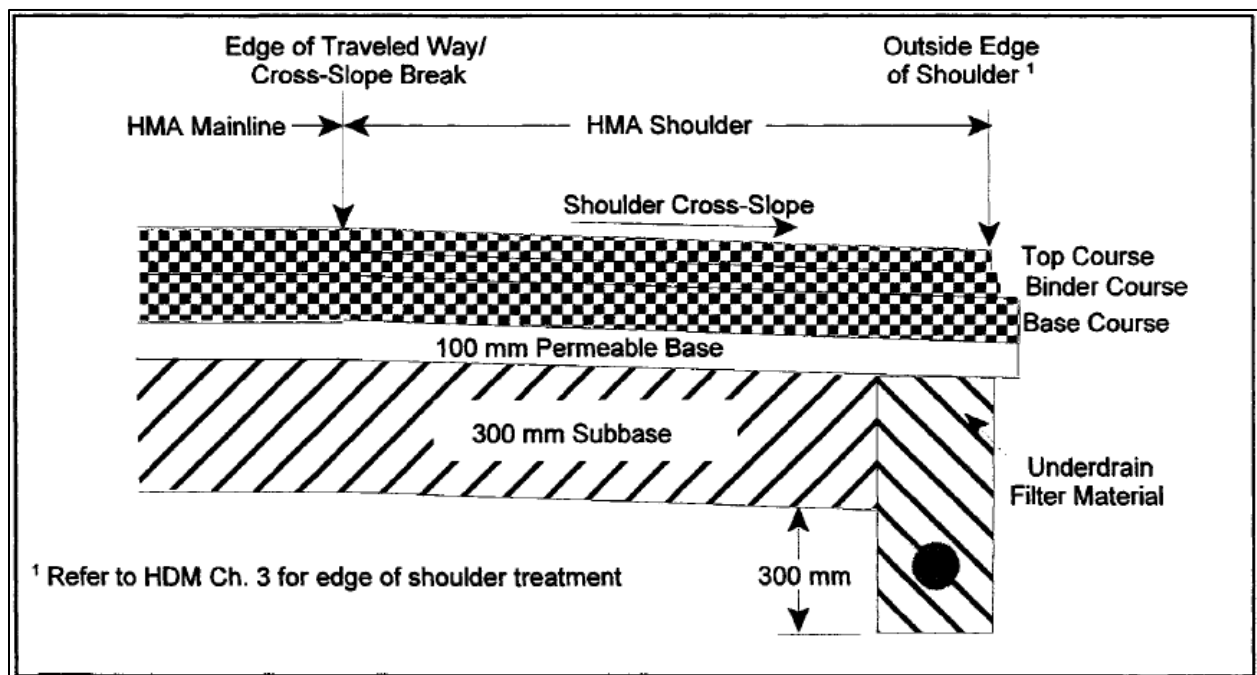


Figure 2: Full-Depth PCC Shoulder with Full-Depth PCC Mainline (Figure 7-1 of NYSDOT Pavement Design Manual)



Note: Select Granular Subgrade is not shown in typical section and varies depending on roadway classification.

Figure 3: Full-Depth HMA Shoulder with Full-Depth HMA Mainline (Figure 7-4 of NYSDOT Pavement Design Manual)

Life-Cycle Costs (Timelines and Cost Summaries)

Life cycle cost analysis (LCCA) was performed using guidelines from Chapter 3 of the NYSDOT Pavement Design Manual to determine the most cost effective pavement type over the LCCA period. The following inputs were used for the LCCA:

1. Analysis Period: 50-years.
2. Discount Rate: 3%.
3. Unit Prices: See Appendix D.
4. Timing of Future Rehabilitation: Combination of NYSDOT LCCA examples and engineering judgment based on pavement performance for wet and freeze-thaw climates.
5. LCCA Area: 1 travel lane-mile.
6. It was assumed the last activity for both flexible and rigid pavement will have no salvage value at the end of the analysis period. Therefore, no salvage value was calculated for either flexible or rigid pavement.
7. User cost was not included in the analysis.

Appendix C contains the breakdown costs of initial and future activities.

Rehabilitation and Future Treatment

Tables 7 and 8 contain the timing and type of activities over the 50-year analysis periods for flexible and rigid pavements, respectively.

Table 7: Flexible Pavement Future Interventions

Year	Description
0	Reconstruction
5	Fill Longitudinal Cracks/Joints Route & Seal Transverse Thermal Cracks
11	Fill Longitudinal Cracks/Joints Route & Seal Transverse Thermal Cracks
15	3" Mill 3" AC Overlay
20	Fill Longitudinal Cracks/Joints Route & Seal Transverse Thermal Cracks
26	Fill Longitudinal Cracks/Joints Route & Seal Transverse Thermal Cracks
30	Full depth HMA Removal and Replacement
35	Fill Longitudinal Cracks/Joints Route & Seal Transverse Thermal Cracks
41	Fill Longitudinal Cracks/Joints Route & Seal Transverse Thermal Cracks

Table 8: Rigid Pavement Future Interventions

Year	Description
0	Reconstruct PCC and use preformed joint sealer
20	Profile Grind
30	1% Slab replacement
40	1.5% Slab replacement Saw and Seal Joints with preformed joint sealer Profile Grind
Note: it was assumed that saw and sealing of the joints is not required before year 40, because of use of preformed joint sealer.	

Cost Summary

Table 9 has a summary of the LCCA for the CG-2 and V-4 alternatives for various road classifications. See Appendix C for the complete analysis.

Table 9: LCCA Summary

		Initial Cost	Discounted Future Maintenance Costs	Present Worth Total Cost
CG- I 81	Flexible	\$ 559,877.71	\$ 215,240.24	\$ 775,117.94
	Rigid	\$ 1,375,473.24	\$ 133,270.27	\$ 1,508,743.51
Viaduct- I 81	Flexible	\$ 559,877.71	\$ 215,240.24	\$ 775,117.94
	Rigid	\$ 1,450,762.13	\$ 137,424.54	\$ 1,588,186.67
CG: I-690	Flexible	\$ 559,877.71	\$ 215,240.24	\$ 775,117.94
	Rigid	\$ 1,375,473.24	\$ 133,270.27	\$ 1,508,743.51
Viaduct: I-690	Flexible	\$ 531,717.71	\$ 215,240.24	\$ 746,957.94
	Rigid	\$ 1,300,184.36	\$ 129,116.00	\$ 1,429,300.36
CG: Connector	Flexible	\$ 531,717.71	\$ 215,240.24	\$ 746,957.94
	Rigid	\$ 1,300,184.36	\$ 129,116.00	\$ 1,429,300.36
Viaduct: Connector	Flexible	\$ 503,557.71	\$ 215,240.24	\$ 718,797.94
	Rigid	\$ 1,149,606.58	\$ 120,807.46	\$ 1,270,414.04
CG: Ramp	Flexible	\$ 531,717.71	\$ 215,240.24	\$ 746,957.94
	Rigid	\$ 1,300,184.36	\$ 129,116.00	\$ 1,429,300.36
Viaduct: Ramp	Flexible	\$ 531,717.71	\$ 215,240.24	\$ 746,957.94
	Rigid	\$ 1,300,184.36	\$ 129,116.00	\$ 1,429,300.36
CG: Local	Flexible	\$ 398,063.31	\$ 215,240.24	\$ 613,303.54
	Rigid	\$ 818,546.67	\$ 124,961.73	\$ 943,508.40
Viaduct: Local	Flexible	\$ 398,063.31	\$ 215,240.24	\$ 613,303.54
	Rigid	\$ 818,546.67	\$ 124,961.73	\$ 943,508.40

Analysis Summary

Based on LCCA, flexible pavements have the lowest initial construction cost and total life cycle costs. Future activities for flexible pavement is approximately 60% higher than rigid. Table 10 shows the percent different between initial cost, maintenance costs, and total life cycle cost.

Table 10: Percent Cost Difference in Pavement Alternatives

		% Difference in Initial Cost	% Difference in Future Maintenance Cost	% Difference in Total Costs
CG- I 81	Flexible		62%	
	Rigid	146%		94.6%
Viaduct- I 81	Flexible		57%	
	Rigid	159%		104.9%
CG: I-690	Flexible		62%	
	Rigid	146%		94.6%
Viaduct: I-690	Flexible		67%	
	Rigid	145%		91.3%
CG: Connector	Flexible		67%	
	Rigid	145%		91.3%
Viaduct: Connector	Flexible		78%	
	Rigid	128%		76.7%
CG: Ramp	Flexible		67%	
	Rigid	145%		91.3%
Viaduct: Ramp	Flexible		67%	
	Rigid	145%		91.3%
CG: Local	Flexible		72%	
	Rigid	106%		53.8%
Viaduct: Local	Flexible		72%	
	Rigid	106%		53.8%

Recommendations

It is recommended that HMA be utilized, as it provides a significantly lower initial construction and total life cycle cost. Other considerations such as constructability, maintenance of traffic, maintenance of rigid vs. flexible over the life of the pavement, friction, long-term ride quality, noise, and user cost should be included in the pavement type selection process.

Appendices

Appendix A- Traffic

From: [Pawlick, Mark](#)
To: [Bermanian, Sohila](#); [Maragakis, Diana](#)
Subject: FW: Request for 2050 Daily HV% and AADT Data for Pavement Design
Date: Tuesday, September 20, 2016 8:24:06 AM
Attachments: I-81 Project Area Interstate Segment Vehicle Classification Data.zip

Sohila, Diana,

Attached is the traffic volume and class information for your use.

Mark

From: Damiani, Brian
Sent: Friday, September 16, 2016 4:23 PM
To: Pawlick, Mark <Mark.Pawlick@parsons.com>
Cc: Chu, You-Lian <You-Lian.Chu@parsons.com>; Deng, Yi <Yi.Deng@parsons.com>
Subject: FW: Request for 2050 Daily HV% and AADT Data for Pavement Design

Mark,

Below are 2050 AADTs for the alternatives in the areas of interest as concerns pavement design. Freeway segments and Almond St are two ways while ramps are one direction.

CG	Location	AADT
1. Heaviest mainline section of 81	I-81 between Court On-Off ramps	102187
2. Heaviest mainline section of 690	I-690 EB between Irving and 81	126979
3. Heaviest interconnect ramp	I 81 SB to I-690 EB	20828
4. Heaviest local ramp	Irving On ramp to I-690 WB	27788
5. Heaviest location on Almond St	Almond St between Castle and Van Buren	34646
Viaduct	Location	
1. Heaviest mainline section of 81	I-81 between Court On-Off ramps	120378
2. Heaviest mainline section of 690	I-690 between Teall and Almond	106724
3. Heaviest interconnect ramp	I-690 WB to I-81 NB	13046
4. Heaviest local ramp	Harrison on ramp to I-81 NB	19563
5. Heaviest location on Almond St	Almond St between Harrison and Adams	32914

Also attached are 2013 counts which include vehicle classification within our study area. Our advice is to use this information to base the future assumptions on as regards vehicle mix.

Thanks,
Brian

From: Deng, Yi
Sent: Friday, September 16, 2016 3:40 PM
To: Damiani, Brian <Brian.Damiani@parsons.com>
Cc: Chu, You-Lian <You-Lian.Chu@parsons.com>
Subject: RE: Request for 2050 Daily HV% and AADT Data for Pavement Design

Brian,

Here are the traffic volume per Mark's request. Freeway and Almond St are two ways while ramps are one direction.

CG	Location	AADT
1. Heaviest mainline section of 81	I-81 between Court On-Off ramps	102187
2. Heaviest mainline section of 690	I-690 EB between Irving and 81	126979
3. Heaviest interconnect ramp	I 81 SB to I-690 EB	20828
4. Heaviest local ramp	Irving On ramp to I-690 WB	27788
5. Heaviest location on Almond St	Almond St between Castle and Van Buren	34646
Viaduct	Location	
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3. Heaviest interconnect ramp	I-690 WB to I-81 NB	13046
4. Heaviest local ramp	Harrison on ramp to I-81 NB	19563
5. Heaviest location on Almond St	Almond St between Harrison and Adams	32914

Yi

From: Damiani, Brian

Sent: Wednesday, September 07, 2016 2:29 PM

To: Deng, Yi <Yi.Deng@parsons.com>

Cc: Chu, You-Lian <You-Lian.Chu@parsons.com>

Subject: Request for 2050 Daily HV% and AADT Data for Pavement Design

Yi,

Just spoke to Mark on the phone.

He is requesting traffic data for pavement design.

He needs projected AADT and HV% for the Viaduct and CG alternatives for the following locations:

1. Heaviest mainline section of 81
2. Heaviest mainline section of 690
3. Heaviest interconnect ramp
4. Heaviest local ramp

I have attached the Existing AADT to apply the delta for locations where we have analogous links in both the existing and Build alternatives.

Also included are the peak hour traffic volume diagrams for CG and Viaduct which can be used to identify the heaviest volume locations 1-4 for each alt.

I will pull some information from the NYSDOT traffic data viewer to get classification counts in the areas of interest. We will project that forward to 2050 for daily HV% information.

Thanks for your help,
Brian Damiani, PE
Senior Traffic Engineer



100 Broadway ♦ New York, NY 10005

Phone – (212) 266-8344 ♦ Mobile – (315) 317-4914

The data below was the closest representation of I-690 traffic, therefore, 10.69% heavy vehicles was assumed for I-690.

New York State Department of Transportation														
Classification Count Average Weekday Data Report														
ROUTE#:	1481	ROAD NAME:	481	YEAR:	2005	STATION:	330102							
COUNTY NAME:	Orange			MONTH:	May									
REGION CODE:	3													
FROM:	ACC RT 690													
TO:	JCT KIRKVILLE RD													
REF-MARKER:	48133012060													
END MILEPOINT:	0110332	NO. OF LANES:	4											
FUNC-CLASS:	11	HPMS NO.:	30072760											
STATION NO.:	0102													
COUNT TAKEN BY:	ORG CODE: TST INITIALS: JSV													
PROCESSED BY:	ORG CODE: DOT INITIALS: SJW													
		BATCH ID:	DOT-SUMR30072760											

The average of 15.56% and 11.66% was used for the I-81 traffic.

New York State Department of Transportation
Classification Count Average Weekday Data Report

ROUTE#:	I 81	ROAD NAME:	YEAR: 2009	STATION#:	330007
COUNTY NAME:	Delaware		MONTH: November		
REGION CODE:	3				
FROM:	ACC 491				
TO:	JCT BRIGHTON AVE				
REF-MARKER:	8133082018				
END MILEPOINT:	031107	NO. OF LANES:	7		
FUNC-CLASS:	11	HPMS NO:	30039480		
STATION NO:	0007	LDNR:			
COUNT TAKEN BY:		ORG CODE: TST INITIALS:	—		
PROCESSED BY:		ORG CODE: DOT INITIALS:	SJM		
		BATCH ID: DOT-SJM000043			

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	23215	26271	50084
NUMBER OF AXLES	32432	60485	112916
% HEAVY VEHICLES (F4-F13)	14.64%	16.22%	15.51%
% TRUCKS AND BUSES (F3-F13)	25.49%	30.75%	28.05%
AXLE CORRECTION FACTOR	0.81	0.87	0.83

VEHICLE CLASS	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES	2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR														
100	3	102	30	8	10	1	0	15	37	0	1	0	0	207
200	1	73	25	10	8	0	0	11	28	0	1	0	0	157
300	2	63	20	7	10	0	0	12	23	0	3	0	0	140
400	2	50	21	4	12	1	0	16	35	0	1	1	0	143
500	5	96	43	9	20	0	0	19	29	2	2	1	0	226
600	3	247	107	20	42	1	6	30	45	1	2	1	0	605
700	2	826	315	19	89	7	1	21	52	3	2	0	0	1237
800	3	1680	433	22	102	4	2	30	54	3	1	0	0	2334
900	4	1422	407	27	86	8	5	30	50	2	0	0	0	2041
1000	1	964	296	25	82	8	2	22	52	4	0	1	0	1445
DIRECTION North	2	811	300	25	75	10	2	23	59	2	0	0	0	1210
1200	1	793	310	21	79	8	8	19	55	2	0	1	0	1297
1300	2	847	295	25	80	7	2	23	72	2	0	0	0	1255
1400	3	841	294	25	90	10	1	27	55	3	0	0	0	1250
1500	3	878	315	28	85	6	3	17	62	5	1	0	0	1412
1600	3	1053	311	27	95	8	1	17	57	3	0	0	0	1646
1700	4	1106	346	24	93	6	0	23	59	2	0	0	0	1663
1800	2	1012	298	12	73	3	0	24	66	1	0	3	0	1494
1900	2	777	237	14	54	1	0	20	56	2	0	1	0	1174
2000	4	516	138	12	35	0	0	17	54	1	1	0	0	772
2100	3	381	94	10	28	1	0	15	46	0	1	0	0	579
2200	3	310	85	12	19	0	0	19	44	0	0	1	0	428
2300	1	242	69	10	13	0	0	12	30	1	1	1	0	320
2400	2	211	68	10	14	0	0	15	27	0	1	0	0	342
TOTAL VEHICLES	81	15301	4917	409	1254	30	33	438	1154	39	17	12	0	23815
TOTAL AXLES	122	30602	9634	1022	2588	270	132	1701	5770	234	85	72	0	52432
ENDING HOUR														
100	1	175	32	5	8	2	0	12	46	1	1	1	0	208
200	1	79	20	10	6	2	0	9	37	0	0	0	0	164
300	1	80	16	9	14	0	0	11	46	0	1	2	0	169
400	1	75	15	13	12	2	0	12	44	1	1	2	0	172
500	1	80	38	12	15	3	0	17	60	3	0	2	0	231
600	1	219	102	14	47	11	0	25	53	2	0	2	0	452
700	2	495	136	35	61	22	1	27	69	1	2	2	0	846
800	4	856	222	30	84	20	3	15	65	3	2	3	2	1312
900	3	166	223	32	72	18	4	27	78	2	1	3	4	1233
1000	6	820	242	30	64	17	1	25	89	5	2	3	4	1209
1100	5	854	243	31	63	21	2	30	105	5	1	4	5	1274
1200	5	965	236	18	45	16	1	22	57	5	1	1	0	1420
DIRECTION South	6	1068	222	25	53	16	2	24	82	4	1	1	6	1510
1300	7	1015	221	29	63	23	3	34	101	6	1	1	7	1511
1400	7	1179	252	19	62	22	2	25	96	4	0	0	9	1609
1500	4	1594	355	23	66	15	1	42	104	5	1	2	0	2219
1600	8	2105	347	21	57	10	0	36	85	6	1	2	1	2615
1700	5	2005	296	15	42	11	0	26	59	2	2	0	7	2321
1800	3	1096	176	11	34	6	0	22	104	2	0	0	4	1452
1900	3	764	115	14	26	5	0	24	82	1	0	0	4	1038
2000	1	647	100	10	22	3	0	19	90	4	2	0	3	901
2100	2	551	102	8	15	2	0	23	76	2	2	1	3	791
2200	1	365	66	8	6	1	0	12	77	3	2	1	3	545
2300	1	253	45	8	13	1	0	11	55	3	1	2	1	354
TOTAL VEHICLES	79	15102	3829	440	550	249	20	339	1840	74	29	32	88	26271
TOTAL AXLES	158	35204	7668	1100	1900	747	80	1895	9200	144	145	192	770	60485
GRAND TOTAL VEHICLES	140	33403	8746	245	2244	339	53	1028	2994	113	46	44	88	50084
GRAND TOTAL AXLES	280	66806	17432	2122	4488	1017	212	3585	14910	217	230	264	770	112916

VEHICLE CLASSIFICATION CODES:

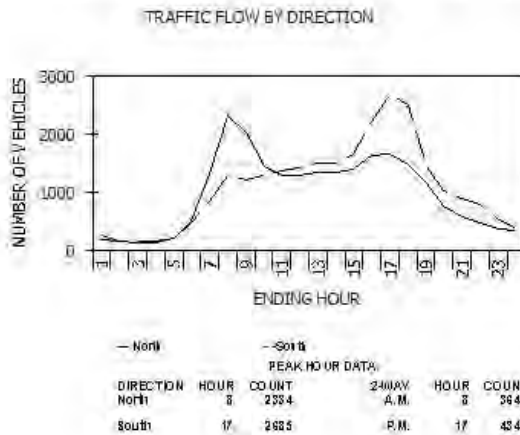
- F1. Motorcycles
- F2. Autos
- F3. 2-Axle, 4-Tire Pickups, Vans, Minivans
- F4. Buses
- F5. 2-Axle, 6-Tire Single Unit Trucks
- F6. 3-Axle Single Unit Trucks
- F7. 4 or More Axle Single Unit Trucks
- F8. 4 or Less Axle Vehicles, One Unit & a Truck
- F9. 5-Axle Double Unit Vehicles, One Unit & a Truck
- F10. 6 or More Double Unit Vehicles, One Unit & a Truck
- F11. 5 or Less Axle Multi-Unit Trucks
- F12. 6-Axle Multi-Unit Trucks
- F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

- | | | |
|-------|-------|-------------------------------|
| RURAL | URBAN | SYSTEM |
| D1 | 11 | PRINCIPAL ARTERIAL-INTERSTATE |
| D2 | 12 | PRINCIPAL ARTERIAL-EXPRESSWAY |
| D3 | 13 | PRINCIPAL ARTERIAL-OTHER |
| D6 | 16 | MINOR ARTERIAL |
| D7 | 17 | MAJOR COLLECTOR |
| D8 | 18 | MINOR COLLECTOR |
| D9 | 19 | LOCAL SYSTEM |

SOURCE: NYS DOT DATA SERVICES BUREAU



New York State Department of Transportation
Classification Count Average Weekday Data Report

ROUTE#:	181	ROAD NAME:	811	YEAR:	2009	STATION#:	330133
COUNTY NAME:	Ontario			MONTH:	May		
REGION CODE:	3						
FROM:	AIRPORT RD JCT						
TO:	TAFT RD JCT						
REF-MARKER:	810333040						
END MILEPOINT:	0312638	NO. OF LANES:	6				
FUNC-CLASS:	11	HPMS NO:	30040040				
STATION NO:	0133	LDN#:					
COUNT TAKEN BY:	ORG CODE: TST INITIALS: JSV						
PROCESSED BY:	ORG CODE: DOT INITIALS: SJM	BATCH ID:	DOT-SJM/300118				

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	32180	33493	65673
NUMBER OF AXLES	65553	71302	136855
% HEAVY VEHICLES (F4-F13)	11.50%	11.53%	11.52%
% TRUCKS AND BUSES (F3-F13)	34.71%	36.05%	35.40%
AXLE CORRECTION FACTOR	0.84	0.84	0.84

VEHICLE CLASS	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES	2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	100	1	189	64	5	12	1	0	2	15	1	0	0	290
	200	1	116	43	4	9	0	0	2	12	0	0	0	187
	300	0	64	24	3	6	0	0	2	17	1	0	1	115
	400	1	48	24	4	7	0	0	4	17	0	1	1	107
	500	0	72	25	4	12	0	0	4	20	1	0	0	141
	600	0	160	65	13	31	3	0	5	20	2	1	0	303
	700	2	382	166	18	68	6	0	13	40	4	0	0	639
	800	3	791	304	32	115	6	1	24	55	3	1	1	1537
	900	1	699	311	27	80	5	0	22	38	4	1	0	1169
	1000	2	665	326	24	98	7	0	25	46	3	0	1	1202
	1100	2	751	353	16	99	6	1	25	48	8	1	0	1311
	1200	4	931	399	23	100	5	0	30	55	7	1	0	1544
	1300	6	1039	442	20	103	7	0	34	59	1	1	2	1715
	1400	4	1021	403	18	98	6	0	30	50	4	0	1	1625
	1500	6	1305	509	17	135	5	0	34	46	5	0	3	2065
	1600	11	2128	809	16	201	8	0	56	45	6	3	0	3296
	1700	18	3028	976	14	192	8	0	80	49	14	6	1	4290
	1800	17	2732	764	16	144	6	0	10	45	6	3	1	3558
	1900	6	1415	443	9	98	3	0	27	45	3	1	0	2051
	2000	4	1026	325	7	60	3	0	17	47	2	1	0	1487
	2100	6	795	260	7	52	1	0	11	38	2	0	0	1172
	2200	3	669	204	8	34	2	0	8	38	2	1	0	570
	2300	3	434	134	7	27	1	0	3	27	1	0	1	629
	2400	1	336	102	7	15	1	0	4	19	1	0	0	485
TOTAL VEHICLES	102	2059	7355	319	1795	92	2	545	884	92	21	9	24	32100
TOTAL AXLES	204	41712	14710	798	3598	276	8	1908	4420	562	105	54	210	65673
ENDING HOUR	100	0	108	22	1	7	0	0	2	18	1	0	0	159
	200	0	65	17	1	4	0	0	3	12	0	0	1	105
	300	0	49	19	2	4	0	0	2	12	1	0	0	88
	400	0	72	25	2	9	0	0	2	12	1	0	0	126
	500	0	201	62	3	14	0	0	4	17	2	0	0	303
	600	2	584	212	3	76	2	0	8	18	3	0	0	872
	700	9	1536	712	11	265	6	0	46	22	8	2	1	2731
	800	15	2395	1299	15	254	5	0	66	31	6	5	1	4642
	900	1	2069	845	15	151	10	1	42	43	5	1	2	3105
	1000	1	1139	510	19	111	5	1	23	54	5	0	1	1870
	1100	2	1019	425	18	102	7	1	21	61	4	1	0	1665
	1200	5	988	420	20	97	5	0	26	57	4	0	1	1635
	1300	5	1023	410	18	100	7	1	24	54	6	1	0	1650
	1400	4	1040	423	21	111	7	1	24	51	4	1	1	1690
	1500	4	1124	445	22	110	5	1	25	59	2	1	1	1770
	1600	5	1183	433	23	107	8	0	25	60	3	2	1	1850
	1700	8	1229	442	20	116	9	0	28	72	4	1	0	1930
	1800	10	1271	429	13	98	8	0	26	64	2	1	0	1925
	1900	7	1074	338	11	80	3	0	16	57	2	1	0	1552
	2000	5	787	277	8	60	4	0	13	51	3	1	0	1210
	2100	4	665	184	7	38	2	0	11	45	2	3	0	942
	2200	2	491	135	4	26	1	0	9	36	3	2	0	711
	2300	1	340	94	3	19	1	0	5	25	1	0	0	485
	2400	1	200	48	2	10	0	0	3	21	1	0	0	285
TOTAL VEHICLES	85	21522	7220	262	1560	85	24	456	962	73	29	9	16	33493
TOTAL AXLES	190	42644	15440	655	3920	285	8	1596	4810	438	115	54	131	71302
GRAND TOTAL VEHICLES	187	42178	15575	581	3759	187	32	3504	9230	990	220	108	341	136657
GRAND TOTAL AXLES	394	84356	31150	1452	7518	561								

VEHICLE CLASSIFICATION CODES:

- F1. Motorcycles
- F2. Autos*
- F3. 2-Axle, 4-Tire Pickups, Vans, Minivans*
- F4. Buses
- F5. 2-Axle, 6-Tire Single Unit Trucks
- F6. 3-Axle Single Unit Trucks
- F7. 4 or More Axle Single Unit Trucks
- F8. 4 or Less Axle Vehicles, One Unit & a Truck
- F9. 5-Axle Double Unit Vehicles, One Unit & a Truck
- F10. 6 or More Double Unit Vehicles, One Unit & a Truck
- F11. 5 or Less Axle Multi-Unit Trucks
- F12. 6-Axle Multi-Unit Trucks
- F13. 7 or More Axle Multi-Unit Trucks

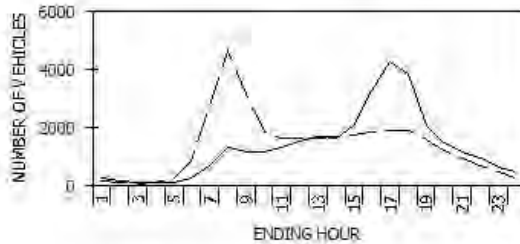
* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
D1	11	PRINCIPAL ARTERIAL-INTERSTATE
D2	12	PRINCIPAL ARTERIAL-EXPRESSWAY
D2	14	PRINCIPAL ARTERIAL-OTHER
D6	15	MINOR ARTERIAL
D7	17	MAJOR COLLECTOR
D8	17	MINOR COLLECTOR
D9	19	LOCAL SYSTEM

SOURCE: NYS DOT DATA SERVICES BUREAU

TRAFFIC FLOW BY DIRECTION



DIRECTION	PEAK HOUR DATA
North	17 4280 A.M.
South	8 4842 P.M.

Appendix B- Drainage Layer Verification

From: [Bermanian, Sohila](#)
To: [Pawlick, Mark](#)
Cc: [Marasakis, Diana](#)
Subject: Re: I-81 Viaduct Project - Pavement Design Question
Date: Thursday, September 22, 2016 1:30:39 PM

Thanks. Will proceed with using permeable base under rigid and HAM pavement.

Sent from my iPhone

On Sep 22, 2016, at 1:21 PM, Pawlick, Mark <Mark.Pawlick@parsons.com> wrote:

Sohila,
Response from DOT on permeable base.
Mark

From: Doucette, George (DOT) [<mailto:George.Doucette@dot.ny.gov>]
Sent: Thursday, September 22, 2016 4:15 PM
To: Pawlick, Mark <Mark.Pawlick@parsons.com>
Subject: RE: I-81 Viaduct Project - Pavement Design Question

Mark,
In general, NYSDOT is still using a permeable base course for rigid and HMA pavements. One exception is an area with poor soils. In that case, we would discuss eliminating the permeable base with our Geotech Engineer.
George

From: Pawlick, Mark [<mailto:Mark.Pawlick@parsons.com>]
Sent: Wednesday, September 21, 2016 5:33 PM
To: Doucette, George (DOT)
Subject: I-81 Viaduct Project - Pavement Design Question

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

George,
Our pavement design person asked me to forward the following question to you:

Could you find out if that state still requires use of permeable base for rigid and HMA pavement? Most states have stop using them since it is not maintained on regular bases and has created more maintenance problem.

Thanks,
Mark

Mark R. Pawlick, PE

Central NY Area Manager
<image001.jpg>
301 Plainfield Road, Suite 350 ♦ Syracuse, NY, 13212
Direct – 315.552.9744
Cell – 315.447.9478
Mark.Pawlick@parsons.com ♦ www.parsons.com

Appendix C-Life Cycle Cost Analysis

Unit Costs

Below are the unit prices used for the LCCA.

Recommended unit costs were used, see Attachment D for details.

Description	Item No.	Unit Price	Unit
Select Granular Fill	203.07	\$37.00	CY
Type 1 Asphalt Treated Permeable Base Course	402.010902	\$67.50	TON
Select Granular Subgrade	203.2	\$24.00	CY
Subbase Course	30.11	\$36.00	CY
HMA Top Course	402.128202	\$85.00	ton
HMA Binder Course	402.258902	\$78.00	ton
HMA Base Course	402.376902	\$67.00	ton
Portland Cement	502.0012	\$385.00	CY
PCTPB	-	\$260.00	TON
Preformed Joint sealer	-	\$5.50	LF
Diamond grinding	557.6301011	\$9.83	sy
Slab Replacement	502.1501002	\$2,436.67	cy
Rout, clean, seal cracks, hot appl sealant	402.7601001	\$1,186.67	lane-mi
3" Mill and Fill/lane-mile	(See below)	\$ 116,037	lane-mile
Full depth asphalt reconstruction	(See below)	\$ 332,286.24	lane-mile

Mill and Fill						
	3" Mill		7040	SY	\$2.33	\$ 16,403
63360	Fill-HMA Top	0.25	1172	ton	\$85	\$ 99,634

Full Depth Asphalt Reconstruction						
	Full Depth Removal		7040	SY	\$6.99	\$ 49,209.60
63360	HMA Top	0.125	586	ton	\$85	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$67	\$ 157,069

Initial Costs

Below are the initial costs associated with I-81.

I81 CG ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.98	2298	cy	\$ 385	\$ 884,644
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,375,473
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.50	3520	cy	\$ 24	\$ 84,480
HMA/lane-mile						\$ 559,878

I81 Viaduct ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	1.06	2493	cy	\$ 385	\$ 959,933
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,450,762
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.50	3520	cy	\$ 24	\$ 84,480
HMA/lane-mile						\$ 559,878

Below are the initial costs associated with I-690.

I690 CG ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.98	2298	cy	\$ 385	\$ 884,644
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,375,473
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.50	3520	cy	\$ 24	\$ 84,480
HMA/lane-mile						\$ 559,878

I690 Viaduct ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.90	2102	cy	\$ 385	\$ 809,356
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,300,184
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.00	2347	cy	\$ 24	\$ 56,320
HMA/lane-mile						\$ 531,718

Below are the costs associated with the connectors.

Connector CG ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.90	2102	cy	\$ 385	\$ 809,356
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,300,184
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.00	2347	cy	\$ 24	\$ 56,320
HMA/lane-mile						\$ 531,718

Connector Viaduct ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.73	1711	cy	\$ 385	\$ 658,778
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,149,607
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	0.50	1173	cy	\$ 24	\$ 28,160
HMA/lane-mile						\$ 503,558

Below are the costs associated with the ramps.

Ramp CG ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.90	2102	cy	\$ 385	\$ 809,356
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,300,184
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.00	2347	cy	\$ 24	\$ 56,320
HMA/lane-mile						\$ 531,718

Ramp Viaduct ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.90	2102	cy	\$ 385	\$ 809,356
63360	PCTPB	0.33	1563	ton	\$ 260	\$ 406,349
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 1,300,184
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.333333	1563	ton	\$ 68	\$ 105,494
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	1.00	2347	cy	\$ 24	\$ 56,320
HMA/lane-mile						\$ 531,718

Below are the initial costs associated with the local streets.

LocalCG ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.81	1907	cy	\$ 385	\$ 734,067
63360	PCTPB	0.00	0	ton	\$ 260	\$ -
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 818,547
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.00	0	ton	\$ 68	\$ -
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	0.50	1173	cy	\$ 24	\$ 28,160
HMA/lane-mile						\$ 398,063

Local Viaduct ALTERNATIVE						
Area (sf)	Type	D	Vol	Unit	Unit Cost	Cost
63360	JPCP	0.81	1907	cy	\$ 385	\$ 734,067
63360	PCTPB	0.00	0	ton	\$ 260	\$ -
63360	Subbase	1.00	2347	cy	\$ 36	\$ 84,480
JPCP/lane-mile						\$ 818,547
63360	HMA Top	0.125	586	ton	\$85.00	\$ 49,817
63360	HMA Binder	0.21	977	ton	\$ 78	\$ 76,190
63360	HMA Base	0.50	2344	ton	\$ 67	\$ 157,069
63360	ATPB	0.00	0	ton	\$ 68	\$ -
63360	Gravel	1.00	2347	cy	\$ 37	\$ 86,827
63360	Granular SG	0.50	1173	cy	\$ 24	\$ 28,160
HMA/lane-mile						\$ 398,063

Life Cycle Costs- Flexible Pavement

I-81

CG- I81				
Year	Description	Activity Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 559,877.71	1	\$ 559,877.71
	Fill Longitudinal Cracks/Joints			
5	Route & Seal Trans. Thermal Cracks	\$1,186.67	0.862609	\$ 1,023.63
	Fill Longitudinal Cracks/Joints			
11	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641862	\$ 74,479.61
	Fill Longitudinal Cracks/Joints			
20	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553676	\$ 657.03
	Fill Longitudinal Cracks/Joints			
26	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463695	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.411987	\$ 136,897.53
	Fill Longitudinal Cracks/Joints			
35	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383	\$ 421.72
	Fill Longitudinal Cracks/Joints			
41	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628	\$ 353.19
Total		\$ 1,015,320.77		\$ 775,117.94

Viaduct- I81				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 559,877.71	1	\$ 559,877.71
	Fill Longitudinal Cracks/Joints			
5	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862609	\$ 1,023.63
	Fill Longitudinal Cracks/Joints			
11	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641862	\$ 74,479.61
	Fill Longitudinal Cracks/Joints			
20	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553676	\$ 657.03
	Fill Longitudinal Cracks/Joints			
26	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463695	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.411987	\$ 136,897.53
	Fill Longitudinal Cracks/Joints			
35	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383	\$ 421.72
	Fill Longitudinal Cracks/Joints			
41	Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628	\$ 353.19
Total		\$ 1,015,320.77		\$ 775,117.94

CG-I690				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 559,877.71	1	\$ 559,877.71
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862608784	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421277	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641861947	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553675754	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463694727	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.41198676	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383398	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628001	\$ 353.19
Total		\$ 1,015,320.77		\$ 775,117.94

Viaduct- I690				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 531,717.71	1	\$ 531,717.71
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862608784	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421277	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641861947	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553675754	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463694727	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.41198676	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383398	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628001	\$ 353.19
Total		\$ 987,160.77		\$ 746,957.94

Connector

CG-Connector				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 531,717.71	1	\$ 531,717.71
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862608784	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421277	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641861947	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553675754	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463694727	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.41198676	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383398	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628001	\$ 353.19
Total		\$ 987,160.77		\$ 746,957.94

Viaduct- Connector				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 503,557.71	1	\$ 503,557.71
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862608784	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421277	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641861947	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553675754	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463694727	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.41198676	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383398	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628001	\$ 353.19
Total		\$ 959,000.77		\$ 718,797.94

Ramps

CG-Ramp				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 531,717.71	1	\$ 531,717.71
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862609	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641862	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553676	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463695	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.411987	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628	\$ 353.19
Total		\$ 987,160.77		\$ 746,957.94

Viaduct- Ramp				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 531,717.71	1	\$ 531,717.71
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862609	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641862	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553676	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463695	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.411987	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628	\$ 353.19
Total		\$ 987,160.77		\$ 746,957.94

Local Streets

CG-Local				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 398,063.31	1	\$ 398,063.31
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862609	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641862	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553676	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463695	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.411987	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628	\$ 353.19
Total		\$ 853,506.37		\$ 613,303.54

Viaduct- Local				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruction	\$ 398,063.31	1	\$ 398,063.31
5	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.862609	\$ 1,023.63
11	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.722421	\$ 857.28
15	3" AC Overlay	\$ 116,036.80	0.641862	\$ 74,479.61
20	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.553676	\$ 657.03
26	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.463695	\$ 550.25
30	Full Depth HMA Reconstruction	\$ 332,286.24	0.411987	\$ 136,897.53
35	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.355383	\$ 421.72
41	Fill Longitudinal Cracks/Joints Route & Seal Trans. Thermal Cracks	\$ 1,186.67	0.297628	\$ 353.19
Total		\$ 853,506.37		\$ 613,303.54

Life Cycle Costs- Rigid Pavement

I-81

I81 -CG				
Year	Description	Activity Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,375,473.24	1.00	\$ 1,375,473.24
20	Profile Grind	\$ 69,203.20	0.55	\$ 38,316.13
30	1% Slab replacement	\$ 55,989.26	0.41	\$ 23,066.83
40	1.5% slab replacement	\$ 83,983.89	0.31	\$ 25,745.84
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.31	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.31	\$ 21,214.71
	TOTAL	\$ 1,735,164.80		\$ 1,508,743.51

I81 - Viaduct				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,450,762.13	1.00	\$ 1,450,762.13
20	Profile Grind	\$ 69,203.20	0.55	\$ 38,316.13
30	1% Slab replacement	\$ 60,754.31	0.41	\$ 25,029.97
40	1.5% slab replacement	\$ 91,131.46	0.31	\$ 27,936.97
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.31	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.31	\$ 21,214.71
	TOTAL	\$ 1,822,366.30		\$ 1,588,186.67

I-690

I690-CG				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,375,473.24	1.00	\$ 1,375,473.24
20	Profile Grind	\$ 69,203.20	0.55	\$ 38,316.13
30	1% Slab replacement	\$ 55,989.26	0.41	\$ 23,066.83
40	1.5% slab replacement	\$ 83,983.89	0.31	\$ 25,745.84
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.31	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.31	\$ 21,214.71
	TOTAL	\$ 1,735,164.80		\$ 1,508,743.51

I690 - Viaduct				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,300,184.36	1.00	\$ 1,300,184.36
20	Profile Grind	\$ 69,203.20	0.55	\$ 38,316.13
30	1% Slab replacement	\$ 51,224.22	0.41	\$ 21,103.70
40	1.5% slab replacement	\$ 76,836.33	0.31	\$ 23,554.70
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.31	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.31	\$ 21,214.71
	TOTAL	\$ 1,647,963.30		\$ 1,429,300.36

Connectors

Connector-CG				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,300,184.36	1.00	\$ 1,300,184.36
20	Profile Grind	\$ 69,203.20	0.55	\$ 38,316.13
30	1% Slab replacement	\$ 51,224.22	0.41	\$ 21,103.70
40	1.5% slab replacement	\$ 76,836.33	0.31	\$ 23,554.70
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.31	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.31	\$ 21,214.71
	TOTAL	\$ 1,647,963.30		\$ 1,429,300.36

Connector- Viaduct				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,149,606.58	1.00	\$ 1,149,606.58
20	Profile Grind	\$ 69,203.20	0.55	\$ 38,316.13
30	1% Slab replacement	\$ 41,694.13	0.41	\$ 17,177.43
40	1.5% slab replacement	\$ 62,541.20	0.31	\$ 19,172.43
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.31	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.31	\$ 21,214.71
	TOTAL	\$ 1,473,560.31		\$ 1,270,414.04

Ramps

Ramp- CG				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,300,184.36	1	\$ 1,300,184.36
20	Profile Grind	\$ 69,203.20	0.553676	\$ 38,316.13
30	1% Slab replacement	\$ 51,224.22	0.411987	\$ 21,103.70
40	1.5% slab replacement	\$ 76,836.33	0.306557	\$ 23,554.70
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.306557	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.306557	\$ 21,214.71
	TOTAL	\$ 1,647,963.30		\$ 1,429,300.36

Ramp- Viaduct				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 1,300,184.36	1	\$ 1,300,184.36
20	Profile Grind	\$ 69,203.20	0.553676	\$ 38,316.13
30	1% Slab replacement	\$ 51,224.22	0.411987	\$ 21,103.70
40	1.5% slab replacement	\$ 76,836.33	0.306557	\$ 23,554.70
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.306557	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.306557	\$ 21,214.71
	TOTAL	\$ 1,647,963.30		\$ 1,429,300.36

Local Streets

Local- CG				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 818,546.67	1	\$ 818,546.67
20	Profile Grind	\$ 69,203.20	0.553676	\$ 38,316.13
30	1% Slab replacement	\$ 46,459.17	0.411987	\$ 19,140.56
40	1.5% slab replacement	\$ 69,688.76	0.306557	\$ 21,363.57
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.306557	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.306557	\$ 21,214.71
	TOTAL	\$ 1,154,413.00		\$ 943,508.40

Local- Viaduct				
Year	Description	Present Cost	Present Worth Factor	Present Worth
0	Reconstruct PCC	\$ 818,546.67	1	\$ 818,546.67
20	Profile Grind	\$ 69,203.20	0.553676	\$ 38,316.13
30	1% Slab replacement	\$ 46,459.17	0.411987	\$ 19,140.56
40	1.5% slab replacement	\$ 69,688.76	0.306557	\$ 21,363.57
40	Saw and Seal Joints with preformed joint sealer	\$ 81,312.00	0.306557	\$ 24,926.75
40	Profile Grind	\$ 69,203.20	0.306557	\$ 21,214.71
	TOTAL	\$ 1,154,413.00		\$ 943,508.40

Appendix D-Unit Costs

		Region	Number of Projects	Quantity	Weighted Average Price	
D Number	Pin	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263237	080932	09/08/2016	BRIDGE REHABILITATION ALONG LONG ISLAND EXPRESSWAY (I-495).	5.00	\$200.00	\$1,000.00
D263240	804505	08/25/2016	ROUTE 139 AT SOMERS HIGH SCHOOL TRAFFIC SIGNAL INSTALLATION,	590.00	\$45.00	\$26,550.00
D263214	526848	07/14/2016	NY ROUTE 240 OVER BUFFALO RIVER	4,755.00	\$25.00	\$118,875.00
D263207	680502	07/14/2016	INTERSTATE CULVERT RELINING PROJECT 2016	5.00	\$1.00	\$5.00
D263230	510541	07/14/2016	NY ROUTE 39 BANK STABILIZATION	55.00	\$30.00	\$1,650.00
D263209	<u>360277</u>	07/14/2016	MBC - ROUTE 5 [HAMILTON RD. TO CHAMBERLIN DR. AND SUNVIEW	6.00	\$47.00	\$282.00
D263210	581290	06/16/2016	RT 394 MILL AND OVERLAY	56.00	\$45.00	\$2,520.00
D263196	180790	06/16/2016	RUSTIC RAIL REPLACEMENT 16	47.60	\$50.00	\$2,380.00
D263192	9TDD16	06/16/2016	DITCH & DRAINAGE 2015 - 16	539.00	\$55.55	\$29,941.45
D263194	700406	06/16/2016	NYS ROUTE 37B (PARKER AVE.) OVER THE GRASSE RIVER	<u>3,122.00</u>	<u>\$52.00</u>	<u>\$162,344.00</u>
D263126	080963	06/16/2016	PRIORITY RESURFACING CONTRACT	100.00	\$40.00	\$4,000.00
D263227	8BOW22	05/19/2016	ROUTE 9W OVER ROCKLAND LAKE OUTLET (BIN 1007110)	94.00	\$75.00	\$7,050.00
D263180	425209	05/19/2016	ROUTE 252 AT JOHN STREET INTERSECTION SAFETY IMPROVEMENTS	17.00	\$100.00	\$1,700.00
D263085	950105	05/19/2016	I-81 WHITNEY POINT REST AREA SEWER IMPROVEMENTS - SITE	5,837.00	\$37.50	\$218,887.50
D263188	201678	05/19/2016	RTE 12 MAPLEDALE TO ALDER CREEK	13.00	\$23.00	\$299.00
D263198	204488	05/19/2016	RTE 30 AMSTERDAM-SCHENECTADY CO. LINE; VAIL MILLS- RTE 349	165.00	\$40.00	\$6,600.00
D263190	581288	05/19/2016	PMI, RTE 951A - WB RAMP TO WILLIAMS RD	90.00	\$65.00	\$5,850.00
D263155	180998	05/05/2016	CULVERT REPAIR - REPLACEMENT	427.00	\$51.00	\$21,777.00
D263143	022914	05/04/2016	LONG ISLAND WELCOME CENTER LIE (I-495) EASTBOUND BETWEEN	3,200.00	\$25	\$800.00
D263134	581004	04/21/2016	D263134 SWEET HOME ROAD - PS&E SHARE 1 WITH STP-FLEX	173.00	\$45.00	\$7,785.00

175m 203.07

SELECT GRANULATE FILL

→ AVG Projects >1000cy
= \$35/cy

AVG- Region #3
= \$29/cy

WT AVG Region #3
= \$16.03/cy

OTHER ADJACENT
REGIONS much higher
≈ \$50/cy
(INC. many small jobs)

WOULD USE
\$35 + 6% INFLATION
= \$37.10/cy

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263160	080931	04/21/2016	PM DRAINAGE CLEAN REPAIR REPLACE VARIOUS LOCATIONS SUFFOLK	100.00	\$35.00	\$3,500.00
D263123	304552	04/14/2016	REHABILITATION OF ROUTE 104, ROUTE 104A TO OSWEGO CITY LINE	9,300.00	\$16.00	\$148,800.00
D263034	360275	04/14/2016	MBC, ROUTE 31, VILLAGE OF BALDWINSVILLE	10.00	\$23.50	\$235.00
D263137	530831	04/07/2016	INTERSECTION SAFETY IMPROVEMENT PROJECT, U.S. ROUTE 62 AND	2,460.00	\$29.00	\$71,340.00
D263073	904131	03/31/2016	RTE 17C OVER CAYUTA CREEK	309.00	\$41.50	\$12,823.50
D263121	621828	03/17/2016	I-390 PAVEMENT REHAB	1,050.00	\$41.00	\$43,050.00
D263098	8BOW09	03/17/2016	ROUTE 28 OVER ESOPUS CREEK (BIN 1019680)	465.00	\$39.00	\$18,135.00
D263114	439013	03/03/2016	REPLACEMENT OF ROUTE 31 (LYELL AVE.) BRIDGE OVER ROUTE 390	1,085.00	\$55.00	\$59,675.00
D263103	512632	03/03/2016	I-990: FROM I-290 TO NORTH FRENCH ROAD	36.00	\$45.00	\$1,620.00
D263120	581109	03/03/2016	WALDEN AVE AT CENTRAL AVE	276.00	\$22.67	\$6,256.92
D263018	935800	03/03/2016	I-88 SANTARIA SPRINGS TO MARTIN HILL ROAD HIGHWAY AND	812.00	\$44.70	\$36,296.40
D263119	581184	02/18/2016	I-86 & RTE 60 LARGE CULVERT REPLACEMENT	743.00	\$38.00	\$28,234.00
D263118	530830	02/18/2016	U.S. ROUTE 62 - NIAGARA FALLS BOULEVARD	2,224.00	\$30.00	\$66,720.00
D263107	1BOW08	02/04/2016	REPLACEMENT OF TWO BRIDGES IN ESSEX COUNTY	280.20	\$40.19	\$11,261.24
D263102	803046	02/04/2016	RT 59 PARK AND RIDE LOT AT I-87 (NYS THRUWAY) REHABILITATION	500.00	\$40.00	\$20,000.00
D263072	980608	02/04/2016	LARGE CULVERT PROJECT, OTSEGO COUNTY	919.00	\$22.05	\$20,263.95
D263025	950095	01/21/2016	SITE CONSTRUCTION	295.00	\$38.00	\$11,210.00
D263082	080960	01/21/2016	ACCELERATED PAVING CONTRACT	65.00	\$50.00	\$3,250.00
D263080	581286	01/21/2016	NY 277: CHESTNUT RIDGE PK. - MERGE NY277/240	255.00	\$15.00	\$3,825.00
D263035	881252	01/07/2016	BRIDGE MBC	9.00	\$33.33	\$299.97
D263055	280558	01/07/2016	CULVERT REHABILITATION PROJECT 15B	45.00	\$80.00	\$3,600.00
D263030	603723	12/17/2015	NY 415 BRIDGE REPLACEMENT OVER MEADS CREEK	40.00	\$45.00	\$1,800.00

D Number	Pin	Let Date	Project Description	Qty	Weighted Average Price	
					Region	Number of Projects
Statewide					5	35,409.00
D263194	700406	06/16/2016	NYS ROUTE 37B (PARKER AVE.) OVER THE GRASSE RIVER	9,390.00	\$32.00	\$300,480.00
D263188	201678	05/19/2016	RTE 12 MAPLEDALE TO ALDER CREEK	9.00	\$23.00	\$207.00
D263118	530830	02/18/2016	U.S. ROUTE 62 - NIAGARA FALLS BOULEVARD	8,681.00	\$13.00	\$112,853.00
D262945	350163	06/18/2015	I-81 NB & SB OVER ONEIDA RIVER CHANNEL	1,200.00	\$50.00	\$60,000.00
D262921	112518	05/21/2015	NYS ROUTE 85 PAVEMENT REHABILITATION AND RECONSTRUCTION	16,129.00	\$14.00	\$225,806.00
Total:					35,409.00	\$699,346.00

17th 203.20

SELECT Granular Subgrade

19.75 avg

PRICE Higher in Region 3 But only 1 Project

say 24.00 INCLUSION

20307
cont.

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263075	152536	12/17/2015	I-890 EXIT 4 SAFETY IMPROVEMENTS	88.00	\$15.50	\$1,364.00
D262963	X73128	12/16/2015	GOWANUS EXPRESSWAY EMERGENCY REPAIRS	20.00	\$50.00	\$1,000.00
D263054	280557	12/03/2015	CULVERT PROJECT 15A	13.00	\$28.40	\$369.20
D263044	606715	12/03/2015	I-86 OVER TANNERY CREEK BRIDGE REHAB	50.00	\$90.00	\$4,500.00
D263019	601722	12/03/2015	RTE. 224 OVER JOHNSON & LANGFORD CREEKS BRIDGE REPLACEMENTS	14.00	\$58.00	\$812.00
D263013	104354	11/19/2015	BRIDGE REPLACEMENT PROJECT ROUTE 9 OVER TROUT BROOK TOWN OF	91.00	\$40.00	\$3,640.00
D262930	1BOW0E	11/19/2015	REPLACEMENT OF 6 BRIDGES AT VARIOUS LOCATIONS IN REGION 1	836.00	\$30.00	\$25,080.00
D262989	980593	11/05/2015	CULVERT REPLACEMENT IN BROOME, DELAWARE & OTSEGO COUNTIES	781.00	\$15.00	\$11,715.00
D262985	X05163	10/22/2015	REHABILITATION OF 188TH STREET BRIDGE OVER THE GRAND CENTRAL	200.00	\$80.00	\$16,000.00
D262693	9BOW0A	10/22/2015	ROUTE 17C OVER PATTERSON CREEK (BIN 1014300) ROUTE 17C OVER	874.00	\$26.30	\$22,986.20
D262997	708834	10/22/2015	NYS ROUTE 58 OVER OSWEGATCHIE RIVER - BRIDGE REHABILITATION	326.00	\$51.00	\$16,626.00
D262653	146042	10/22/2015	REPLACE THE NYS ROUTE 32 BRIDGE OVER THE MOHAWK RIVER	930.00	\$55.00	\$51,150.00
D263014	105171	10/22/2015	REHABILITATION OF THE I-787 BRIDGES TO EMPIRE STATE PLAZA	27.00	\$78.00	\$2,106.00
Total: 44,824.80						\$1,349,840.33

ITEM 4102.010903
ASPHALT TREATED PERM BASE

		Region	Number of Projects	Quantity	Weighted Average Price	
		Statewide	5	6,139.00	\$64.88	
D Number	Pin	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263085	950105	05/19/2016	1-81 WHITNEY POINT REST AREA SEWER IMPROVEMENTS - SITE	13.00	\$95.00	\$1,235.00
D263073	904131	03/31/2016	RTE 17C OVER CAVUTA CREEK	1,029.00	\$71.60	\$73,676.40
D263019	601722	12/03/2015	RTE. 224 OVER JOHNSON & LANGFORD CREEKS BRIDGE REPLACEMENTS	633.00	\$71.00	\$44,943.00
D262881	602914	05/07/2015	NY 328 SAFETY INTERSECTIONS	2,764.00	\$62.00	\$171,368.00
D262874	175967	03/19/2015	LAKE GEORGE GATEWAY PROJECT (RT 9 FROM ROUTE 9N TO WEST	1,700.00	\$63.00	\$107,100.00
Total:				6,139.00		\$398,322.40

ITEM 304.15
SUGGEST CHANGE, OPTIONAL TYPE

PROJECTS OVER 10000Y
44.27/cy

PROJECTS OVER 10000Y

33.25/cy STRAIGHT

31.07 WEIGHTED

USE 36.00/cy

D Number	Pin	Let Date	Project Description	Qty	Awarded Price	Extended Amt	Region	Number of Projects	Quantity	Weighted Average Price
D263225	902140	07/28/2016	RTE 52, INFIRMARY RD TO WOODBOURNE - MILL & FILL	20.00	\$90.00	\$1,800.00	Statewide	34	111,991.20	\$34.77
D263214	526848	07/14/2016	NY ROUTE 240 OVER BUFFALO RIVER	1,188.00	\$35.00	\$41,580.00				
D263200	576071	06/16/2016	SAFE ROUTES TO SCHOOLS-- GOWANDA	839.00	\$45.00	\$37,755.00				
D263210	581290	06/16/2016	RT 394 MILL AND OVERLAY	434.00	\$55.00	\$23,870.00				
D263195	904134	06/16/2016	ROUTES 17C AND 26, HARRISON AVE TO ADAMS AVE	22.00	\$159.00	\$3,498.00				
D263192	9TDD16	06/16/2016	DITCH & DRAINAGE 2015 - 16	1.00	\$510.00	\$510.00				
D263085	950105	05/19/2016	I-81 WHITNEY POINT REST AREA SEWER IMPROVEMENTS - SITE	41.00	\$28.50	\$1,168.50				
D263127	360312	05/05/2016	ROUTE 3 MBC MILLING AND PAVING, CITY OF FULTON	128.00	\$111.00	\$14,208.00				
D263174	935824	05/05/2016	BROOME COUNTY GENERAL BRIDGE REPAIRS	45.00	\$79.00	\$3,555.00				
D263125	606714	04/21/2016	I-86 PAVEMENT REHAB, EXIT 46 TO CHEMUNG COUNTY LINE	7,100.00	\$39.00	\$276,900.00				
D263034	360275	04/14/2016	MBC, ROUTE 31, VILLAGE OF BALDWINSVILLE	61.00	\$184.00	\$11,224.00				
D263123	304552	04/14/2016	REHABILITATION OF ROUTE 104, ROUTE 104A TO OSWEGO CITY LINE	33,020.00	\$27.00	\$891,540.00				
D263137	530831	04/07/2016	INTERSECTION SAFETY IMPROVEMENT PROJECT, U.S. ROUTE 62 AND	830.00	\$42.00	\$34,860.00				
D263136	558047	04/07/2016	I-290 OVER PARKER BLVD. AND OVER SHERIDAN DRIVE	3.00	\$120.00	\$360.00				
D263153	181002	04/07/2016	PAVEMENT MAINTENANCE - 2016A	2.00	\$50.00	\$100.00				
D263073	904131	03/31/2016	RTE 17C OVER CAYUTA CREEK	1,831.00	\$78.80	\$144,282.80				
D263121	621828	03/17/2016	I-390 PAVEMENT REHAB	16,417.00	\$40.00	\$656,680.00				
D263018	935800	03/03/2016	I-88 SANTARIA SPRINGS TO MARTIN HILL ROAD HIGHWAY AND	29,500.00	\$28.00	\$826,000.00				
D263100	680504	03/03/2016	GUIDERAIL	100.00	\$66.50	\$6,650.00				
D263105	581280	03/03/2016	GENERAL BRIDGE REPAIRS	40.00	\$140.00	\$5,600.00				

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263068	360273	03/03/2016	TWO - COURSE MILL & FILL OF INTERSTATE 81	1.20	\$180.00	\$216.00
D263114	439013	03/03/2016	REPLACEMENT OF ROUTE 31 (LYELL AVE.) BRIDGE OVER ROUTE 390	175.00	\$110.00	\$19,250.00
D263108	980WT0	02/18/2016	RTE 97 OVER BEAVER BROOK (CBOW)	1,200.00	\$50.00	\$60,000.00
D263104	581257	02/18/2016	GENERAL BRIDGE REPAIRS	141.00	\$80.00	\$11,280.00
D263118	530830	02/18/2016	U.S. ROUTE 62 - NIAGARA FALLS BOULEVARD	11,376.00	\$38.00	\$432,288.00
D263025	950095	01/21/2016	SITE CONSTRUCTION	195.00	\$50.00	\$9,750.00
D263080	581286	01/21/2016	NY 277, CHESTNUT RIDGE PK. - MERGE NY277/240	806.00	\$45.00	\$36,270.00
D263071	904466	01/07/2016	ROUTE 30 OVER EAST BRANCH DELAWARE RIVER	2,400.00	\$55.00	\$132,000.00
D263060	305762	01/07/2016	ELEMENT SPECIFIC BRIDGE REPAIRS ON STATE ROUTE 13 BINS	400.00	\$58.00	\$23,200.00
D263030	603723	12/17/2015	NY 415 BRIDGE REPLACEMENT OVER MEADS CREEK	1,075.00	\$47.00	\$50,525.00
D263019	601722	12/03/2015	RTE. 224 OVER JOHNSON & LANGFORD CREEKS BRIDGE REPLACEMENTS	1,190.00	\$49.00	\$58,310.00
D263022	610855	11/19/2015	RTE. 14, SLEEPER CREEK BRIDGE REPLACEMENT BIN 1096330	610.00	\$39.60	\$24,156.00
D262989	980593	11/05/2015	CULVERT REPLACEMENT IN BROOME, DELAWARE & OTSEGO COUNTIES	600.00	\$48.50	\$29,100.00
D262985	X05163	10/22/2015	REHABILITATION OF 188TH STREET BRIDGE OVER THE GRAND CENTRAL	200.00	\$130.00	\$26,000.00
Total:				111,991.20		\$3,894,486.30

D Number	Pin	Let Date	Project Description	Qty	Awarded Price	Extended Amt	Region	Number of Projects	Quantity	Weighted Average Price
D263160	080931	04/21/2016	PM DRAINAGE CLEAN REPAIR REPLACE VARIOUS LOCATIONS SUFFOLK.	220.00	\$50.00	\$11,000.00	Statewide	44	198,115.00	\$11.87
D263125	606714	04/21/2016	186 PAVEMENT REHAB, EXT 46 TO CHEMUNG COUNTY LINE	4,700.00	\$20.00	\$94,000.00				
D263121	621828	03/17/2016	1-390 PAVEMENT REHAB OVERLAY REPAIRS.	127,868.00	\$8.00	\$1,022,944.00				
D263074	080951	03/03/2016	CRACK SEALING AND JOINT OVERLAY REPAIRS.	60.00	\$15.82	\$949.20				
D263082	080960	01/21/2016	ACCELERATED PAVING CONTRACT	416.00	\$17.50	\$7,280.00				
D262976	080943	09/24/2015	TRAFFIC SIGNAL REQUIREMENTS 34.	20.00	\$22.00	\$440.00				
D262965	080956	08/20/2015	PRIORITY RESURFACING CONTRACT	200.00	\$55.00	\$11,000.00				
D262877	005923	06/18/2015	CONCRETE PAVEMENT REPAIR CONTRACT NY27 FROM NY231 TO	336.00	\$15.00	\$5,040.00				
D262876	080945	06/18/2015	CRACK SEALING AND JOINT OVERLAY REPAIRS	5.00	\$100.00	\$500.00				
D262896	005924	05/21/2015	MILL AND FILL CONTRACT NY 27 SERVICE ROADS BELMONT AVE TO	120.00	\$13.00	\$1,560.00				
D262881	602914	05/07/2015	NY 328 SAFETY INTERSECTIONS	912.00	\$16.00	\$14,592.00				
D262878	609627	04/09/2015	CONCRETE PAVEMENT REPAIR NY 36	1,391.00	\$9.00	\$12,519.00				
D262883	211803	04/09/2015	ROUTE 28 OLD FORGE HAMLET TO HAMILTON COUNTY LINE	150.00	\$9.15	\$1,372.50				
D262817	005920	03/19/2015	NY 27 MILL AND FILL PROJECT NYC LINE TO BROADWAY NASSAU	25.00	\$50.00	\$1,250.00				
D262842	080949	03/19/2015	MILL AND FILL CONTRACT NY108, NY106/107 NSP TO N. MARGINAL	50.00	\$50.00	\$2,500.00				
D262733	005919	12/04/2014	NY 27 MILL & FILL, WANTAGH STATE PARKWAY TO NASSAU/SUFFOLK	125.00	\$50.00	\$6,250.00				
D262699	X80661	12/04/2014	REHABILITATION OF 3 BRIDGES IN THE LONG ISLAND	3,200.00	\$12.00	\$38,400.00				
D262708	004233	12/04/2014	BRIDGE REHABILITATION AT NY 25 OVER I-495 L I EXPY TOWN OF	1,070.00	\$30.00	\$32,100.00				
D262725	053475	11/20/2014	SAFETY IMPROVEMENTS ON VARIOUS STATE HIGHWAYS	876.00	\$20.00	\$17,520.00				

ITEM 502.921
CONST TRANSVERS JOINTS

IGNORING GATEWAY,
AVG of 1000 Projects
IS ~ \$10/LF

GATEWAY WNS D/B TYPE
of BID

ASSUME GATEWAY 10% POSSIBLE

$(\$10 \times 9 + \$66) / 10 = \$15.60$

WOULD USE
\$15/LF

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D262652	576080	08/25/2014	GATEWAY	7,300.00	\$66.00	\$481,800.00
D262677	055321	08/21/2014	NY24 MILL AND FILL	12.00	\$40.00	\$480.00
D262656	022949	08/21/2014	MILL AND FILL LIE FROM EXIT 37 TO EXIT 46 TOWNS OF NORTH	560.00	\$50.00	\$28,000.00
D262654	080923	08/14/2014	PRIORITY SURFACE TREATMENT NY ROUTE 25 901A & 25A.	490.00	\$30.00	\$14,700.00
D262580	080928	05/08/2014	TRAFFIC SIGNAL REQUIREMENTS 33.	20.00	\$5.00	\$100.00
D262538	005915	04/10/2014	NY ROUTE 27 CONCRETE PAVEMENT REPAIR CONTRACT.	185.00	\$50.00	\$9,250.00
D262512	213441	03/20/2014	ROUTE 5, 8, 12, N-S ARTERIAL (CONTRACT 2)	28,114.00	\$9.20	\$258,648.80
D262391	X72030	03/20/2014	REHABILITATION OF MAJOR DEEGAN EXPRESSWAY VIADUCT BETWEEN	20.00	\$14.00	\$280.00
D262419	X09628	02/20/2014	WEST SHORE EXPRESSWAY ACCESS IMPROVEMENTS	5,241.00	\$5.00	\$26,205.00
D262522	608440	01/16/2014	NY 21 OVER BIG CREEK BRIDGE REHABS	576.00	\$15.15	\$8,726.40
D262483	005912	12/19/2013	NY27 MILL AND FILL	200.00	\$30.00	\$6,000.00
D262416	080924	12/19/2013	PM DRAINAGE CLEAN REPAIR REPLACE VARIOUS LOCATIONS NASSAU	25.00	\$20.00	\$500.00
D262440	022946	12/05/2013	I495 EXITS 32 TO 37	50.00	\$12.00	\$600.00
D262445	005918	11/21/2013	NY 27 MILL & FILL, NY ROUTE 114 TO SOUTH ETNA AVE.	515.00	\$50.00	\$25,750.00
D262408	080917	11/21/2013	SOUTHERN STATE PARKWAY GUIDE RAIL REHABILITATION.	294.00	\$10.00	\$2,940.00
D262444	005917	11/21/2013	NY 27 MILL FILL CR39 TO W O STEPHEN HANDS PATH.	30.00	\$50.00	\$1,500.00
D262389	004237	11/07/2013	6 3 MM THIN COURSE OVERLAY NY 25 TUCKER LANE TO END OF NY	75.00	\$35.00	\$2,625.00
D262403	005914	10/17/2013	MILL & FILL NY 27 BROADWAY TO HARRISON.	240.00	\$20.00	\$4,800.00
D262402	005913	10/17/2013	NY 27 MILL AND FILL HARRISON AVENUE TO WANTAGH STATE	42.00	\$50.00	\$2,100.00
D262332	022945	06/20/2013	CONCRETE PAVEMENT RESTORATION CONTRACT	120.00	\$17.00	\$2,040.00
D262308	080823	05/16/2013	SAFETY IMPROVEMENTS.	4,730.00	\$11.00	\$52,030.00

562,91
CMT

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D262258	080915	05/02/2013	TRAFFIC SIGNAL REQUIREMENTS 32.	20.00	\$18.00	\$360.00
D262197	X73140	03/28/2013	GOWANUS EMERGENCY REPAIRS AND DECK REPLACEMENT AND RAMPS F	4,100.00	\$20.00	\$82,000.00
D262236	180880	02/07/2013	BRIDGE 5-7 REPAIRS SFY 12-13	156.00	\$20.00	\$3,120.00
D262171	053473	12/13/2012	DRAINAGE BASIN RECONSTRUCTION.	3,256.00	\$17.00	\$55,352.00
Total:				198,115.00		\$2,351,123.90

		Region	Number of Projects	Quantity	Weighted Average Price	
D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263125	606714	04/21/2016	I-86 PAVEMENT REHAB, EXIT 46 TO CHEMUNG COUNTY LINE	2,600.00	\$15.00	\$39,000.00
D263121	621828	03/17/2016	I-390 PAVEMENT REHAB	58,920.00	\$4.00	\$235,680.00
D263007	X73148	03/02/2016	GOWANUS EXPRESSWAY EMERGENCY REPAIRS	450.00	\$110.00	\$49,500.00
D262883	211803	04/09/2015	ROUTE 28 OLD FORGE HAMLET TO HAMILTON COUNTY LINE	120.00	\$21.00	\$2,520.00
D262878	609627	04/09/2015	CONCRETE PAVEMENT REPAIR NY 36	1,576.00	\$6.00	\$9,456.00
D262725	053475	11/20/2014	SAFETY IMPROVEMENTS ON VARIOUS STATE HIGHWAYS	447.00	\$20.00	\$8,940.00
D262671	541054	09/04/2014	RMPW	12.00	\$122.00	\$1,464.00
D262652	576080	08/25/2014	GATEWAY	12,200.00	\$16.00	\$195,200.00
Total:				76,325.00		\$541,760.00

Print 

1 Item 502.81002 9110

Const. Longitudinal Joints

26.00/3 = 8.67/lf (avg)

SPY \$10/lf

		Region	Number of Projects	Quantity	Weighted Average Price	
		Statewide	5	1,814.00	\$21.63	
D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263179	232615	04/21/2016	RTE 5A COMMERCIAL DRIVE	22.00	\$30.00	\$660.00
D263007	X73148	03/02/2016	GOWANUS EXPRESSWAY EMERGENCY REPAIRS	450.00	\$45.00	\$20,250.00
D262985	X05163	10/22/2015	REHABILITATION OF 188TH STREET BRIDGE OVER THE GRAND CENTRAL	377.00	\$10.00	\$3,770.00
D262761	XM1256	02/05/2015	CORRECTIVE REPAIRS AND PREVENTIVE MAINTENANCE ON SPECIFIED	953.00	\$15.00	\$14,295.00
D262671	541054	09/04/2014	RMPW	12.00	\$21.20	\$254.40
Total:				1,814.00		\$39,229.40

ITEM 502.93
Sealing longitudinal joints

$$25.00/2 = 12.50$$

$$3 \text{ years INF.} \quad \frac{1,13}{13,63}$$

USE \$14 - \$15/25

		Region	Number of Projects	Quantity	Weighted Average Price	
		Statewide	7	17,945.00	\$330.37	
D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D262980	X05810	10/22/2015	OCEAN PKWY (RT 908H) CORRIDOR SAFETY IMPROVEMENTS FOR	300.00	\$525.00	\$157,500.00
D262883	211803	04/09/2015	ROUTE 28 OLD FORGE HAMLET TO HAMILTON COUNTY LINE	120.00	\$395.00	\$47,400.00
D262878	609627	04/09/2015	CONCRETE PAVEMENT REPAIR NY 36	800.00	\$206.00	\$164,800.00
D262652	576080	08/25/2014	GATEWAY	5,300.00	\$550.00	\$2,915,000.00
D262512	213441	03/20/2014	ROUTE 5, 8, 12, N-S ARTERIAL (CONTRACT 2)	11,054.00	\$225.00	\$2,487,150.00
D262522	608440	01/16/2014	NY 21 OVER BIG CREEK BRIDGE REHABS	267.00	\$460.00	\$122,820.00
D262236	180880	02/07/2013	BRIDGE 5-7 REPAIRS SPY 12-13	104.00	\$325.00	\$33,800.00
Total:				17,945.00		\$5,928,470.00

Item 502.0012
PCC PAVT

\$330/cy

\$370/cy - 4yr inflation

may BE higher as one project has \$225/cy

Item 402.3784xx
BASE COURSE

USE 64/700

2

		Region	Number of Projects	Quantity	Weighted Average Price	
		Statewide	42	78,268.00	\$63.63	
D Number	Pin	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263224	180965	07/14/2016	EMERGENCY STANDBY CONTRACT - SFY 16-18	400.00	\$85.00	\$34,000.00
D263152	950098	07/14/2016	I81 OVER 990 G, NORTH BOUND & SOUTH BOUND	40.00	\$124.00	\$4,960.00
D263233	152885	06/22/2016	SCHODACK REST AREA IMPROVEMENTS - GENERAL CONSTRUCTION	262.00	\$67.00	\$17,554.00
D263210	581290	06/16/2016	RT 394 MILL AND OVERLAY	26.00	\$150.00	\$3,900.00
D263194	700406	06/16/2016	NYS ROUTE 37B (PARKER AVE.) OVER THE GRASSE RIVER	3,425.00	\$63.50	\$217,487.50
D263085	950105	05/19/2016	I-81 WHITNEY POINT REST AREA SEWER IMPROVEMENTS - SITE	19.00	\$134.00	\$2,546.00
D263190	581288	05/19/2016	PMI, RTE 951A - WB RAMP TO WILLIAMS RD	267.00	\$110.00	\$29,370.00
D263174	935824	05/05/2016	BROOME COUNTY GENERAL BRIDGE REPAIRS	790.00	\$96.00	\$75,840.00
D263155	180998	05/05/2016	CULVERT REPAIR - REPLACEMENT	1,205.00	\$100.00	\$120,500.00
D263135	581285	04/21/2016	PAVEMENT RESTORATION U.S. 219, FROM DUERR ROAD TO THE I-90	132.00	\$125.00	\$16,500.00
D263160	080931	04/21/2016	PM DRAINAGE CLEAN REPAIR REPLACE VARIOUS LOCATIONS SUFFOLK.	10.00	\$500.00	\$5,000.00
D263123	304552	04/14/2016	REHABILITATION OF ROUTE 104, ROUTE 104A TO OSWEGO CITY LINE	2,650.00	\$68.75	\$182,187.50
D263136	558047	04/07/2016	I-290 OVER PARKER BLVD. AND OVER SHERIDAN DRIVE	1.00	\$450.00	\$450.00
D263142	181023	04/07/2016	BRIDGE PRESERVATION 6, SFY 15-16	180.00	\$160.00	\$28,800.00
D263153	181002	04/07/2016	PAVEMENT MAINTENANCE - 2016A	15.00	\$200.00	\$3,000.00
D263073	904131	03/31/2016	RTE 17C OVER CAYUTA CREEK	1,544.00	\$64.60	\$99,742.40
D263140	704242	03/17/2016	RTE. 26 AT ONEIDA/ONTARIO AVE. INTERSECTION (FORT DRUM)	9,446.00	\$54.00	\$510,084.00
D263121	621828	03/17/2016	I-390 PAVEMENT REHAB	19,770.00	\$66.00	\$1,304,820.00
D263091	714344	03/17/2016	US ROUTE 11 BRIDGE OVER CHATEAUGAY RIVER	565.00	\$86.00	\$48,590.00
D263120	581109	03/03/2016	WALDEN AVE AT CENTRAL AVE	472.00	\$73.57	\$34,725.04

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263018	935800	03/03/2016	I-88 SANITARIA SPRINGS TO MARTIN HILL ROAD HIGHWAY AND	24,967.00	\$44.60	\$1,113,528.20
D263105	581280	03/03/2016	GENERAL BRIDGE REPAIRS	66.00	\$400.00	\$26,400.00
D263104	581257	02/18/2016	GENERAL BRIDGE REPAIRS	13.00	\$200.00	\$2,600.00
D263118	530830	02/18/2016	U.S. ROUTE 62 - NIAGARA FALLS BOULEVARD	279.00	\$60.00	\$16,740.00
D263119	581184	02/18/2016	I-86 & RTE 60 LARGE CULVERT REPLACEMENT	288.00	\$100.00	\$28,800.00
D263107	1BOW0B	02/04/2016	REPLACEMENT OF TWO BRIDGES IN ESSEX COUNTY	2,108.00	\$87.73	\$184,934.84
D263025	950095	01/21/2016	SITE CONSTRUCTION	73.00	\$160.00	\$11,680.00
D263080	581286	01/21/2016	NY 277, CHESTNUT RIDGE PK. - MERGE NY277/240	198.00	\$75.00	\$14,850.00
D263071	904466	01/07/2016	ROUTE 30 OVER EAST BRANCH DELAWARE RIVER	970.00	\$88.00	\$85,360.00
D263030	603723	12/17/2015	NY 415 BRIDGE REPLACEMENT OVER MEADS CREEK	1,200.00	\$75.00	\$90,000.00
D263039	080947	12/17/2015	SIGN STRUCTURE REPAIR CONTRACT VARIOUS LOCATIONS NASSAU AND	26.00	\$350.00	\$9,100.00
D263019	601722	12/03/2015	RTE. 224 OVER JOHNSON & LANGFORD CREEKS BRIDGE REPLACEMENTS	958.00	\$79.00	\$75,682.00
D262930	1BOW0E	11/19/2015	REPLACEMENT OF 6 BRIDGES AT VARIOUS LOCATIONS IN REGION 1	1,377.00	\$128.00	\$176,256.00
D263013	104354	11/19/2015	BRIDGE REPLACEMENT PROJECT ROUTE 9 OVER TROUT BROOK TOWN OF	108.00	\$155.00	\$16,740.00
D263022	610855	11/19/2015	RTE. 14, SLEEPER CREEK BRIDGE REPLACEMENT BIN 1096330	292.00	\$91.70	\$26,776.40
D262999	080942	11/19/2015	PRE-PS&E COMPLIANCE BLOCK VARIOUS LOCATIONS	5.00	\$200.00	\$1,000.00
D262989	980593	11/05/2015	CULVERT REPLACEMENT IN BROOME, DELAWARE & OTSEGO COUNTIES	275.00	\$154.00	\$42,350.00
D262693	9BOW0A	10/22/2015	ROUTE 17C OVER PATTERSON CREEK (BIN 1014300) ROUTE 17C OVER	2,926.00	\$72.60	\$212,427.60
D262993	846317	10/22/2015	BRIDGE REHABILITATION, BIN 1041200, ROUTE 213 OVER THE	55.00	\$165.00	\$9,075.00

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D262997	708834	10/22/2015	NYS ROUTE 58 OVER OSWEGATCHIE RIVER - BRIDGE REHABILITATION	433.00	\$104.00	\$45,032.00
D262653	146042	10/22/2015	REPLACE THE NYS ROUTE 32 BRIDGE OVER THE MOHAWK RIVER	240.00	\$83.00	\$19,920.00
D263014	105171	10/22/2015	REHABILITATION OF THE I-787 BRIDGES TO EMPIRE STATE PLAZA	192.00	\$161.00	\$30,912.00
Total: 78,268.00						\$4,980,220.48

D Number	Pin	Let Date	Project Description	Qty	Awarded Price	Extended Amt	Region	Number of Projects	Quantity	Weighted Average Price
D263224	180965	07/14/2016	EMERGENCY STANDBY CONTRACT - SPY 16-18	400.00	\$120.00	\$48,000.00	Statewide	12	14,812.00	\$87.48
D263121	621828	03/17/2016	I-390 PAVEMENT REHAB	1,702.00	\$75.00	\$127,650.00				
D263014	105171	10/22/2015	REHABILITATION OF THE I-787 BRIDGES TO EMPIRE STATE PLAZA	22.00	\$260.00	\$5,720.00				
D262653	146042	10/22/2015	REPLACE THE NYS ROUTE 32 BRIDGE OVER THE MOHAWK RIVER	300.00	\$101.00	\$30,300.00				
D262983	130679	09/24/2015	ROUTE 7 BRIDGE OVER THE SUNKAUJISSIA CREEK	405.00	\$80.00	\$32,400.00				
D262945	350163	06/18/2015	I-81 NB & SB OVER ONEIDA RIVER CHANNEL	340.00	\$150.00	\$51,000.00				
D262923	103424	06/18/2015	ROUTE 5 PEDESTRIAN IMPROVEMENTS	163.00	\$316.00	\$51,508.00				
D262889	180999	04/23/2015	TRAFFIC SIGNALS REQUIREMENTS CONTRACT NO. 21	8.00	\$235.00	\$1,880.00				
D262878	609627	04/09/2015	CONCRETE PAVEMENT REPAIR NY 36	75.00	\$160.00	\$12,000.00				
D262879	606707	04/09/2015	MBC PAVING, I-86 EXIT 39 TO EXIT 41 AND I-99 PRESHO TO GANG	8,373.00	\$71.00	\$594,483.00				
D262786	7BOW00	01/08/2015	I-87 CRITICAL BRIDGES OVER WATER (4)	2,660.00	\$110.75	\$294,595.00				
D262773	5BOW01	10/23/2014	RT 78 OVER BLACK AND GILL CREEKS	364.00	\$127.00	\$46,228.00				
Total: 14,812.00						\$1,295,764.00				

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New 17em 402.128203
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kg Projects. 72/700
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D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt	Region	Number of Projects	Quantity	Weighted Average Price
D263224	180965	07/14/2016	EMERGENCY STANDBY CONTRACT - SFY 16-18	400.00	\$85.00	\$34,000.00	Statewide	47	58,094.00	\$73.24
D263152	950098	07/14/2016	181 OVER 990 G, NORTH BOUND & SOUTH BOUND	450.00	\$114.00	\$51,300.00				
D263233	152885	06/22/2016	SCHODACK REST AREA IMPROVEMENTS - GENERAL CONSTRUCTION	150.00	\$67.00	\$10,050.00				
D263192	9TDD16	06/16/2016	DITCH & DRAINAGE 2015 - 16	5.00	\$380.00	\$1,900.00				
D263210	581290	06/16/2016	RT 394 MILL AND OVERLAY	208.00	\$125.00	\$26,000.00				
D263194	700406	06/16/2016	NYS ROUTE 37B (PARKER AVE.) OVER THE GRASSE RIVER	2,038.00	\$70.50	\$143,679.00				
D263188	201678	05/19/2016	RTE 12 MAPLEDALE TO ALDER CREEK	13,265.00	\$52.50	\$696,412.50				
D263190	581288	05/19/2016	PMI, RTE 951A - WB RAMP TO WILLIAMS RD	173.00	\$145.00	\$25,085.00				
D263085	950105	05/19/2016	1-81 WHITNEY POINT REST AREA SEWER IMPROVEMENTS - SITE	7.00	\$105.00	\$735.00				
D263155	180998	05/05/2016	CULVERT REPAIR - REPLACEMENT	359.00	\$135.00	\$48,465.00				
D263174	935824	05/05/2016	BROOME COUNTY GENERAL BRIDGE REPAIRS	13.00	\$99.00	\$1,287.00				
D263135	581285	04/21/2016	PAVEMENT RESTORATION U.S. 219, FROM DUERR ROAD TO THE I-90	553.00	\$150.00	\$82,950.00				
D263160	080931	04/21/2016	PM DRAINAGE CLEAN REPAIR REPLACE VARIOUS LOCATIONS SUFFOLK.	8.00	\$500.00	\$4,000.00				
D263130	280568	04/21/2016	PM BRIDGE REPAIRS PROJECT 15A - WEST	12.00	\$156.20	\$1,874.40				
D263136	558047	04/07/2016	I-290 OVER PARKER BLVD. AND OVER SHERIDAN DRIVE	1.00	\$450.00	\$450.00				
D263142	181023	04/07/2016	BRIDGE PRESERVATION 6, SFY 15- 16	60.00	\$230.00	\$13,800.00				
D263153	181002	04/07/2016	PAVEMENT MAINTENANCE - 2016A	2,205.00	\$50.50	\$111,352.50				
D263073	904131	03/31/2016	RTE 17C OVER CAYUTA CREEK	644.00	\$93.20	\$60,020.80				
D263140	704242	03/17/2016	RTE. 26 AT ONEIDA/ONTARIO AVE. INTERSECTION (FORT DRUM)	5,397.00	\$57.00	\$307,629.00				

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19 items BUNDED 80 series

kg projects \$61.50/ton
wt avg

USE \$65/ton

~~402.19~~

402.2589 x 5
small qty. Found

avg \$80/ton
projects

For test, use \$75/ton

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D263091	714344	03/17/2016	US ROUTE 11 BRIDGE OVER CHATEAUGAY RIVER	296.00	\$96.00	\$28,416.00
D263121	621828	03/17/2016	1-390 PAVEMENT REHAB	16,726.00	\$70.00	\$1,170,820.00
D263117	005925	03/17/2016	CONCRETE PAVEMENT RESTORATION CONTRACT NY 27 FROM N	20.00	\$300.00	\$6,000.00
D263103	512632	03/03/2016	1-990, FROM 1-290 TO NORTH FRENCH ROAD	2,946.00	\$86.00	\$253,356.00
D263105	581280	03/03/2016	GENERAL BRIDGE REPAIRS	24.00	\$500.00	\$12,000.00
D263018	935800	03/03/2016	1-88 SANTARIA SPRINGS TO MARTIN HILL ROAD HIGHWAY AND	1,342.00	\$63.40	\$85,082.80
D263074	080951	03/03/2016	CRACK SEALING AND JOINT OVERLAY REPAIRS.	151.00	\$125.00	\$18,875.00
D263118	530830	02/18/2016	U.S. ROUTE 62 - NIAGARA FALLS BOULEVARD	400.00	\$75.00	\$30,000.00
D263104	581257	02/18/2016	GENERAL BRIDGE REPAIRS	961.00	\$125.00	\$120,125.00
D263119	581184	02/18/2016	1-86 & RTE 60 LARGE CULVERT REPLACEMENT	667.00	\$100.00	\$66,700.00
D263107	1BOW08	02/04/2016	REPLACEMENT OF TWO BRIDGES IN ESSEX COUNTY	937.00	\$100.47	\$94,140.39
D263080	581286	01/21/2016	NY 277, CHESTNUT RIDGE PK. - MERGE NY277/240	66.00	\$90.00	\$5,940.00
D263082	080960	01/21/2016	ACCELERATED PAVING CONTRACT	16.00	\$300.00	\$4,800.00
D263025	950095	01/21/2016	SITE CONSTRUCTION	22.00	\$200.00	\$4,400.00
D263060	305762	01/07/2016	ELEMENT SPECIFIC BRIDGE REPAIRS ON STATE ROUTE 13 BINS	230.00	\$85.00	\$19,550.00
D263070	935823	01/07/2016	188 & RTE 7 THIN BRIDGE OVERLAYS	1,475.00	\$88.00	\$129,800.00
D263071	904466	01/07/2016	ROUTE 30 OVER EAST BRANCH DELAWARE RIVER	910.00	\$91.00	\$82,810.00
D263030	603723	12/17/2015	NY 415 BRIDGE REPLACEMENT OVER MEADS CREEK	308.00	\$90.00	\$27,720.00
D263039	080947	12/17/2015	SIGN STRUCTURE REPAIR CONTRACT VARIOUS LOCATIONS NASSAU AND	50.00	\$350.00	\$17,500.00
D263019	601722	12/03/2015	RTE. 224 OVER JOHNSON & LANGFORD CREEKS BRIDGE REPLACEMENTS	1,739.00	\$84.00	\$146,076.00
D262999	080942	11/19/2015	PRE-PS&E COMPLIANCE BLOCK VARIOUS LOCATIONS	10.00	\$400.00	\$4,000.00

D Number	Pin Number	Let Date	Project Description	Qty	Awarded Price	Extended Amt
D262930	1BOW0E	11/19/2015	REPLACEMENT OF 6 BRIDGES AT VARIOUS LOCATIONS IN REGION 1	1,080.00	\$129.00	\$139,320.00
D263013	104354	11/19/2015	BRIDGE REPLACEMENT PROJECT ROUTE 9 OVER TROUT BROOK TOWN OF	73.00	\$161.00	\$11,753.00
D263022	610855	11/19/2015	RTE. 14, SLEEPER CREEK BRIDGE REPLACEMENT BIN 1096330	88.00	\$100.00	\$8,800.00
D262653	146042	10/22/2015	REPLACE THE NYS ROUTE 32 BRIDGE OVER THE MOHAWK RIVER	160.00	\$100.00	\$16,000.00
D263014	105171	10/22/2015	REHABILITATION OF THE I-787 BRIDGES TO EMPIRE STATE PLAZA	49.00	\$246.00	\$12,054.00
D262693	9BOW0A	10/22/2015	ROUTE 17C OVER PATTERSON CREEK (BIN 1014300) ROUTE 17C OVER	1,258.00	\$80.40	\$101,143.20
D262997	708834	10/22/2015	NYS ROUTE 58 OVER OSWEGATCHIE RIVER - BRIDGE REHABILITATION	142.00	\$117.00	\$16,614.00
Total: 58,094.00						\$4,254,785.59

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			Region	Number of Projects	Quantity	Weighted Average Price	
			Statewide	7	1,591.00	\$248.90	
D Number	Pin Number	Let Date	Project Description		Qty	Awarded Price	Extended Amt
D263007	X73148	03/02/2016	GOWANUS EXPRESSWAY EMERGENCY REPAIRS		10.00	\$2,000.00	\$20,000.00
D262197	X73140	03/28/2013	GOWANUS EMERGENCY REPAIRS AND DECK REPLACEMENT AND RAMPS F		640.00	\$300.00	\$192,000.00
D262069	439017	08/09/2012	ACCESS390 INT. 16 PHASE I		504.00	\$110.00	\$55,440.00
D261837	500698	02/09/2012	I-86 BRIDGE AND HIGHWAY IMPROVEMENTS		61.00	\$125.00	\$7,625.00
D261600	080858	12/02/2010	DRAINAGE IMPROVEMENT BLOCK NYS ROUTES 25 AND 908K IN SUFFOLK		188.00	\$500.00	\$94,000.00
D261550	XM1048	09/02/2010	PAVEMENT MAINTENANCE/REQUIREMENTS CONTRACT ALL COUNTIES		150.00	\$120.00	\$18,000.00
D261413	X80626	06/03/2010	MAINTENANCE & REHABILITATION OF NEW YORK CITY BRIDGES		38.00	\$235.00	\$8,930.00
Total:					1,591.00		\$395,995.00

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