FORM APPROVED COUNTY COUNSEL
BY: PATRICIA MUNROE DATE 1/14/14

Departmental Concurrence

131 A

SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FROM: TLMA – Transportation Department

SUBMITTAL DATE: January 16, 2014

SUBJECT: Amendment No. 2 to the Preliminary Engineering and Environmental Services Agreement with AECOM Technical Services, Inc., dba Lim & Nascimento Engineering, to Provide Additional Final Engineering Services for the Magnolia Avenue Railroad Grade Separation Project. 2nd/2nd District [$3,575,002]; State Funds 100%

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the attached Amendment No. 2 to provide additional final engineering services to the Engineering and Environmental Services agreement between the County of Riverside and AECOM Technical Services, Inc., dba, Lim & Nascimento Engineering; and

2. Authorize the Chairman of the Board of Supervisors to execute the same.

Juan C. Perez, Director
Transportation and Land Management

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost:	POLICY/CONSENT (Per Exec. Office)
COST	$ 368,458	$ 0.00	$ 3,575,002	$ 0.00	Consent ☐ Policy ☑
NET COUNTY COST	$ 0.00	$ 0.00	$ 0.00	$ 0.00	

SOURCE OF FUNDS: Proposition 1B (State Bond Funds-Local Roads) (100%)
There are no General Funds used in this project.

Budget Adjustment: No

For Fiscal Year: 13/14

C.E.O. RECOMMENDATION:

APPROVE
BY: Tina Grande

County Executive Office Signature

MINUTES OF THE BOARD OF SUPERVISORS

☐ Positions Added ☐ Change Order
☐ A-30 ☐ 4/5 Vote

Prev. Agn. Ref.: 6/16/09, Item 3-45; 5/10/11, Item 3-33

District: 2/2

Agenda Number: 3-27

BACKGROUND:
Summary
Magnolia Avenue is a four-lane Arterial Highway that provides primary access to commercial, industrial, and residential land uses in the Home Gardens community of Riverside County (County), which neighbors the City of Riverside to the east and City of Corona to the north. A Burlington Northern Santa Fe Railway Company (BNSF) at-grade crossing currently exists on Magnolia Avenue between Lincoln Street and Buchanan Street.

Vehicles, pedestrians, and bicycles all traverse the crossing at the BNSF railroad tracks. At this crossing, there are two mainline tracks that service freight trains, as well as Metrolink and Amtrak commuter trains. The railroad crosses Magnolia Avenue at a sharp angle, which limits visibility and increases the potential for train-vehicle accidents. Currently, 63 freight and 23 passenger trains pass through Magnolia Avenue grade crossing on a daily basis, which is projected to increase to 91 freight and 46 passenger trains by 2035. The increase in number of trains will cause more frequent interruptions in the normal flow of vehicle traffic, creating additional congestion in the area.

On June 16, 2009 (Item 3-45), the Board of Supervisors (Board) approved an Engineering Services Agreement for the Magnolia Avenue Railroad Grade Separation with the firm of Lim & Nascimento Engineering to provide preliminary engineering and environmental services. Subsequent to execution of the original agreement, Lim & Nascimento Engineering changed its name to AECOM Technical Services, Inc. and will henceforth be known as AECOM Technical Services, Inc.

On May 10, 2011 (Item 3-33), the Board approved Amendment No. 1 to the agreement. The amendment added final design to the scope and included a budget for the preparation of plans, specifications, and estimates, as well as construction support services.

The Magnolia Avenue Grade Separation is a complex bridge project requiring coordination with the City of Riverside, BNSF, the California Department of Transportation (Caltrans), many utility companies, and several adjacent businesses. Coordination with the various agencies is complicated by the fact that the construction funding for the project is being provided, in part, from Trade Corridor Improvement Funds (TCIF). TCIF funding requirements include a stipulation that construction must be awarded on or before December 31, 2013.

It has been determined that the project requires additional consulting services. Completion of the project requires a greater level of coordination than was originally anticipated. Additional services are necessary to:

- **Right-of-Way Coordination and Support**:
  Provide support, coordination, and assistance in preparing construction and maintenance agreement with BNSF and exhibits for the land acquisition negotiations and court support for use of eminent domain.

- **Plan Revisions for Utility Relocations**:
  Perform high level utility coordination and modify plans and landscape design to accommodate Riverside Public Utility water line relocation plans that were provided late in the design stage.

- **Changed Scope:**
  Provide additional design and coordination services to incorporate enhanced aesthetics features, prepare project specifications in accordance with Caltrans 2010 specifications released subsequent to the execution of the agreement, facilitate design modifications, and convert lighting design to incorporate LED lighting.

- **Assistance with Funding Applications and Certifications**:
  Assist the County with preparation and processing various funding applications and documents.

- **Structure Work:**
  Perform structural integrity analysis of existing Flood Control channel walls due to the close proximity of the columns and provide a greater level of detail and analysis due to the unique conditions and complexity of the bridge structure design.

Project No. B7-0784

Impact on Residents and Businesses
Magnolia Avenue is a major corridor that provides an alternate route for motorists to travel between the cities of Riverside and Corona. Due to heavy traffic on Magnolia Avenue, the County identified the need to elevate the roadway over the railroad. Vehicles, pedestrians, and bicycles all traverse the crossing at the BNSF railroad tracks. The new overpass bridge will provide an uninterrupted flow of traffic over the railroad crossing.

The proposed project will grade separate Magnolia Avenue where it currently crosses the BNSF mainline tracks at grade, providing the following benefits to the public:

- Improved vehicular traffic circulation, public safety, and uninterrupted and efficient access for motorists, residents, businesses, pedestrians, and emergency vehicles in the area
- Substantial reduction of particulate matter from idling vehicles, causing a reduction in greenhouse gas emissions

SUPPLEMENTAL:
Additional Fiscal Information
This work will be funded with Proposition 1B funds.

There are no General Funds used in this project.

Contract History and Price Reasonableness
The proposed amendment to this agreement is $368,458.56. The original budget amount and the cost of this amendment and all prior amendments are summarized below.

Original Budget:	$ 952,859.00	Environmental Clearance
Amendment 1:	$2,253,684.00	Final Design
Proposed Amendment 2:	$ 368,458.56	Additional Final Design
Total Proposed Budget:	$3,575,001.56	

The bridge structure proposed for the Magnolia grade separation will be the longest bridge and arguably the most complex structural design that has been performed by the Transportation Department. The current construction estimate for the proposed grade separation is $42.8 million. The total cost of final design with this amendment is approximately $2.6 million. The final design costs are, therefore, roughly 6% of the estimated construction cost, which is within a typical range for design services on a project of this magnitude.

AMENDMENT TO AGREEMENT BETWEEN

County of Riverside • Transportation Department and AECOM Technical Services, Inc.

THIS AMENDMENT (hereinafter the "Amendment 2") to an agreement is made and entered into as of this _____ day of _____, 2014, by and between the County of Riverside, a political subdivision of the State of California (hereinafter the "COUNTY"), and AECOM Technical Services, Inc. (dba, Lim & Nascimento Engineering) (hereinafter "ENGINEER").

RECITALS

A. COUNTY and ENGINEER have entered into an agreement entitled *"Engineering Services Agreement for Magnolia Avenue Railroad Grade Separation between County of Riverside • Transportation Department and Lim and Nascimento Engineering."* that is dated June 16, 2008 (hereinafter the "Agreement"). The Agreement provides the terms and conditions, scope of work, schedule and budget for the performance of professional and technical services necessary to prepare an engineering recommendations report and obtain environmental clearance.

B. COUNTY AND ENGINEER amended the agreement on May 10, 2011. The amendment added additional scope and budget for the preparation of plans, specifications and estimates as well as to provide construction support services.

C. It has been determined that the project requires additional consulting services. Completion of the project requires tasks not included in the original or first amended scope of services and requires a greater level of coordination than was anticipated. Additional services are necessary to:

- Provide additional design and coordination services to incorporate enhanced aesthetics features.
- Perform higher than anticipated level of utility coordination.
- Provide COUNTY with assistance in preparing a Construction and Maintenance Agreement with the BNSF Railroad and facilitated coordination of the document with the Railroad.
- Provide support and exhibits for the land acquisition negotiations and condemnation activities.
- Prepare project specifications in accordance with Caltrans' 2010 specifications that were released and adopted for use by COUNTY subsequent to the execution of the Agreement.
- Facilitate design modifications necessary to coordinate the Grade Separation Project with a separate COUNTY project to install a Queue-Cutter Signal at the same location.
- Modify Plans to accommodate Riverside Public Utility water line relocation plans that were

provided late in the design stage.

- Provide greater level of detail and analysis than is typically required for a Type Selection Report due to the unique conditions and extreme complexity of the bridge structure design.
- Revise abutment 11 to comply with new Caltrans' Load and Resistance Factor Design standards.
- Perform structural integrity analysis of the existing Flood Control channel walls due to the close proximity of the bridge columns.
- Convert lighting design to incorporate LED lighting resulting from advancements in the technology.
- Assistance COUNTY with the preparation and processing of various funding applications and documents.
- Provide design services necessary to incorporate Bus stop modifications per recommendations provided by the Traffic Division.
- Modify the landscape design to accommodate the Riverside Public Utilities water line relocation.

D. The parties desire to amend the Agreement to modify the scope of services to be provided by the ENGINEER and increase the contract budget.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants hereinafter contained, the parties agree as follows:

1. Appendix A • Scope of Services is amended by the addition of the extra work described in Attachment "A–2" of this Amendment 2, attached hereto and incorporated by this reference.
2. Appendix C • Article CV is amended by increasing the contract budget by $368,458.56 as provided below: Increase the Phase 2 budget by the amount of $368,458.56 to provide compensation for the additional services. Detailed fee and man-hours are provided in Attachment "B-2" of this Amendment 2, attached hereto and incorporated by this reference. The current contract not to exceed fee of $3,206,543.00 by this increase is now $3,575,001.56.

	PHASE 1 PA/ED	PHASE 2 PS&E	PHASE 3 Bidding	PHASE 4 Con Support	PHASE ALL Contingency	TOTAL
ORIGINAL BUDGET	844,378.00				108,481.00	**952,859.00**
AMENDMENT NO. 1		2,124,496.00	32,478.00	126,362.00	(29,652.00)	**2,253,684.00**
AMENDMENT NO. 2		368,458.56				**368,458.56**
Aesthetics Final Details Design and Coordination		65,209.19				65,209.19
Additional Utilities Coordination		24,030.00				24,030.00
Additional Railroad Coordination		18,968.00				18,968.00
Right-Of-Way Support and Exhibits		48,905.00				48,905.00
Prepare Caltrans 2010 Specifications		35,637.00				35,637.00
Queue-Cutter Coordination		10,397.00				10,397.00
Modifications per RPU Water Relocation		50,710.00				50,710.00
Type Selection Report Additional Analysis		17,109.00				17,109.00
Revise Abutment 11 to LRFD		11,877.00				11,877.00
Arlington Channel Structural Check		10,633.00				10,633.00
Conversion to LED Lighting		18,176.00				18,176.00
Assistance with Funding Applications		4,638.00				4,638.00
Bus Stop Modifications per Traffic Comments		4,167.00				4,167.00
ODC - reprographics		2,000.00				2,000.00
Geotech (Diaz-Yourman and Associates)		5,000.46				5,000.46
Utility Coordination (Douglas Engineering)		10,036.91				10,036.91
Aesthetics (Thirtieth Street Architects)		26,215.00				26,215.00
Landscaping (RHA Landscaping)		4,750.00				4,750.00
PROPOSED AMENDED BUDGET	844,378.00	2,492,954.56	32,478.00	126,362.00	78,829.00	**3,575,001.56**

3. Except to the extent specifically modified or amended hereunder, all of the terms, covenants and conditions of the Agreement shall remain in full force and effect between the parties hereto.

IN WITNESS HEREOF, the parties hereto have caused this Amendment 2 to the Agreement to be duly executed this day and year first written above.

ARTICLE VIII • APPROVALS

COUNTY Approvals

RECOMMENDED FOR APPROVAL:

_____ Dated: 12/6/13

JUAN C. PEREZ

Director of Transportation and Land Management Agency

APPROVED AS TO FORM:

PAMELA J. WALLS, COUNTY COUNSEL

_____ Dated: 1/14/14

By Deputy

APPROVAL BY THE BOARD OF SUPERVISORS

_____ Dated: _____

PRINTED NAME

Chairman, Riverside County Board of Supervisors

ATTEST:

_____ Dated: _____

KECIA HARPER-IHEM

Clerk of the Board (SEAL)

ENGINEER Approvals

ENGINEER:

Matt Ullukaya Dated: 9/26/13

MATT ULLIKAYA

PRINTED NAME

VICE PRESIDENT

TITLE

ENGINEER:

_____ Dated: 09/26/13

MOHAN CHAR

PRINTED NAME

VICE PRESIDENT

TITLE

ATTACHMENT A-2 • SERVICES TO BE PROVIDED

A. BACKGROUND

Contract Amendment 2 is to cover additional design services that are necessary to complete the Project. The original contract was for the preliminary engineering and environmental work. Contract Amendment 1 was for the PS&E, bid support and construction support services. There was an Administrative Modification 1 for permitting services for the Project. Administrative Modification 2 was for additional services. Both Administrative Modifications were covered by the Project contingency.

The additional services included in this Amendment No. 2 are detailed as follows:

B. BRIDGE AESTHETICS FINAL DESIGN AND COORDINATION

The COUNTY had originally described the bridge aesthetics for the Project to be relatively basic with the use of reliefs on a fractured rib background on the retaining walls. In the course of the Project and after meetings with the City of Riverside's planning and engineering staff, the extent and complexity of the bridge aesthetics changed significantly. A historical and more complex bridge aesthetics theme was adopted for the Project. These changes have increased the level of detailing needed and the number of meetings needed to review and approve the design details.

The conceptual designs and themes were reviewed and modified in conjunction with City of Riverside and COUNTY staff. ENGINEER worked closely with the Bridge Architect to coordinate the design elements into the engineering plans and submit them for review by the City and COUNTY. In addition, the aesthetic elements had to be made to coordinate with the engineered improvements so they could be implemented and executed. The final selection of the streetlight poles involved both the City and COUNTY and working with the light pole manufacturer to select and assemble a pole that would fit the bridge barrier width and meet the aesthetic requirements and provide the necessary photometric levels. The final detailing of the various elements, including the decorative fencing, decorative tree silhouettes, railing, informational plaques, decorative tiles, lightpole architectural elements, metal railings, bridge railing features, and wall finishes, required final engineering design to incorporate them into the engineering drawings. Details included connection and anchorage details, insets for the tilework, design and sizing of structural steel and concrete elements, and dimensions for construction.

C. ADDITIONAL UTILITIES COORDINATION

Utilities coordination efforts increased after the Notice to Owners were sent out and the utilities providers

provided responses and have continued after submittal of final mylars. Several utilities provided late responses or required additional coordination. ENGINEER provided responses to utilities comments and questions. Reviews and comments included clearances to existing and proposed facilities, coordination with adjacent utilities, and review of relocation plans. Coordination and efforts also included modifications to plans for avoidance of conflicts. Discussions and meetings with utilities to identify construction windows. Additional meetings and teleconferences were needed to coordinate the efforts. It is anticipated that modifications to the drawings will need to be made to reflect the final outcome of utility relocations.

D. ADDITIONAL RAILROAD COORDINATION

ENGINEER has had to make additional submittals and contacts with the railroad. ENGINEER prepared and drafted up a Construction and Maintenance (C&M) agreement for the Project since the railroad had not yet drafted the C&M agreement. ENGINEER provided a detailed description of the staging and timing of the construction as requested by the railroad. ENGINEER coordinated with railroad to develop the cost sharing between COUNTY and railroad. ENGINEER coordinated railroad and developed work windows and flagging costs. ENGINEER coordinated with railroad to identify work limits between railroad and COUNTY's contractor. Additional coordination meetings with the railroad were requested by COUNTY to obtain responses from the railroad regarding railroad participation, agreements, and easements. ENGINEER prepared materials for meetings and attended the additional meetings.

E. RIGHT-OF-WAY SUPPORT AND EXHIBITS

The original R/W scope was tasked to identify the right-of-way and easements required and furnish the data to the COUNTY to prepare the necessary legal descriptions and plats and for the COUNTY's right-of-way agent to prepare the acquisition documents and execute the agreements for acquiring the right-of-way and easements. The original hours shown for this task amounted to 64 hours total.

Coordination with the COUNTY's R/W agent has been ongoing. ENGINEER has provided numerous exhibits at the R/W agent's request for meetings with various property and business owners. The exhibits include easements, construction staging and impacts, and graphic and 3-D illustrations. ENGINEER provided exhibits for Flood Control District easements. ENGINEER attended meeting with prospective purchaser of the Magnolia Industrial Park and provided graphics and exhibits. ENGINEER attended meeting with Car Wash owner and their representatives and subsequently provided data and graphics to the representatives. The data and graphics included specific dimensions, turning radii, sight lines, and 3d renderings from various

locations. Additional exhibits and data were provided for coordination with the Buchanan Square property. Prepared exhibits for relocation alternatives for propane tank at the welding supply company. Prepared driveway and gate alternatives and layouts for the property north of the Lincoln St/Magnolia Ave intersection. Prepared exhibits for potential condemnation procedures for several properties. Coordination with RTA for bus stops and potential construction easements. Prepared exhibit to define the maintenance responsibilities between the City and COUNTY.

F. PREPARE CALTRANS 2010 SPECIFICATIONS

COUNTY has directed that all projects now be based on the 2010 version of the Caltrans Standard Specifications after April 2012. COUNTY had not developed the new boilerplate specs for the 2010 specs. ENGINEER, in conjunction with COUNTY, developed the boilerplate specifications for the Project based on the Caltrans 2010 Standard Specifications. ENGINEER has had to coordinate with the various disciplines and COUNTY for updating the specs for those disciplines. ENGINEER coordinated with the COUNTY Traffic for the traffic signal specifications. ENGINEER also coordinated with COUNTY Landscape to develop an agreeable set of specifications for landscape work. ENGINEER needed to coordinate with the constructability reviewer to clarify the use of new specification version. ENGINEER also incorporated Home Gardens Sewer District specifications into the Project specifications since COUNTY will now be doing the sewer relocation work. ENGINEER also incorporated railroad specifications into the Project specs. ENGINEER was requested by COUNTY to review and edit "Section Zero" of the specifications.

G. ADDITIONAL QUEUE-CUTTER COORDINATION

The queue-cutter was a project designed by the COUNTY and was intended to be constructed and in-place prior to the grade separation project. ENGINEER facilitated meetings between COUNTY and railroad to discuss the queue-cutter project. In addition, the COUNTY had discussions with the City's quiet zone project. In the course of discussions with the railroad and the City, there were various scenarios discussed in coordinating and cost responsibility of the various parties. ENGINEER modified the plans to incorporate and then disincorporate the queue-cutter plans. The plans were modified to show the queue-cutter improvements as existing facilities and show the needed modifications during the Project construction. The specifications were modified accordingly.

H. MODIFICATIONS PER RPU WATER RELOCATION

The Riverside Public Utilities Department was late in responding to identification of prior rights and following

up on the request for relocation of their facilities. Conflicts were identified that required revisions to previously designed relocations, project improvements, and easements. Meetings were held to develop realignment alternatives and easement and right-of-way needs. Upon agreement of the realignment routing, specific additional improvements were needed for the plans. The revisions involved changes to the utility plans, sewer relocation plans, and right-of-way requirements. The realignment also required the addition of a new retaining wall. This required changes to the grading plans, layout plans, landscape plans, drainage plans, and aesthetics plans. The location of the retaining wall created a new potential conflict with a utility line. ENGINEER revised the footing elevations and grading to avoid the conflict. Additional coordination was required with the property owner fronting the new retaining wall. The coordination with RPU have continued beyond the mylar submittal date.

I. TYPE SELECTION REPORT ADDITIONAL ANALYSIS

COUNTY requested additional analysis for the construction sequencing and staging, falsework layout, equipment placement and construction space requirements, The request was made due to the unique conditions and the extreme complexity of the bridge structure. The additional analysis included additional calculations, exhibits, and meetings.

J. REVISE ABUTMENT 11 WINGWALLS PER LRFD

Caltrans recently updated the structures details for wingwalls to meet Load and Resistance Factor Design (LRFD) standards. The wingwall was originally designed to the standards at the time of design. The LFRD is now required for design of these structures. The change required a review by the geotechnical engineer. It also required recalculation by ENGINEER for the new load requirements and modify the wingwall plans accordingly.

K. ARLINGTON CHANNEL STRUCTURAL CHECK

Due to the close proximity of columns to the Arlington Channel, additional analysis of the existing flood control channel walls was necessary to provide assurance to the Flood Control District that the integrity of the flood control channel would not be impacted by the column construction. The analysis included crane placement, CIDH drilling, backfill and settlement. Calculations and exhibits were provided to the Flood Control District.

L. CONVERSION TO LED LIGHTING

During the preliminary engineering phase and at the start of the PS&E phase of the Project, the COUNTY had not adopted the use of LED lighting for street lighting in the County areas due to the LED technology at that

time. In the course of the Project, LED street lighting technology had progressed and was becoming more widely adopted by public agencies and utility providers.

Initial LED photometric data was provided to the City and COUNTY for the LED lights. Once the detailed design got underway, the aesthetics detailed design required selection of specific equipment and light mounting alternatives. ENGINEER provided input and photometric calculations for the various alternatives to assure that lighting levels were satisfactory to the City and the COUNTY. ENGINEER assisted in the selection of the light poles and fixtures that met the aesthetic theme requirements and photometric requirements. The plans and specifications were modified to incorporate the final selected equipment.

M. ASSISTANCE WITH FUNDING APPLICATIONS AND DOCUMENTS

ENGINEER was requested by COUNTY to review, provide data, and assist in filling out portions of funding applications, Division of State Architect forms, R/W certifications, and PS&E certifications.

N. BUS STOP RELOCATION

COUNTY requested ENGINEER to modify and relocate the bus stop at Buchanan Street and Magnolia Avenue. Alternative locations and alignments were developed and discussed with COUNTY. The modifications realigned the north curb from Buchanan Street to the bridge, increasing height of a slough retaining wall and modified the grading.

O. ADDITIONAL LANDSCAPE ARCHITECTURAL SERVICES

Additional landscape modifications were made in response to changes requested by COUNTY and City. In addition, the grading and retaining wall to accommodate the RPU waterline realignment will require modification of the landscape and irrigation plans.

Attachment B-2 • Fee & Manhours

Magnolia Ave/BNSF Railroad Grade Separation Contract Amendment Proposal Summary June 24, 2013

COMPANIES	PHASE I	PHASE II	PHASE III	PHASE IV	TOTAL
AECOM Prime		$ 322,456.19			$ **322,456.19**
Diaz Yourman Additional Services		$ 5,000.46			$ **5,000.46**
Douglas Engineering Additional Utilities and Railroad Coordination		$ 10,036.91			$ **10,036.91**
Thirtieth Street Architects Finalize Bridge Aesthetics		$ 26,215.00			$ **26,215.00**
RHA Landscaping Additional Landscaping		$ 4,750.00			$ **4,750.00**
TOTAL		$ **368,458.56**			$ **368,458.56**

Phase I **Preliminary Engineering & Environmental**
Phase II **Plans, Specs & Estimates**
Phase III **Bid Support**
Phase IV **Construction Support**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
AECOM	**Plans, Specs & Estimates**	**Phase II**
PROJECT: **Magnolia Ave/BNSF Railroad Grade Separation**		DATE: **June 24, 2013**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Edward Ng	Project Manager	380	@	$75.19	$28,572.20
Brian Smith	Sr. Engineer	480	@	$51.60	$24,768.00
Nicolas Borrayo	Assistant Engineer	448	@	$28.84	$12,920.32
Danny Pheng	Assistant Engineer	64	@	$27.68	$1,771.52
Mohan Char	Structure Task Manager	32	@	$85.00	$2,720.00
Robert Price	Sr. Bridge Engineer	288	@	$61.09	$17,593.92
Limen He	Princ Bridge Engineer	192	@	$60.11	$11,541.12
Kimberly Gee	Associate Engineer	214	@	$33.83	$7,239.62
Ray Andrasek	CADD3	64	@	$47.70	$3,052.80
Mike Andrasek	CADD	80	@	$32.15	$2,572.00
John Kim	Project Lead Engineer	48	@	$67.41	$3,235.68
Chris Canlobo	Associate Engineer	120	@	$41.09	$4,930.80
Perry Truong	Associate Engineer	80	@	$38.12	$3,049.60
	TOTAL HOURS	**2,490**		TOTAL DIRECT LABOR	**$123,967.58**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	135.00%	(of Direct Labor + Escalation)	$167,356.23
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$29,132.38
		TOTAL MULTIPLIERS	**$196,488.61**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Reprographics	2000	ea	@	$1.00	$2,000.00
				TOTAL ODC'S	**$2,000.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Diaz Yourman	$1,541.00	$3,414.46	$45.00	$5,000.46
Douglas Engineering	$4,180.00	$5,811.91	$45.00	$10,036.91
Thirtieth Street Architects	$26,215.00			$26,215.00
RHA Landscaping	$4,750.00			$4,750.00
			TOTAL SUBCONSULTANT SERVICES		**$46,002.37**
			TOTAL		**$368,458.56**

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
AECOM	Plans, Specs & Estimates	Phase II
PROJECT:		**DATE:**
Magnolia Ave/BNSF Railroad Grade Separation		June 24, 2013

TASK	PROJECT MANAGER	SR. ENGINEER	ASSISTANT ENGINEER	ASSISTANT ENGINEER	STRUCTURE TASK MANAGER	SR. BRIDGE ENGINEER	PRINC BRIDGE ENGINEER	ASSOCIATE ENGINEER	CADD3	CADD	PROJECT LEAD ENGINEER	ASSOCIATE ENGINEER	ASSOCIATE ENGINEER		HOURS	COST
Total Manhours	380	480	448	64	32	288	192	214	64	80	48	120	80		2,490	
Aesthetics Final Details Design and Coordination	80	24			16	40	40	40	64	80	24	40	40		488	$ 65,209
Additional Utilities Coordination	24	96	88												208	$ 24,030
Additional Railroad Coordination	64	40	16												120	$ 18,968
Right of Way Support and Exhibits	120	80	200												400	$ 48,905
Preparation of Specs per 2010 Caltrans	36	120				80									236	$ 35,637
Queue Cutter Coordination	8	40	24	24											96	$ 10,397
Modifications per RPU Water Relocation	32	48	80	40		80	80	48							408	$ 50,710
Type Selection Report Additional Analysis					8	48	32	32							120	$ 17,109
Revise Abutment II to LRFD					4	24	16	54							98	$ 11,877
Arlington Channel Structural Check					4	16	24	40							84	$ 10,633
Conversion to LED lighting	8										24	80	40		152	$ 18,176
Assistance with Funding Applications	4	20	16												40	$ 4,638
Bus Stop Modifications	4	12	24												40	$ 4,167

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz Yourman	**Additional Services**	**Phase II**
PROJECT: **Magnolia Ave/BNSF Railroad Grade Separation**		DATE: **April 18, 2013**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Somadevan Niranjanan	Senior Engineer	34	@	$46.00	$1,541.00
	TOTAL HOURS	**34**		\L DIRECT LABOR	**$1,541.00**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	192.34%	(of Direct Labor + Escalation)	$2,963.96
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additive	$450.50
		TOTAL MULTIPLIERS	**$3,414.46**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Copies, reproduction	45	ea	@	$1.00	$45.00
		TOTAL ODC'S			**$45.00**

TOTAL **$5,000.46**

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz Yourman	**Additional Services**	**Phase II**
PROJECT:		DATE:
Magnolia Ave/BNSF Railroad Grade Separation		**April 18, 2013**

TASK	SENIOR ENGINEER													HOURS	COST
Total Manhours	**34**													**34**	
Abutment II Wingwall Revision per LRFD	**14**													**14**	**$ 1,997**
Review for Retaining Wall for RPU Relocation	**20**													**20**	**$ 2,958**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Douglas Engineering	**Additional Utilities and Railroad Coordination**	**Phase II**
PROJECT: **Magnolia Ave/BNSF Railroad Grade Separation**		DATE: **4/18/13**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Douglas Mays	Project Manager			$75.00	
Paul Mays	AutoCad/Eng Tech			$38.00	
Michael Mays	Eng Tech	110	@	$38.00	$4,180.00

TOTAL HOURS **110** \L DIRECT LABOR **$4,180.00**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	112.31%	(of Direct Labor + Escalation)	$4,694.56
PAYROLL ADDITIVES @	5.00%	(of Direct Labor + Escalation)	$209.00
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additive	$908.36

TOTAL MULTIPLIERS **$5,811.91**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Reproductions	45	EA	@	$1.00	$45.00

TOTAL ODC'S **$45.00**

TOTAL **$10,036.91**

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Douglas Engineering	**Additional Utilities and Railroad Coor**	**Phase II**
PROJECT:		DATE:
Magnolia Ave/BNSF Railroad Grade Separation		**April 18, 2013**

TASK	PROJECT MANAGER	AUTOCAD/ENG TECH	ENG TECH											HOURS	COST
Total Manhours			**110**											**110**	
Additional Utility Coordination			**70**											**70**	**$ 6,358**
HGSD Sewer Relocation Redesign			**25**											**25**	**$ 2,271**
BNSF Coordination re: HGSD license			**15**											**15**	**$ 1,363**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Thirtieth Street Architects	**Finalize Bridge Aesthetics**	**Phase II**
PROJECT: **Magnolia Ave/BNSF Railroad Grade Separation**		DATE: **April 18, 2013**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
	Principal	51	@	$160.00	$8,160.00
	Licensed Architect	82	@	$135.00	$11,070.00
	Draftsperson	64	@	$110.00	$6,985.00
	TOTAL HOURS	**197**		\L DIRECT LABOR	**$26,215.00**

MULTIPLIERS

ESCALATION @	(of Direct Labor)
OVERHEAD @	(of Direct Labor + Escalation)
PAYROLL ADDITIVES @	(of Direct Labor + Escalation)
PROFIT (FIXED FEE) @	(of Direct Labor + Escalation + Overhead + Payroll Additive

TOTAL MULTIPLIERS

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT

TOTAL ODC'S

TOTAL **$26,215.00**

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Thirtieth Street Architects	**Finalize Bridge Aesthetics**	**Phase II**
PROJECT:		DATE:
Magnolia Ave/BNSF Railroad Grade Separation		**April 18, 2013**

TASK	PRINCIPAL	LICENSED ARCHITECT	DRAFTSPERSON											HOURS	COST
Total Manhours	**51**	**82**	**64**											**197**	
Revise aesthetic design dwgs per City/County comm'ts	**14.5**	**21.0**	**8.0**											**44**	**$ 6,035**
Design details coordination w/ County/AECOM	**28.5**	**51.0**	**47.5**											**127**	**$ 16,670**
Additional retaining wall aesthetics per RPU relocation	**8.0**	**10.0**	**8.0**											**26**	**$ 3,510**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
RHA Landscaping	**Additional Landscaping**	**Phase II**
PROJECT: **Magnolia Ave/BNSF Railroad Grade Separation**		DATE: **April 18, 2013**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
	Senior Principal	3	@	$190.00	$570.00
	Principal			$150.00	
	Landscape Architect			$130.00	
	Project Manager	44	@	$95.00	$4,180.00
	Designer			$75.00	
	TOTAL HOURS	**47**		AL DIRECT LABOR	**$4,750.00**

MULTIPLIERS

ESCALATION @	(of Direct Labor)
OVERHEAD @	(of Direct Labor + Escalation)
PAYROLL ADDITIVES @	(of Direct Labor + Escalation)
PROFIT (FIXED FEE) @	(of Direct Labor + Escalation + Overhead + Payroll Additive

TOTAL MULTIPLIERS

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT

TOTAL ODC'S

TOTAL **$4,750.00**

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
RHA Landscaping	**Additional Landscaping**	**Phase II**
PROJECT:		DATE:
Magnolia Ave/BNSF Railroad Grade Separation		**April 18, 2013**

TASK	SENIOR PRINCIPAL	PRINCIPAL	LANDSCAPE ARCHITECT	PROJECT MANAGER	DESIGNER	HOURS	COST
Total Manhours	**3**			**44**		**47**	
Modify planting/irrigation per County comment				**11**		**11**	**$ 1,045**
Changes for NW corner of Magnolia/Buchana	**3**			**33**		**36**	**$ 3,705**