

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

535



FROM: RUHS – Medical Center

SUBMITTAL DATE:
 April 25, 2016

SUBJECT: Approval of the First Amendment to the Master Services Agreement (MSA) with Loma Linda University Hospital for the Implementation and Ongoing Maintenance of the Epic Electronic Health Records System; District 5; [\$4,171,883]; Hospital Enterprise Fund.

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the attached First Amendment to the MSA with Loma Linda University Hospital for the Implementation and Ongoing Maintenance of the Epic Electronic Health Records System;
2. Approve and authorize expenditures of \$400,000 included in the attached amendment, to be taken from the existing project budget contingency;
3. Authorize the Assistant CEO – Health System, where such action is necessary to complete the Epic Project approved 9/22/15 as Item 3-30, to amend the Loma Linda MSA or enter into additional ancillary agreements to support the project, so long as the total of all such changes does not exceed the project contingency of \$4,171,883, subject to County Counsel approval.

BACKGROUND:


(See next page)


 Zareh H. Sarrafian,
 Assistant CEO – Health System

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost:	POLICY/CONSENT (per Exec. Office)
COST	\$ 4,171,883	\$ 0	\$ 4,171,883	\$	Consent <input type="checkbox"/> Policy <input checked="" type="checkbox"/>
NET COUNTY COST	\$	\$	\$	\$	
SOURCE OF FUNDS: Hospital Enterprise Fund 40050 from previously approved project budget				Budget Adjustment: none	
				For Fiscal Year: 15/16	

C.E.O. RECOMMENDATION:

APPROVE

BY: 

County Executive Office Signature

Christopher M. Hans

MINUTES OF THE BOARD OF SUPERVISORS

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

Prev. Agn. Ref.: 9/22/15 Item 3-30

District: 5

Agenda Number:

3-29

Departmental Concurrence

BACKGROUND:
Summary (continued)

On September 22, 2015 the Board of Supervisors approved the Master Services Agreement with Loma Linda University to implement and maintain the new Epic Medical Health Records system. The project is progressing on the planned timetable and thus far is projected to come in modestly under budget. The new system will go live in the Hospital's FQHC clinics in August and in the main hospital in October.

Loma Linda University Hospital (LLUH) requires a suite of supporting software products to accompany the main Epic software. Additionally, cooperative design meetings between Loma Linda and Riverside staff were planned when the project was approved last September. At that time it was understood that the design meetings would likely uncover additional details that could necessitate minor program changes. Contingency was included to cover these expected but hard to quantify changes.

The design meetings were conducted to customize Epic installation to our hospital's needs. As a result of these design meetings, the design team has agreed on several software changes that will optimize Epic performance in our environment. The changes will add the following software products: Emdeon for revenue cycle, Nuvon for biomedical device integration, and Magview for structured mammography report integration.

The \$400,000 cost will be paid from the existing project budget contingency. The overall cost of the project will not be increased by this action.

Impact on Residents and Businesses

The county has made a sizable investment in the new medical health records system as part of its ongoing effort to continuously improve patient care and the patient experience. The action before the Board protects that investment and is within the original project scope and budget.

Contract History and Price Reasonableness

The county's Technology Standards and Oversight Committee (TSOC) and hospital IT staff have both reviewed and endorsed these purchases.



RIVERSIDE COUNTY INFORMATION TECHNOLOGY PROCUREMENT FORM
To be completed for all departmental purchases of IT systems, services or renewals

PR2016-04020

Tracking Number for Internal Use Only

4/12

REQUESTED PURCHASE:		AMENDMENT TO LLU AGREEMENT – ADDITIONAL INTEGRATED SOFTWARE PRODUCTS (EPIC INTERFACE APPLICATIONS)		
DEPARTMENT/AGENCY:		INFORMATION SERVICES, RUHS - MC (EPIC PROJECT CODE MC5010023)		
CONTACT NAME/PHONE:		MARYGRACE HEDGE – EXT. 64973; JENNIFER SANDOVAL – EXT. 64392		
PURCHASE REQUEST:		<input checked="" type="checkbox"/> NEW EQUIPMENT/SERVICES	<input type="checkbox"/> UPGRADE	<input type="checkbox"/> REPLACEMENT
PURCHASE TYPE:		<input type="checkbox"/> PROFESSIONAL SERVICES	<input checked="" type="checkbox"/> SOFTWARE	<input type="checkbox"/> HARDWARE <input type="checkbox"/> RENEWAL
DESCRIBE REQUESTED PURCHASE	<p>This request is an amendment from our original blanket approval (listed under RCIT H-11 PR2015-03388). The purpose of these additional integrated software costs are necessary for the implementation and success of Epic Electronic Health Records. Emdeon for Revenue Cycle (replacing the current products); Nuvo for biomedical device integration, and Magview for structured mammography report integration.</p> <p>Estimated costs are approximately \$400,000 (for replacement and net new)</p>			
BUSINESS NEEDS ADDRESSED	<p>This amendment to the Loma Linda University Health agreement is for the integrated software products are required to enable ancillary RUHS Medical Center and Federally Qualified Medical Clinic applications system to send and receive clinical patient information to and from the EPIC Electronic Health Record System.</p>			
ARE THERE ANY OTHER COUNTY SYSTEMS THAT PROVIDE THE SAME FUNCTIONALITY?		<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> UNKNOWN		
BUSINESS CRITICALITY		BUSINESS IMPACT (SELECT ALL THAT APPLY)		
<input checked="" type="checkbox"/> Run the business		<input checked="" type="checkbox"/> Support current operations		
<input checked="" type="checkbox"/> Grow the business		<input checked="" type="checkbox"/> Reduce Expenses		
<input checked="" type="checkbox"/> Transform the business		<input checked="" type="checkbox"/> Improve Customer Service		
		<input checked="" type="checkbox"/> Improve Operational Efficiencies		
BUSINESS RISKS	Financial: Operational: Customer:			
ALTERNATIVE SOLUTIONS	1. [Solution] 2. [Solution] 3. [Solution]			
TRANSACTION	<input type="checkbox"/> Cash Purchase <input type="checkbox"/> Lease Purchase Lease Years: _____			
PURCHASE COSTS	COST BENEFIT ANALYSIS			
Software costs: \$400,000.00		ALTERNATIVE STATUS QUO	ALTERNATIVE	ALTERNATIVE
	Current Annual Cost			
	Ongoing Annual Cost			
	Annual Cost Savings			

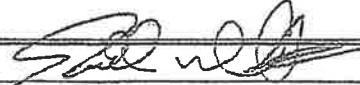


RIVERSIDE COUNTY INFORMATION TECHNOLOGY PROCUREMENT FORM
To be completed for all departmental purchases of IT systems, services or renewals

Tracking Number for Internal Use Only


TOTAL COST: \$400,000.00	Net Annual Savings			
	Project Implementation Cost			
	Project Payback Period? yrs			

Is this Budgeted?
 Yes No

Department Head Signature:  Date: 4-11-16

RCIT RECOMMENDATION for purchases and renewals under \$100,000


Recommended: Yes No (Non-recommended requests submit to TSOC)

By: _____ Date: _____
 Chief Information Officer Signature:  Date: 4/13/16

RCIT explanation for non-recommended requests:

TSOC RECOMMENDATION for purchases and renewals over \$100,000 and RCIT non-recommended purchases or renewals

Recommended: Yes No (In no, provide explanation below)

TSOC Chair Signature:  Date: 4/13/16

TSOC explanation for denied requests:

(Vendor #25701)

**Amendment No. 1 to
Master Services Agreement**

This Amendment No. 1 (“*Amendment No. 1*”) is dated as of [____], 2016 (the “*Amendment Effective Date*”) and amends that certain Master Services Agreement dated as of September 22, 2015 (the “*Original Agreement*” and as amended by this Amendment No. 1, the “*Agreement*”) between Loma Linda University Shared Services, on behalf of itself and its Affiliates (“*LLUSS*”) and Riverside University Health System, an agency of the County of Riverside, also known as Riverside County Regional Medical Center, on behalf of itself and its Affiliates (“*Customer*”). Capitalized terms used and not otherwise defined herein shall have the meanings given to them in the Agreement.

Recitals

A. Since the effective date of the Original Agreement, LLUMC on behalf of itself and its Affiliates has entered into that certain Amendment to License (“*Epic RUHS Amendment*”) with Epic Systems Corporation (“*Epic*”) for the purposes of: (i) extending the use of the Program Property to Customer (any users granted access to or the right to use the Epic Program Property in accordance with the Original Agreement by reason of its or their relationship with Customer), (ii) specifying certain fees for the upgrade and separate licensed volumes for use by Customer, and (iii) clarifying how LLUMC and Epic will work together and address certain contingencies such as a separation of LLUSS and Customer. The Epic RUHS Amendment is attached hereto and incorporated herein as Amendment Exhibit A.

B. Further, since the effective date of the Original Agreement, Customer has requested that LLUSS amend the SLA to provide for payment of certain expenses on a quarterly, rather than annual, basis and the parties have identified certain additional terms in the Original Agreement.

C. The parties desire to amend the Original Agreement on the terms and conditions set forth herein.

Agreement

1.0 Amendment to Section 10.1(c). Section 10.1(c) of the Original Agreement is hereby deleted in its entirety and replaced with the following:

(c) For the Support Services during the Initial Term, the recurring annual fee specified in the SLA, subject to adjustment as more particularly described therein, payable quarterly in advance; and, for any Renewal Term after the first Renewal Term, the fees agreed upon between the parties at the time of the renewal under Section 16.1;

2.0 Amendment to Section 16.6. Section 16.6 of the Original Agreement is hereby deleted in its entirety and replaced with the following:

16.6 Refund of License and Unused Services Fees.

(a) In the event this Agreement is properly terminated by Customer pursuant to Section 16.4 by reason of LLUSS’ bankruptcy (Termination Upon Insolvency or Bankruptcy), or by either party under Section 16.5 (Termination or Modification in the Event of Government Action), LLUSS shall refund to Customer: (i) the unamortized portion of the license fees paid by Customer for the LLUSS EHR Platform, calculated by amortizing the actual license fees paid by Customer to LLUSS for the LLUSS EHR Platform over a five (5) year straight-line basis, commencing on the date such license fees first become due and payable; and (ii) any pre-

payments made by Customer with respect to unused maintenance, support, or other Services to be provided by LLUSS to Customer after the date of termination.

(b) In the event this Agreement is properly terminated by Customer pursuant to Section 16.2 (Termination without Cause), the following provisions shall apply:

(i) In the event this Agreement is properly terminated by Customer pursuant to Section 16.2(a) within sixty (60) days of project kickoff, then Customer shall not be required to pay any portions of the Licensed Software – Epic Program Property (as reflected in paragraph 1.0 of Exhibit E of the SOW) that have not been invoiced to LLUSS by Epic as of the effective date of such termination.

(ii) In the event this Agreement is properly terminated by Customer pursuant to Section 16.2(b), then Customer shall not be required to pay one-third (1/3) of the portion of the Licensed Software – Epic Program Property (as reflected in paragraph 1.0 of Exhibit E of the SOW) that have not been invoiced to LLUSS by Epic as of the effective date of such termination.

(iii) In any other event of termination by Customer pursuant to Section 16.2, all license fees, including Pass-Through Fees, shall continue to be due and payable throughout the unexpired term of all licenses then in effect at the time of termination.

(c) THIS SECTION STATES CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR ANY TERMINATION OF THIS AGREEMENT BY CUSTOMER PURSUANT TO SECTION 16.2 OR BY EITHER PARTY PURSUANT TO SECTION 16.4 OR SECTION 16.5. For purposes of clarification, this Section 16.6 only applies to termination under 16.2 (Termination without Cause), Section 16.4 (Termination Upon Insolvency or Bankruptcy), and Section 16.5 (Termination or Modification in the Event of Government Action).

3.0 Amendment to Exhibit A, Implementation Statement of Work.

(A) *Paragraph 2.2, Required Third Party Software, of Exhibit A, entitled "Implementation Statement of Work", is amended to add the following after the existing paragraph 2.2:*

Change Healthcare Solutions for Real Time Eligibility (RTE) Services – RTE allows for electronic verification of patient coverage within Epic providing registrars and billing staff with a quick and consistent workflow. The LLUSS platform is currently built and maintained to utilize Emdeon as the RTE vendor. Transactions costs required for RTE are not included in the start-up or recurring costs for this model.

Change Healthcare Solutions for Clearinghouse Services – full service Clearinghouse that provides revenue cycle services to healthcare organizations. Services include claims scrubbers, claims submission, real time eligibility, admission notifications, and address verification services.

Trust Commerce – Payment authorization and processing for card-based payments through both onsite credit and debit card presentation and through online portals such as MyChart. Pass-through transaction costs are provided in Section 6.2.

CMRE – Billing related payment collection services. Pass-through costs are based upon a percentage of amounts collected and noted in Section 6.2.

Bernoulli – Bernoulli is a BioMedical Device Integration vendor that allows integration from patient monitors, ventilators, and anesthesia data into Epic.

MagView – MagView is used for mammography structured reporting, MQSA reporting and patient mammography letters. It is recommended to share a single instance of MagView in order to allow the viewing of biopsy and other patient mammography reports across entities.

Micromedex – Truven’s product provides integrated evidence-based clinical resources. Annual pass-through costs are reflected in Section 6.2.

Trace Faxing Solution – Integrated solution for Epic-related faxing. Pass-through costs are represented in Section 6.2 and reflect a license fee with routine maintenance costs.

The following third party applications are optional and highly recommended to be adopted by the Customer. Resource estimates for the implementation and ongoing support has assumed that Customer adopts the below 3rd Party solutions that LLUSS currently has in production. If adopted, LLUSS will work with Customer and the vendors to obtain licensing and pricing information. If Customer decides to implement a different 3rd party solution than LLUSS currently has in production there may be an increase in resource cost or a change in the timelines quoted in paragraph 5 and Exhibit E of this SOW.

Obix – Obix provides fetal monitoring solutions in the areas of labor and delivery that are integrated into the Epic patient record. Separate fetal monitoring vendors can be accommodated in the system but may require additional interface licenses and resources.

Optum Claims Manager - Optum Claims Manager provides regulatory and payor specific charge review edits, integrating seamlessly with Epic’s charge review functionality. The edit set is updated frequently to meet the most recent changes in government or payor requirements.

AGFA Enterprise Imaging Suite (EI) – AGFA EI provides DICOM modality work lists for imaging modalities such as Radiology, provides image links into the Epic system for seamless and consistent image viewing by care givers, and provides image integration into EpicCare Link for external providers. AGFA EI can also store secondary copies of Customer images for either disaster recovery or business continuity purposes.

The above lists of required and recommended third parties may be amended from time to time using the Change process of the Master Services Agreement.

(B) Paragraph 2.5, *Infrastructure*, subparagraph entitled “*Customer Responsibilities*”, of the Statement of Work is amended to add the following after the existing paragraph:

The Customer organization is responsible for compliance with third party vendor customer requirements as a result of the addition of Required Third Party Software identified above, which customer requirements will be identified in the third party vendor quotation, license agreement or other agreement delivered by LLUSS to Customer.

(C) Paragraph 2.5, *Infrastructure*, subparagraph entitled “*Customer Site Requirements*”, of the Statement of Work is amended to add the following after the existing paragraph:

The Customer organization is responsible for compliance with third party vendor site requirements as a result of the addition of Required Third Party Software identified above, which site requirements will be identified in the third party vendor quotation, license agreement or other agreement delivered by LLUSS to Customer.

(D) Paragraph 4.4, *LLUSS Technical Resources*, is amended to add the following after the existing paragraph:

- Clinical Engineering
- Radiology Systems Integration

(E) Paragraph 4.5, *Customer Resources*, is amended to add the following after the existing paragraph:

- Clinical Engineering
- Radiology Systems Integration

(F) Paragraph 4.6, *Training Requirements*, of the Statement of Work is amended to add the following after the existing paragraph:

The Customer organization is responsible for compliance with third party vendor training requirements as a result of the addition of Required Third Party Software identified above, which training requirements will be identified in the third party vendor quotation, license agreement or other agreement delivered by LLUSS to Customer.

(G) Exhibit C, Customer Volumes, of the Statement of Work is amended to add the following in the chart:

Volume	Volume definition	Needed for	Your volume
Carts	Number of Anesthesia carts	BioMedical devices for use with Bernoulli	13
Patient Monitors	Number of patient monitors included with the Bernoulli implementation	BioMedical devices for use with Bernoulli	139
Real-Time eligibility transactions	Monthly volume of transactions included in scope for Change Healthcare eligibility verification.	Change Healthcare Solutions eligibility verification	160,000
Clearinghouse Transactions	Monthly volume of transaction types in scope for Change Healthcare Solutions clearing house.	Change Healthcare Solutions Clearinghouse	10,000
Concurrent Users	Number of expected concurrent user	MagView	7

(H) Paragraph 1.0 of Exhibit E, Fees and Charges, of the Statement of Work is deleted in its entirety and replaced with the following:

1.0 LLUSS EHR Platform Implementation (paragraph 2.1 of SOW)

Project Category	Project Cost
Licensed Software – Epic Program Property ¹	\$7,634,500
Application Analysts – Phase 0 – 1	\$1,152,716
Application Analysts – Phases 2 – 4	\$12,432,412
Technical Resources – Phase 0 – 1	\$94,185
Technical Resources – Phases 2 – 4	\$455,227
Project Leadership – Phase 0 – 1	\$189,280
Project Leadership – Phases 2 – 4	\$764,227
Epic Resources (including travel) – Phases 1 – 5	\$3,049,500
Go-live Support – Phase 5	\$1,214,438

¹ Epic licensed software cost estimate based upon annual volume of 160,000 inpatient days, 250,000 ambulatory visits, 90,000 ED visits, and 123,000 hospital outpatient visits. Variance from these volume estimates may impact actual costs.

(I) Paragraph 2.0 of Exhibit E, Fees and Charges, of the Statement of Work will be amended by adding the following to the chart:

Bernoulli ²	\$202,790
MagView ³	\$10,000
Change Healthcare Solutions - Clearinghouse	\$ 17,495
Change Healthcare Solutions - RTE	\$0
Trust Commerce	\$0
CMRE	\$0
Trace	\$70,000-estimate
Truven Micromedex	\$41,893
Change Healthcare Solutions - RTE	\$0

4.0 Amendment to Exhibit C, Service Level Agreement.

(A) Paragraph 6.1(a) of the Service Level Agreement, attached as Exhibit C, is deleted in its entirety and replaced with the following:

(a) Customer will pay the following annual recurring fees, subject to adjustment as set forth below. Such fees shall be payable quarterly, in advance, on the first day of January, April, July and October of each year, in an amount equal to twenty-five percent (25%) of the amount set forth in the chart below. Fees due for the partial period from the Effective Date through January 1, 2016 shall be prorated based on the number of days from the Effective Date through January 1, 2016 (as the numerator) and 365 as the denominator and shall be payable upon execution of this Amendment.

² Estimated cost is based on assumed BioMedical Device scope. Actual cost will be determined upon finalization of Customer BioMedical Device inventory and the pass-through agreement with Bernoulli.

³ Estimated cost is based upon on assumed MagView scope and concurrent user volume.

Customer EHR Recurring Costs	
EHR Recurring Costs	
Maintenance Costs	
Ambulatory and Inpatient ¹	1,443,673
Interface ²	70,500
Subtotal Maintenance Costs	1,514,173
Other License Costs	
Third Party Software ³	542,113
Hosting and Cache Costs ⁴	1,136,761
<i>Subtotal EHR Costs</i>	<i>3,193,047</i>
LLUSS Resources	
Application Analysts ⁵	4,212,163
Service Desk ⁶	426,400
Project Leadership ⁷	79,404
Technical Resources ⁴	316,940
Training Resources ⁸	538,200
Subtotal LLUSS Resource Costs	5,573,107
Total Recurring Annual Costs⁸	8,766,154

¹Epic licensed software cost estimate based upon annual volume of 160,000 inpatient days, 250,000 ambulatory visits, 90,000 ED visits, and 123,000 hospital outpatient visits. Variance from these volume estimates constitute changes and will impact actual costs.

²Interface costs based on standard interface offering from Epic as documented in quote #2015012302.2B

³Third party software costs are based upon assumed volumes for Customer relative to LLUSS based upon inpatient licensed beds. Variance from these volume estimates constitute Changes and will impact actual costs. Annual costs for third party are subject to change once per calendar year

⁴Hosting and Cache and Technical Resources are estimated based upon 4000 additional users and 1360 additional concurrent users. Variance from these estimates constitute Changes and will impact actual costs.

⁵Application Analyst Fees cover (i) Incident Management maintenance based upon 4000 users, and an estimated 1,335 ticket volume. (ii) Business as Usual Request Fulfillment up to 5100 hours per year. Variance from these estimates constitute Changes and will impact actual costs.

⁶Service Desk Fees are estimated on 1,335 total ticket volume submitted by Customer per month with 24 x 7 support. Variance from these estimates constitute Changes and will impact actual costs.

⁷Project Leadership Fees are estimated on Customer engagement activities per month. Variance from these estimates constitute Changes and will impact actual costs.

⁸Training Resources Fees are based on Epic’s system update schedule and ongoing curriculum maintenance. Variance from estimates constitute Changes and will impact actual costs.

(B) Paragraph 6.1(b) of the Service Level Agreement is amended as follows: The phrase in the second full sentence of Paragraph 6.1(b) “Effective on each anniversary date during the term hereof,…” is deleted and replaced with the following:

Effective on January 1 of each year during the term hereof,...

(C) Paragraph 6.2 of the Service Level Agreement is amended to add the following at the end of the chart:

Third party vendor	License Cost	Annual Maintenance Year	Transaction Cost basis	Transactional Cost
Change Healthcare Solutions Real Time Eligibility	NA	\$ 318,000	Based on vendor's method for calculating per transaction pricing. LLUSS will calculate Customer's usage and pass-through fees.	\$0.18 per eligibility verification and/or referral/authorization transaction fee for transactions equal or greater than 160,001 per month.
Bernoulli	\$202,790	\$25,290	NA	NA
MagView	\$10,000	\$3,780	Additional Concurrent users (upon request)	\$2,500 per additionally requested concurrent user
Change Healthcare Solutions Clearinghouse	NA	\$30,000	Based on vendor's method for calculating per transaction pricing. LLUSS will calculate Customer's usage and pass-through fees.	\$0.16 per electronic claim transaction for transactions equal or greater than 10,001 per month. \$0.07 per electronic remittance advice transaction for transactions equal or greater than 10,001 per month. \$0.45 for print and mail service per claim.
Trust Commerce	NA	NA	Flat per transaction charge based upon a tiered volume structure for total, LLUSS-wide monthly transaction volume. Current volume as of Amendment date is in the 10000-49999 tier. Customer shall be invoiced the pass-through charge and benefit from system-wide transaction volume increases.	0-9,999 transactions per month is \$.15 per transaction, 10000-49999 transactions per month is \$.1325 per transaction, 50000-99999 transactions per month is \$.1150 per transaction, 100000-499999 transactions per month is \$.0975 per transaction.

CMRE Collection	NA	NA	Pass-through costs based upon a percentage of collections.	FQHC collections, greater than 10 days past due – 18% of collected amount, 25% for collected amounts involving legal activity. Hospital collections, greater than 5 days past due – 15% of collected amount, 22% for collected amounts involving legal activity.
Truven Micromedex	\$41,893	\$60,817	NA	NA
Trace Faxing	\$70,000-estimate	\$12,600-estimate	NA	NA

5.0 *No Other Amendment or Modification.* All other terms and conditions of the Original Agreement not specifically amended or modified by this Amendment No. 1 shall remain in full force and effect.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereby have caused this Amendment No. 1 to be duly executed and delivered as of the Amendment Effective Date.

LLUSS:

Loma Linda University Shared Services,
on behalf of itself and its affiliates

By: _____
Name: _____
Its: _____

Customer:

Riverside University Health System, an agency of
the County of Riverside, also known as Riverside
County Regional Medical Center, on behalf of itself
and its affiliates

By: _____
John J. Benoit, Chairperson
Board of Supervisors

ATTEST: Kecia Harper-Ihem
Clerk of the Board

By: _____
Deputy

APPROVED AS TO FORM:

Gregory P. Priamos

By: _____
Anita C. Willis,
Assistant County Counsel