RESOLUTION R 11-12

A RESOLUTION AUTHORIZING AN AMENDMENT TO A PROFESSIONAL SERVICES CONTRACT INVOLVING AN INCREASE/DECREASE IN THE DOLLAR AMOUNT OF THE CONTRACT OF \$10,000 OR MORE AND/OR EXTENDING/SHORTENING THE TIME IN WHICH THE CONTRACT IS TO BE COMPLETED BY THIRTY (30) DAYS OR MORE

WHEREAS, pursuant to Illinois Compiled Statutes, Chapter 720, Section 5/33E-9, units of local government are required to make specific findings prior to authorizing any amendment relative to a contract which would increase or decrease the dollar amount of the contract by \$10,000 or more, or would extend or shorten the time in which the contract is to be completed by thirty (30) days or more; and

WHEREAS, staff has presented and recommended the proposed amendment to the contract between the Village of Lombard and Bollinger, Lach & Associates, Inc. regarding the Great Western Trail Bridges project, as attached hereto as Exhibit "A" and made part hereof, (the "Amendment") to the Corporate Authorities of the Village of Lombard; and

WHEREAS, said Amendment attached hereto as Exhibit "A" would increase the dollar amount of the contract by \$144,359.00;

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LOMBARD, DU PAGE COUNTY, ILLINOIS, as follows:

SECTION 1: That after reviewing the explanation of staff as to the necessity of and reasons for the Amendment attached hereto as Exhibit "A", the President and Board of Trustees find as follows:

- A That the circumstances which necessitated said Amendment were not reasonably foreseeable at the time the contract was entered into.
- B. That the basis of the Amendment was not within the contemplation of the contract when the contract was signed.
- C. That it is in the best interests of the Village of Lombard to approve the Amendment in its proposed form.
- D. That to the extent that it may have been necessary to go to bid relative to the work contemplated by said Amendment, bidding is hereby specifically waived as to the Amendment work.

Resolution 11-12 Page 2

SECTION 2: That having made the findings set forth in Section 1 above, the President and Board of Trustees hereby approve the Amendment attached hereto as Exhibit "A", and direct and authorize the Village President and Village Clerk to execute said Amendment on behalf of the Village.

Adopted this 16th day of June, 2011, pursuant to a roll call vote as follows:

Ayes: Trustees Gron, Giagnorio, Wilson, Breen, Fitzpatrick and Ware

Nays: None

Absent: None

Approved by me this 16th day of June, 2011.

Resolution 11-12

Page 3

William J. Mueller Village President

ATTEST:

tte Officer Brigitte O'Brien Village Clerk

Contract Amendment No. 2 May 2011 Project Fee Summary

Great Western Trail

Phase I Engineering

Original Phase I Fee	\$147,104.48
Amendment No. 1 Fee	\$66,960.06
Total Phase I Fee	\$214,064.54

Phase II Engineering

Original Phase II Fee	\$174,995.20
Amendment No. 1 Fee	\$292,581.30
Amendment No. 2 Fee	\$144,359.00
Total Phase II Fee	\$611,935.50
Total Phase I & II Fee	\$826,000.04

Contract Amendment No. 2 May 2011 Phase II List with Scope Changes & Hours (Summary)

Great Western Trail

Below are the change in scope items and the associated hours for the work. The following pages contain a narrative with more detailed discussion of the change in scope and also a breakdown of the hours and fee for each item by discipline.

Enhancements (Village logo, formliner and railing investigation) BLA is requesting 166 additional hours for this work.

Expansion of Village Ponds (3) & Trail Earthwork Revisions BLA is requesting 221 additional hours for this work.

DuPage Water Commission Retaining Walls & Trail Revisions BLA is requesting 697 additional hours for this work.

Geosynthetic Reinforced Soil Abutments for Grace Street BLA is requesting 473 additional hours for this work.

Contract Amendment No. 2 May 2011 Narrative of Phase II Scope Changes

Great Western Trail

The following tasks were not included in the original scope of work, or in Contract Amendment No. 1. These tasks could not have been anticipated at the time that the previous scopes of work were developed. And they cannot be absorbed by the existing budget.

Enhancements: Village Logo and Formliner

For this task the plans and specifications will be revised to show the MSE walls with formliner and colored concrete with stained finish. The bridge parapets will be revised to show form liner with staining and also show "Village of Lombard" along with stained flower logo on the outside face of Grace and St. Charles bridge parapets. This task was initiated by the Village in an October 5, 2010 meeting. In addition to the revisions to the plans and specifications, the tasked also required research and preparation of exhibits for Village review. New sheets will be added. BLA is requesting 110 additional hours for this work.

Enhancements: Bridge Railing Investigation

BLA was asked to find decorative alternatives in lieu of the standard IDOT bridge railing and fence shown on the plans. This task was initiated by the Village in a December 15, 2010 meeting. The last submittal for this task was on February 10, 2011 and the task was closed on April 1, 2011 at the direction of the Village. For this task BLA performed research to find suitable decorative railing and fence alternatives, visited sites for sample photographs, prepared cost estimates and prepared exhibits for review by the Village.

BLA is requesting 56 additional hours for this work.

Expansion of Village Ponds (3) & GWT Earthwork Revisions

Expansion of the Village ponds benefits the Village by providing addition storm water storage capacity and it benefits the GWT project by providing a local source for embankment. This task was initiated by the Village in a December15, 2010 meeting. BLA's work for this task includes topographic survey, environmental investigation and permitting, revisions to the GWT earthwork computations and revisions to the GWT plans and specifications. Additional plans sheets will be prepared for construction at the ponds and will be incorporated into the GWT plan set. 2 of the 3 ponds will be incorporated into GWT plans and the plans and computations for the third will be retained for use at a later date.

BLA is requesting 221 additional hours for this work.

DuPage Water Commission Exhibits, Retaining Walls & Trail Revisions

This task began with BLA following up with DPWC on 2-11-11and requesting comments on plan submittals from November 2010. On 2-17-11 BLA met with DPWC who indicated that the MSE wall location presented a problem. BLA investigated alternate wall types and developed exhibits showing the walls located down slope. DPWC reviewed the exhibits and responded that the fill height over their main was too high. After meeting with DuPage County Division of

Transportation, BLA prepared new exhibits showing an anchored sheet pile wall that will support the MSE wall in the event that the DPWC needs to excavate their pipe in the future. These exhibits were presented to DPWC on 3-30-11 and the anchored sheet pile wall was accepted by DPWC. Thereafter BLA is to prepare detailed design of the anchored sheet piling, prepare a construction cost estimate, revise the JRF, revise the plans and revise the special provisions. New sheets will be added.

BLA is requesting 697 additional hours for this work.

Geosynthetic Reinforced Soil Abutments for Grace Street

BLA was asked by the Village to investigate the potential application of Geosynthetic Reinforced Soil (GRS) Abutments on the GWT project. On 3-31-11 BLA provided background information to IDOT, who through their committee, determined that it was a suitable candidate for the use of GRS. Work requires redesign of the abutments, wingwalls, beam seats and MSE walls. Redsign of the beams, bridge deck elevation trail profile. Also included are revisions to ground improvement requirements at the site. Existing plan sheets, specification, quantities and cost estimate must be revised. New sheets will be added.

BLA is requesting 473 additional hours for this work.

Summary Sheets & Manhours by Civil Task

Phase II Bollinger, Lach & Associates, Inc.

Enhancements
Ponds & GWT
Earthwork Work
DPWC Retaining
Walls & GWT
Revisions
GRS Abutments for
Grace Street

				Enh	Pon Eart	DP1 Wal Rev	GRS	
July 2009 Amen	dment			Apr		Add'l H	ours	Total Add'l Hours
Item	Sheets	MH/Sheet	Total MH					
Cover Sheet	1	16	16					
Typical Section	1	30	30			4	2	6
Alignment & Ties, Benchmarks	2	24	48			2		2
Notes, Index, List of Standards	1	24	24		2	1	2	
Summary of Quantities	2	32	64	4	4	4	4	16
Schedule of Quantities	1	24	24		4	2	2	
Base Sheets	3	20	60		3	6	4	13
Roadway Plan & Profile	3	25	75			4	4	8
Drainage Plan & Profile	3	25	75			6	4	10
Special Provisions	-	-	40	8	4	4	2	18
Cost Estimate	-	-	36	2	4	4	4	14
Misc. IDOT Details	6	2	12					
f.ocal Details (Consultant)	2	8	16					
Pavement Marking & Signing	1	16	16					<u> </u>
Landscaping	2	20	40			4	4	8
Erosion Control	2	20	40					
Mectings		<u>-</u>	80		2	14	4	20
Drainage Calculations	1	-	60					
Village of Lombard Drainage Submittal	1	<u> </u>	80		16			16
Cross Sections (30 full @ 3.5 MH/xsec.)*	1	-	105			24	24	48
Permits (Railroad, NPDES, NOI, KDSC)	1	-	80		60			60
Utility Coordination, Permits, Conflicts	1	-	40		4	36		40
Soil Profile and Coordination	1	8	8					
QA/QC @ 40 MH/Submittal			120	2	2	2	2	
Supplemental Survey			70		40			40
Phase III Coordination		ļ	40	2		8	8	
Phase III Shop Drawing Review	.	ļ	162			24	8	· · · · · · · · · · · · · · · · · · ·
Administration			176	2	4	4	4	
		Subtotal	1,637	20	149	153	82	404
Structural (Bridge & Retaining Walls)	98	-	2,949					
TOTAL	134	-	4,586					
April 2011 Add'l Sheets	Sheets							
Form Liner & Village Logo	3	-		90				90
Pond Expansion (2)	5			, , ,	72			72
Bridge Railing Enhancements	0			56				56
DPWC Walls	5					544		544
GRS-IBS Grace Street Abutments	5						391	391

GRAND TOTAL

166

221

697

473

1557

^{*} Revise 16 Cross Sections for DPWC Walls

^{*} Revise 16 Cross Sections for GRS Abutments

Manhour Summary by Structur Phase II Great Western Trail	e	Enhancements	Ponds & GWT Earthwork	DPWC Retaining Walls & GWT Revisions	GRS Abutments for Grace Street
July 2009 Amendment		Apı	ril 2011	Add'l Ho	urs
Structural Design Tasks					
Grace Street Bridge	683	42			329
Grace Street MSE Wall Abutments	251				62
UPRR Bridge	703	18		193	
UPRR MSE Wall Abutments	299			104	
St. Charles Road Bridge	547	18		227	
St. Charles Road MSE Wall Abutments	239			20	
North MSE Wall	131	12			
Project Tasks	96				
Total Structural Tasks	2,949				
Civil Tasks (Nonstructural) & Phase III Tasks	1,637	76	221	153	82
Total Hours	4,586	166	221	697	473

Previously Negotiated

1,871

Illinois Department of Transportation

Firm

Contract Amendment #2

Consultant Services Cost Estimate of (Direct Labor Multiple)

05/24/11

Date

Complexity Factor Bollinger, Lach & Associates, Inc. Great Western Trail Phase II DuPage Ν Route Section County Job No. PTB & Item

Overhead Rate

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			(2.50+R) TIMES	DIRECT	SERVICES	DBE		% OF
ITEM	MANHOURS	PAYROLL	PAYROLL	COSTS	BY	TOTAL	TOTAL	GRAND
					OTHERS			TOTAL
	(A)	(B)	(၁)	(D)	(3)	(C+D+E)	(C+D+E)	
Grace Street Bridge	371	~14,712.62]	36,781.55				36,781,55	25.48%
Grace Street MSE Walls	62	2,532.76	6,331.90				6,331.90	4.39%
St. Charles Road Bridge	245	9,299.52	23,248.80				23,248.80	16.10%
St. Charles MSE Walls	20	799.04	1,997.60				1,997.60	1.38%
UPRR Bridge	211	8,083.98	20,209.95				20,209.95	14.00%
UPRR MSE Walls	104	4,028.12					10,070,30	%86.9
North Access MSE Wall	12	444.76	1,111.90				1,111.90	0.77%
Roadway Engineering	350	11,589.00					28,972.50	20.07%
Administration and Meetings	14	578.80	1,447.00				1,447.00	1.00%
Supplemental Survey	40	1,047.13	2,617.83				2,617.83	1.81%
Pond Expansion	72	2,800.80	7,002.00				7,002.00	4.85%
Bridge Railing Enhancements	56	1,826.92	4,567.30				4,567.30	3.16%
TOTALS	1557	57,743.45	144,358.63	00:00	00.00	0.00	144,358.63	100.00%

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BDE 027 (Rev. 2/06)



Average Hourly Project Rates

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Sheet 1

Date 05/12/11

		Bollinger, Lach & Associates, Inc.		
		Consultant		
Great Western Trail	Phase II	DuPage		
Route	Section	County	Job No.	PTR/Item

_										_	_	_	_	_							_			_			_	-			_		
	Wgtd	Avg	9.38	16.84		12.09																											\$38.31
dge	%	Part.	19.91%	41.71%		38.39%																											100%
UPRR Bridge	Hours			88	┪	84				-				_																			211
	Wgtd	Avg	9.42	24.23		6.30																											\$39.95
St. Charles MSE Walls	%	Part.	20.00%	%00.09		20.00%																											100%
St. Charle	Hours		4	\dashv		4													-														20
Γ	Wgtd	Avg	8.65	16.32		12.99																				-							\$37.96
St. Charles Road Bridge	%	Part.	18.37%	40.41%	-	41.22%																											100%
St. Charle	Hours		45	66		101													_	-													245
	gtq	Avg	24.32	5.86		10.67																											\$40.85
Grace Street MSE Walls	%	Part.	51.61%	14.52%		33.87%															-												100%
Grace Str	Hours		32	6		21					-		_		-																		29
ř	Wgtd	Avg	18.04	9.30		11.72																											79.151
eet Bridge	%	Part.	38.27%	24.53%		37.20%																											100%
Grace Stu	Hours		142	91	_	138														_													371
	Wgtd	Avg	8.39	13.77	2.36	10.34	0.12	0.25	0.15	1.11																							\$37.09
Total Project Rates	%	Part.	19.08%	34.10%	9.25%	32.82%	0.32%	0.96%	%06.0	2.57%																							100%
rotal Pro	Hours		297	531	144	511	z,	15	14	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1447
Avg			\$47.12	\$40,38	\$25.52	\$31.50	\$38.22	\$25.75	\$16,25	\$43.27																							
Payroll	1	Classification	Director of Structural Eng	Project Manager	Design Engineer	CADD Technician II	Survey Project Manager	Party Chief I	Instrument Man	Director of Environmental					-							The state of the s											TOTALS



Average Hourly Project Rates

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Sheet

Date 05/12/11

		Bollinger, Lach & Associates, Inc.		
		Consultant		
Great Western Trail	Phase II	DuPage		
Route	Section	County	Job No.	PTB/item

	_				٠.,		-	٠		_	_	-	_	_	_		_	_	_			-	 -	 	 _	_			_		
	Wgtd	Avg		33.65		5.25																							:		\$38.90
nsion	%	Part.		83.33%		16.67%								_																	100%
Pond Expansion	Hours			09	-	12											<u> </u>	 	-	1	†										72
Ī	Wgtd	Avg		90.9			4.78	9.66	5.69)											Ì										\$26.18
Supplemental Survey	%	Part.		15.00%			12.50%	37.50%	35,00%						_													-			100%
upplemen	Hours			9			5	15 8	14				_	-				-		l	1								-	1	40
Г	Wgtd	Avg	6.73	34.61														-			1	1									\$41.34
Administration and Meetings	%	Part.		85.71%														-	-	1			 								100%
ministratic	Hours		-	12 85															<u> </u>	+	+										14 1
Ad	Wgtd Hc	Avg		10.84	9.04	8.28				4.95								-		+	+	+									\$33.11
eering										L		-		_		<u> </u> 	<u> </u>	-		1	+		 	 		_					
Roadway Engineering	rs %	Part.		Н	1 35.43%	26.29%				11.43%			_	_		L	-	-	_	-	+	-	 	 							100%
Roady	T		-	H	124	26	_		_	40					_	<u> </u>	-	-	ļ	-	+						_	L			6 350
Wali	Wgfd	Avg	7.85	13.46		15.75																_									\$37.06
cess MSE Wall	%	Part,	16.67%	33.33%		20,00%																									100%
North Acce	Hours		2	4		9																									12
:	Wgtd	Avg	9.97	17.86		10.90																									\$38.73
E Walls	%	Part	21.15%	44.23%		34.62%																									100%
UPRR MSE Walls	Hours		22	46		36			-																						104
Ava	Hourly	Rates	\$47.12	\$40.38	\$25.52	\$31.50	\$38.22	\$25.75	\$16.25	\$43.27																					
Pavroll	1	Classification	Director of Structural Eng	Project Manager	Design Engineer	CADD Technician II	Survey Project Manager	Party Chief I	Instrument Man	Director of Environmental																					TOTALS



Average Hourly Project Rates

•		Date 05/12/11	Sheet 3 OF 3
		Boilinger, Lach & Associates, Inc.	
		Consultant	
Great Western Trail	Phase It	40	
Route	Section	County	PTB/ltem

Payroll	Avg	Bridge R	Bridge Railing Enhancemen	ancemen	Houre	76	-	Houre	%	\neg	Hours	%	_	Houre	%	Work	Hours	%	Watd
Classification		2	Part.	Avg	2	Part.	Avg	· · · · · · · · · · · · · · · · · · ·	Part.	Avg		Part.	Avg)	Part.	Avg	}	Part.	Avg
Director of Structural Eng	\$47.12	9	10.71%	5.05															
Project Manager	\$40.38	10	17.86%	7.21															
Design Engineer	\$25.52	20	35.71%	9.11															
CADD Technician II	\$31.50	20	35.71%	11.25															
Survey Project Manager	\$38.22																		
	\$25.75													_					
Instrument Man	\$16.25													-					
Director of Environmental	\$43.27																		
														_					
														_					
											-								
					:														
								_											
							-												
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							1							1					
TOTALS		56	100%	\$32.62	0	%0	\$0.00		%	\$0.00	0	%0	\$0.00	0	%0	\$0.00	0	%	\$0.00
		١			1								1						

Structural Manhour Estimate Great Western Trail over Grace Street Bridge 2011 Plan Revisions

							Formliner & Village Log	GRS Abutn for Grace St
Sheet		No. of		Hours		Total		
No.	Sheet Title/ Task	Sheets	Sr. Str	Struct	CADD	Hours		
1	General Plan		9	4	12	25	2	23
2	Total Bill, General Notes, Abutment Typ Sec (MSE),	1	4	2	6	12		12
	Index, Name Plate							
3	Top of Slab Elevations	1		4	4	8		8
4	Top of Slab Elevations	1	2	3	3	8		8
5	Top of Approach Pavement Elevations	1			11	1		1
6	Superstructure Plan	1	6	2	4	12		12
. 7	Super Structure Cross Sections	1	2		2	4		4
8	Parapet Plan and Elevation (Lighting)]]	4	4	9	4	5
9	Abutment Diaphragm Details	1	4	2	2	8		8
10	Superstructure Bar List, Bar Details, Parapet Joint Details, Lighting Details	1	:			0		0
11	Parapet Railing Details (2'-2") Standard R-29	1	2		2	4		4
12	Framing Plan and Beam Tables	1	2	8	4	14		14
13	48" PPC I-Beam P1-4-48	1	2	8	2	12		12
14	48" PPC I-Beam Details PI-4-48D	1				0		0
15	West Abutment - Plan, Elev., Section	1	8	4	8	20		20
16	East Abutment - Plan, Elev., Section	1	8	4	8	20		20
17	H-Piles (F-HP)	1			1	1		1
18	Bar Splicer Ascembly Details (BSD-1)	1			1	1		1
19	Approach Pavement Details I	1			I	1		1
20	Approach Pavement Details II	1			1	1		i
21	Boring Logs	1				0		
22	Boring Logs	1				0		
23	Boring Logs	1				0		
	Subotal	23						
	Special Provisions		8	4		12	4	8
	B Jeciai 1 10vissons			-		12	7	
	Subtotal Hours for Plan Revisions		58	49	66	173	10	162
	Statistical from 8 for Fran Revisions			47	<u> </u>	113	10	163
	New Sheets							
	Formliner and Village Logo	1	2	12	18	32	32	
	GRS Abutment - FHWA Notes and Details	3	12	6	18	36		36
	GRS Abutment - Section A-A]	40	12	18	70		70
	GRS Abutment - Detail and Wingwall	. 1	30	12	18	60		60
	Grand Total for Revisions & New Sheets		142	91	138	371	42	329

Structural Manhour Estimate Great Western Trail

Grace Street MSE Walls 2011 Plan Revisions

GRS Abutments for Grace Street

						0 4 0
Sheet		No. of	[
No.	Sheet Title/ Task	Sheets	Sr. Structural			
1	Wall Plan and Elevation (West)	1	12	4	8	24
2	Wall Plan and Elevation (East)	1	12	4	8	24
3	Typ. Sec. thru Wall, Details, Bill of Materials, Notes	1			1	1
4	Stone Column Details, Notes	1	4		4	8
5	Boring Logs	1				0
6	Boring Logs	1				0
7	Boring Logs	1				0
						0
						0
						0
						0
-						0
						0
						0
		-				0
						0
						0
						0
						0
						0
						0
						0
						0
	Subotal	7				
-						
	Special Provisions		4	1		5
	Total Hours for Plan Revisions		32	9	21	62
					-	
					 	
		_				
		1				
-						
		1				
					 	
			<u> </u>	 	<u> </u>	<u> </u>

Structural Manhour Estimate Great Western Trail over St. Charles Road Bridge 2011 Plan Revisions

Formliner &
Village Logo
DPWC Retaining
Walls & GWT
Revisions

							Fo Vi	DF W _i
Sheet		No. of	No. of Hours Total					
No.	Sheet Title/ Task	Sheets	Sr. Structural	Structural	CADD	Hours		
1	General Plan	1	2	4	4	10	2	8
2	Total Bill, General Notes, Abutment Typ See (MSE), Index, Name Plate	1	1	2	2	5		5
3	Top of Slab Elevations	1				0		
4	Top of Slab Elevations	1				0		
5	Top of Approach Pavement Elevations	1				0		
6	Superstructure Plan	_				0		
7	Superstructure Cross Sections	1				0		
8	Parapet Plan and Elevation (Lighting)	1	2	8	6	16		16
9	Abutment Diaphragm Details	I			<u> </u>	0		
10	Superstructure Bar List, Bar Details, Parapet Joint Details, Lighting Details	1				0		
11	Parapet Railing Details (2'-2") Standard R-29	1 .		1	1	2		2
12	Framing Plan and Beam Tables	ı				0		
	48" PPC I-Beam PI-4-48	1				0		
	48" PPC I-Beam Details PI-4-48D	1				0		
15	West Abutment - Plan, Elev., Section	ı				0		
16	East Abutment - Plan, Elev., Section	1		2	2	4		4
	H-Piles (F-HP)	1				0		
	Bar Splicer Aseembly Details (BSD-1)	1				0		
19	Approach Pavement Details I	1				0		·
20	Approach Pavement Details II (East Plan)	1	2	8	12	22		22
	Boring Logs	1 1				0		
	Boring Logs	1 1				0		
23	Boring Logs	1				0		
	Subotal	23						
	Special Provisions					0		
	Subtotal Hours for Plan Revisions		7	<u>25</u>	<u>27</u>	<u>59</u>	2	<u>57</u>
	New Sheets							
	Formliner and Village Logo	1	2	6	8	16	16	
	Wall Elevation View	1	12	24	24	60		60
	Wall Plan View	1	12	20	18	50		50
	Wall Typical Sections, Anchor Details	1	12	24	24	60		60
	Grand Total for Revisions & New Sheets		45	99	101	245	18	227

Structural Manhour Estimate Great Western Trail

St. Charles Road MSE Walls 2011 Plan Revisions

DPWC Retaining Walls & GWT

No. of Hours Total Sheet Sr. Structural Structural CADD Hours No. Sheet Title/ Task Sheets Wall Plan and Elevation (West) 1 0 2 Wall Plan and Elevation (East) 1 0 2 10 10 3 Typ. Sec. thru Wall, Details, Bill of Materails, Notes 1 Watermain Protection Details, Spur Ramp Details 0 4 1 0 5 Boring Logs 0 Boring Logs 6 0 Boring Logs 7 0 0 0 0 0 0 0 0 7 Subotal Special Provisions 8 10 10 Total Hours 4 12 4 <u>20</u> <u>20</u>

Structural Manhour Estimate Great Western Trail over Union Pacific Bridge 2011 Plan Revisions

							DPWC Ret Walls & G' Revisions	Formliner a
Sheet		No. of		Hours		Total		
No.	Sheet Title/ Task	Sheets	Sr. Structural	Structural	CADD	Hours		
<u> </u>	General Pian	1 1	2	3	3	8	8	
2	Total Bill, General Notes, Abutment Typ Sec (MSE), Index, Name Plate, UPRR Info	I	1	2	2	5	5	
3	Top of Slab Elevations	1				0		
4	Top of Slab Elevations	1				0	i	1
5	Top of Approach Pavement Elevations	1				0		· · · · · · · · · · · · · · · · · · ·
6	Superstructure Plan	1				0		
7	Superstructure Cross Sections	1			l	0		
8	Parapet Plan and Elevation (Lighting)	1				0		
9	Superstructure Bar List, Bar Details, Parapet Joint Details, Lighting Details	1				0		
10	Preformed Joint Strip Seal E.J-BJS	1				0		
11	Bridge Fence Railing Standard R-28 Modified	1				0		
12	Parapet Railing Standard R-29 Modified	1	l	2	1	4	4	
13	Framing Plan and Beam Tables	J				0		
14	72" PPC Bulb T Beam PBT-4-72	1				0		
15	72" PPC I-Beam Details PBT-4-72D	-				0		
16	Bearings	1				0		· · · · · · · · · · · · · · · · · · ·
17	West Abutment - Plan, Elev., Section	1				0		
18	East Abutment - Plan, Elev., Section	1		ı	1	2	2	
19	H-Piles (F-HP)	1			*************	0		
20	Approach Pavement Details I	1	·			0		
21	Approach Pavement Details II	1				0		
22	Boring Logs	1				0		
23	Boring Logs]				0		
24	Boring Logs	J				0		
	Subotal	24						
	Special Provisions					0		
	Subtotal Hours for Plan Revisions		4	8	7	19	10	0
				2	7.	12	19	U
	New Sheets							
	Formliner	1	. 2	8	8	18		18
	Plan View Parapet and Moment Slab	1	12	24	18	54	54	
			12	24	24	60	60	
	Wall Typical Sections, Anchor Details	1	12	24	24	60	60	
	Grand Total for Revisions & New Sheets		42	88	81	211	193	18

Structural Manhour Estimate Great Western Trail

UPRR MSE Walls 2011 Plan Revisions

DPWC Retaining Walls & GWT Revisions

Sheet No. of Hours Total No. Sheet Title/ Task Sheets Sr. Structural | Structural | CADD Hours Wall Plan and Elevation (West) Wall Plan (East)-Sheet 1 Wall Elevation (East)-Sheet 2 Wall Elevation (East)-Sheet 3 Typ. Sec. thru Wall, Details, Bill of Materails, Notes UPRR Access Plan and Construction Staging Boring Logs Boring Logs Boring Logs Subotal Special Provisions **Total Hours** <u>36</u>

Structural Manhour Estimate Great Western Trail

North Access MSE Wall 2011 Plan Revisions

Formlines & Village Logo

Sheet No. Sheet Title/ Task Sheet Sr. Structural Structural								
1 Wall Plan and Elevation (West) 1 2 4 6 12 12 5 Boring Logs 1	Sheet)				
1 Wall Plan and Elevation (West) 1 2 4 6 12 12 12 12 15 15 15 15	No.	Sheet Title/ Task	Sheets	Sr. Structural	Structural	CADD	Hours	
3 Typ. Sec. thru Wall, Details, Bill of Materials, Notes 1 2 4 6 12 12 5 Boring Logs 1	1	Wall Plan and Elevation (West)	1					
S Boring Logs	3	Typ. Sec. thru Wall, Details, Bill of Materials, Notes	1	2	4	6	12	12
Boring Logs	5	Boring Logs	1				1	
7 Boring Logs 1	6		1				1	
	7		1				1	
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Total Hours 2 4 6 15 12								
		Special Provisions					0	
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		Total Hours		2	4	6	<u>15</u>	<u>12</u>
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Railing Enhancements - Summary

Manhour Estimate for Amendment No. 2 Great Western Trail

<u>Task</u>	Hours
Railing Alternative Research	16
Railing Alterative Cost Estimates	10
Railing Alternative Site Visits	4
Railing Alternative Exhibits	26
	56