AMENDMENT #1 TO AGREEMENT BETWEEN
THE COUNTY OF LAKE AND VICTOR S. TEGLASI d/b/a
CAPITAL PROGRAM MANAGEMENT ASSOCIATES FOR THE
UPGRADING OF THE CAPITAL PROGRAM MANAGEMENT SYSTEM (CPMS) AND
THE PROVISION OF OTHER RELATED TECHNICAL SERVICES
TO THE COUNTY'S DIVISION OF TRANSPORTATION (LCDOT)

THIS AMENDMENT #1 is entered into this _____ day of _____, A.D. 20____, by and between the COUNTY OF LAKE, Illinois, an Illinois body politic and corporate, acting by and through its Chair and County Board, hereinafter referred to as the COUNTY, and VICTOR S. TEGLASI d/b/a CAPITAL PROGRAM MANAGEMENT ASSOCIATES, a private software development business, hereinafter referred to as the DEVELOPER. The COUNTY and the DEVELOPER are hereinafter referred to collectively as "parties" to THIS AMENDMENT #1, and either one is referred to individually as a "party" to THIS AMENDMENT #1.

WITNESSETH

WHEREAS, the COUNTY and the DEVELOPER entered into an agreement dated April 12, 2012 hereinafter referred to as the AGREEMENT, regarding upgrading the LCDOT's existing CPMS software from a Microsoft Access database environment to a Microsoft SQL database environment (hereinafter CPMS UPGRADE) at a cost of $158,840 and designated as County Section 12-00000-11-EG; and,

WHEREAS, the DEVELOPER's intent was to use conversion software to complete the CPMS UPGRADE. The DEVELOPER attempted the conversion of the existing CPMS code as part of the CPMS UPGRADE, but discovered that this approach is not feasible and additional programming services will be necessary to complete the project. Therefore, the CPMS UPGRADE became a redevelopment project (hereinafter CPMS REDEVELOPMENT); and,

WHEREAS, the Revised Scope of Work document, which is included as EXHIBIT A to THIS AMENDMENT #1, is attached hereto and is hereby made a part hereof; and,

WHEREAS, the CPMS REDEVELOPMENT tasks and costs are shown in EXHIBIT B, which is attached hereto and is hereby made a part hereof; and,

WHEREAS, the CPMS REDEVELOPMENT shall be in accordance with EXHIBIT A and EXHIBIT B of this AMENDMENT #1 unless the DEVELOPER is otherwise notified in writing by the COUNTY; and,

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County Section No. 12-00000-11-EG

WHEREAS, the total duration of the CPMS REDEVELOPMENT shall be fifteen (15) months, including review time by LCDOT. The DEVELOPER and the COUNTY shall make a good-faith effort to meet the schedules set forth in THIS AMENDMENT #1; however, both parties to THIS AMENDMENT #1 recognize that the inherent nature of software development involves unknowns and risks that may adversely affect the schedule; and,

NOW, **THEREFORE**, for and in consideration of the mutual covenants contained herein, made and pursuant to all applicable statutes, local ordinances, and authority, the COUNTY and the DEVELOPER do hereby enter into the following:

1. As a result of the work done by the DEVELOPER on the CPMS UPGRADE, the DEVELOPER has completed the database conversion from MS Access to SQL Server as part of the original AGREEMENT, redeveloped the User Interface using new code, and has created several of the reports which will be incorporated into the CPMS REDEVELOPMENT.

2. The CPMS REDEVELOPMENT shall preserve the functionality and reporting capabilities of the current CPMS system and provide enhanced features and user interface in accordance with the Revised Scope of Work is attached hereto as EXHIBIT A.

3. The CPMS REDEVELOPMENT cost is based on the estimated hours for each task using and hourly rate of $95. All overhead costs, including long distance telephone charges, equipment, software, supplies and mailings, shall be included in the hourly rate. Travel, if required, is not included in the hourly rate and shall be reimbursed separately. The maximum "not to exceed" cost of this contract is $180,120. The CPMS REDEVELOPMENT tasks and costs are attached hereto as EXHIBIT B.

4. The CPMS REDEVELOPMENT shall be in accordance with EXHIBIT A and EXHIBIT B of this AMENDMENT #1 unless the DEVELOPER is otherwise notified in writing by the COUNTY.

5. The DEVELOPER shall commence work on the CPMS REDEVELOPMENT upon execution of THIS AMENDMENT #1 and will make a good-faith effort to deliver a Beta version of the CPMS REDEVELOPMENT software in ten (10) months after execution of said AMENDMENT #1. The COUNTY shall review the Beta version of the CPMS REDEVOLPMENT software and shall submit to the DEVELOPER any issues encountered within two (2) months. The DEVELOPER shall submit to the COUNTY the final version of CPMS REDEVELOPMENT software within three (3) months after receiving comments from the COUNTY.

The total duration of the CPMS REDEVELOPMENT shall not exceed fifteen (15) months. The DEVELOPER and the COUNTY shall make a good-faith effort to meet the schedules set forth in THIS AMENDMENT #1; however, both parties to THIS AMENDMENT #1 recognize that the inherent nature of software development involves unknowns and risks that may adversely affect the schedule.

6. As part of the AGREEMENT the COUNTY has provided the DEVELOPER details about its operating system, database management system, network configuration, and security protocols so that the DEVELOPER can set up a similar operating environment at his place of business in order to fully test and debug the Beta version of the CPMS software..

7. It is mutually agreed by and between the parties hereto that the CPMS REDEVELOPMENT will take the place of the CPMS UPGRADE as per this AMENDMENT #1, with all other terms and conditions of the AGREEMENT remaining intact and that THIS AMENDMENT #1 supersedes all oral agreements and negotiations between the parties hereto relating to the subject matter hereof.

8.   THIS AMENDMENT #1 shall be effective upon its full execution by the parties. Except as expressly provided in this AMENDMENT #1, all provisions of the AGREEMENT shall remain in full force and effect.

CAPITAL PROGRAM MANAGEMENT ASSOICATES

By: _____
       Victor S. Teglasi, P.E.
       Developer

Date: _____

RECOMMENDED FOR EXECUTION

_____
Lake County
County Engineer/Director of Transportation

COUNTY OF LAKE

By: _____
       Chairman
       Lake County of Board

ATTEST:

Date: _____

_____
Clerk
Lake County

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EXHIBIT A
REVISED SCOPE OF WORK

Migrating to an SQL Environment: Scope of Work

Revised September 2015

Scope of Work

This document represents the LCDOT decision to pursue a monolithic enterprise file structure in accordance with Design Option #1 (diagrammed below), in which the application "talks" directly to SQL; and security, active projects and versioned projects all have an SQL location. A taskforce was formed at LCDOT, and said taskforce created, reviewed and modified this document iteratively to bring it to its current state, ready for use as the basis for and RFQ.
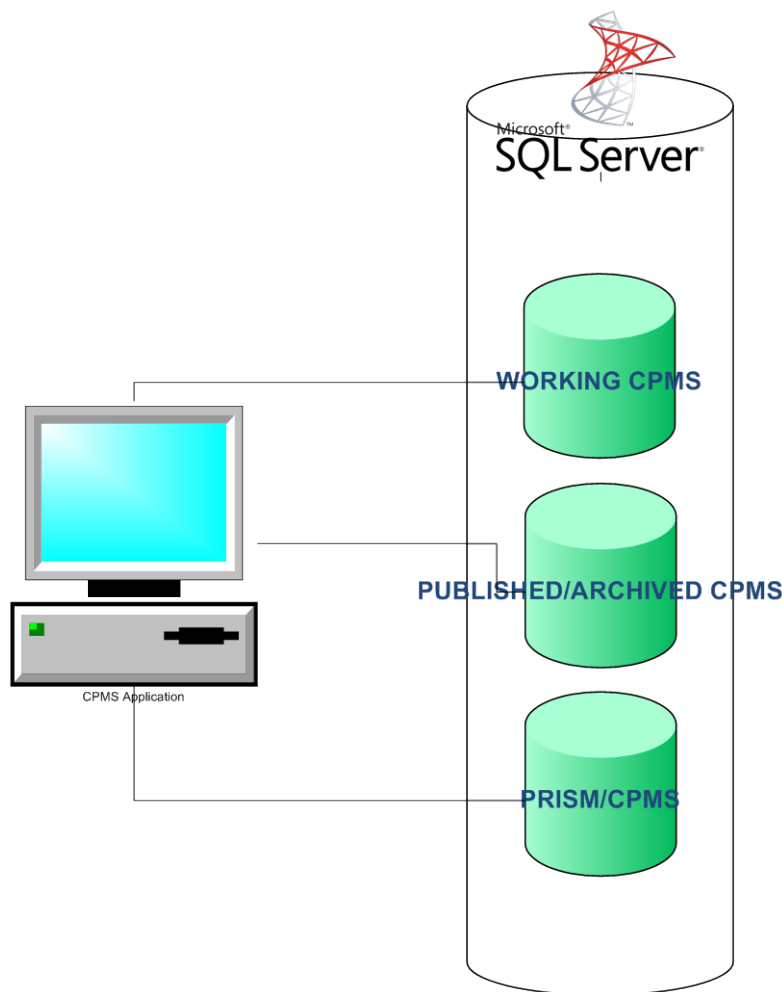

Figure 1: Design Option #1, which is a typical enterprise application.

A. Migrating to an SQL Environment

In the context of data integrity, LCDOT is desirous to (1) move to an SQL environment, which represents a more modern, more robust environment for back-end database management (i.e., an enterprise-based model), and (2) take this opportunity to add certain functionality to the program, revise certain features of the program and remove unnecessary features of the program.

1. **Database.** The database shall be reconfigured to be compatible with the most current, commercially-available version of Microsoft SQL Server2012.

2. **Operating System Compatibility.** The client application must be compatible with both Windows 7 and Windows 10.

3. **Security.** CPMS shall have an SQL Server account, and individual user accounts will be established in the program environment.

4. **Graphical User Interface (GUI).** The graphical user interface (GUI) shall be written in the Microsoft.net environment using C Sharp and/or XAML and shall be similar to the existing CPMS user interface (written in VB6).

B. Versioning

The many versions of CPMS must able to be "versioned." This requirement is easy to accomplish when using the current CPMS version written in MS Access. Versioned data are each separate MS Access databases which are capable of being used for comparison-type reports and which are retrievable [for future reference], but the SQL environment operates on just one active database and does not, at the surface, have provisions for this type of versioning (i.e., assigning a version and a date to a given dataset at a specified point in time).

What LCDOT requires is functionality similar to that of the current CPMS interface, in which we may create and/or modify the "working" version into a versioned state, from which we can prepare comparison-type reports on two distinct versions, representing two different points in time.

The following major, "named" versions occur every year and represent something very specific. These include: (1) the Annual Update version, (2) the 5-Year Update version and (3) the Budget Submittal version. There will be many, many Periodic Update versions within in a given County Fiscal Year and many iterative versions [of short duration] as we endeavor to financially balance the database, in order to ultimately arrive at versions (1), (2) and (3) above. The various Periodic Update versions also are used to input the various stages of the Budget process after the submittal is made: CAO recommendation, joint County Board Committee recommendation, and final County Board action.

The following list of databases will be created on the Lake County DOT SQL Server with support from the ITS Group (Tentative):

Table 1: SQL Server Databases (Tentative)

NAME	DESCRIPTION
cpms_active	Working database used by Program Management
cpms_current	Most recent published version of the capital program
cpms_archive	All published versions are saved to the archive for future retrieval
cpms_base	Base CPMS database; can be populated from archive
cpms_comparison	Comparison CPMS database; can be populated from archive
cpms_prism	Most recent version of CPMS to be accessed by PRISM (if different from cpms_current)
cpms_temp	Used to view CPMS versions retrieved from the cpms_archive database
cpms_directory	Contains a list of cpms database versions along with pertinent information regarding the location of linked Excel files for each version
cpms_users	Contains a list of users with information about which databases each user has access to; needs a valid server password to access this database.

(Note: There can be no worry of accidental overwriting or deletion of data.)

Concepts / Definitions:

The SQL Server databases will include three basic versions: (1) the working version, (2) the published version and (3) the PRISM/CPMS version.

The **working version (cpms_active)** is another name for the current, in-progress version. This is the version which is being worked on *now*, being revised with changes to project phase costs, dates and the like. Only those LCDOT staff with full read-write privileges will have access to this version. Typically, the Manager of Capital Programming will make the decision as to when a given working version is in a state ready to be made the published version.

The **published version (cpms_current)** is the version which may be accessed by all. It cannot be overwritten by the user, except by Program Management. The published version will contain the most-recently published version of the CPMS database. Typically, a published version is a financially-balanced version, though there have been (and likely will be) exceptions to this rule.

The **archive version (cpms-archive)** will contain all previously published versions of the CPMS database which can be retrieved by the user and viewed but not edited. (A specific archive version, when retrieved, will be assigned to the **cpms_temp** database where it can be viewed, reported, and/or analyzed.)

The **PRISM/CPMS version (cpms_prism)** will essentially be a duplicate of the latest published version, EXCEPT THAT it will only contain the *most-recently* published version. The purpose of the PRISM/CPMS version is to provide a location for PRISM to "point to" in order to refresh and update its data (for project management purposes).

We must retain the ability to run comparision-type reports comparing different versions of the capital program using a filing system with distinct, unique versions, each representing a given dataset at a specified point in time. This requires that all project records have a version field (YYYY-Na) containing a "year" prefix and a version number. The structure of the existing database will change, and we will need to convert selected historical Access files to the new SQL database file structure. Versioning can be accomplished from the CPMS file information **(cpms_directory)** database.

C. PRISM Update Status

PRISM, our project management system, is currently in its third incarnation/third generation at LCDOT. The system was designed to monitor current LCDOT road projects, tracking timelines and status. Just as PRISM II had been referred to simply as "PRISM," PRISM III will also be referred to "PRISM" at LCDOT. LCDOT contracted with OpenText (a programming consulting firm) to upgrade PRISM II (to PRISM III), using MS Project Server 2010, MS Project Professional 2010 and MS SharePoint 2010 as its basis.

Any interfacing between CPMS and PRISM is performed at LCDOT, with programming by LCDOT or designated contractor. The **CPMS/PRISM Interface Report**, which is published five times per year by LCDOT's Engineer of Design, is the primary deliverable. The interface (consisting of small blocks of programming code: subroutines and modules) "points" to key data fields in the CPMS database (such as key date fields–see the discussion of these date fields in Section D of this document). This functionality must be retained in PRISM; therefore, database design must be considered in conjunction with the integration.

D. Dates in CPMS and in PRISM

The task force held a discussion focusing on the "date" fields used in CPMS and those used in PRISM. The task force had hoped to come to some meaningful conclusion regarding which of these fields must

be retained in the re-tooled version of CPMS (and which could be removed without diminishing the program's effectiveness). This may or may not become a key theme in the re-development of the program. In fact, its importance (or lack thereof) may only become apparent in the actual SQL programming stage.

These stand-alone dates come together and have some collective meaning in the CPMS/PRISM Interface Report. ASIDE: Refer to the discussion of the use of the Phase Analysis Report, which is a closely-related idea, found later in this document under the heading, *Functionality to be Enhanced and/or Revised in CPMS*. For reference, the CPMS date fields are:

1. Original Program Date (shown on all tabs and in the Project Management Tab)
2. Current Program Date (General Tab)
3. Funds Available Date (General Tab)
4. CPMS Construction Cost Date (General Tab)
5. Base Construction Cost Date (General Tab)

6. Plan Available Date (Project Management Tab would be from PRISM Interface but is not used)
7. Available Letting Date (Project Management Tab would be from PRISM Interface but is not used)

…and the PRISM date fields are:

1. Original Program Date (pulled from CPMS by a PRISM Interface)
2. Current Program Date (pulled from CPMS by a PRISM Interface)
3. Funds Available Date (pulled from CPMS)
4. Available Letting Date (defined as the earliest let date that can be achieved based on the project plan)
5. Construction Cost Estimate Date

6. ROW Cost Estimate Date
7. Preliminary Engineering Cost Estimate Date
8. Design Engineering Cost Estimate Date
9. ROW Appropriation Date
10. Plan Available Date (not terribly useful; it is simply the date at the end of a particular project's Gantt Chart)

E. Functionality to be Added to CPMS

1. **Archiving.** LCDOT desires the ability to specify select date ranges for which to archive data, so that they can be easily referenced at some future point [without worry of accidental overwriting or deletion of data].

2. **Backward Compatibility.** In addition to reviewing the hard-copy (i.e., "paper") documentation from previous versions, LCDOT desires the ability to launch old database versions and old versions of the Excel financials. The consensus of the taskforce is that we require the ability to launch databases up to 2 years old (that should be sufficient). This suggests that the need for *conversion techniques* (subroutines?), as the data shall all be in one SQL file. NOTE: Certain reports (both Crystal Reports and Excel-based reports) compare data from new and old files, hence the need for this functionality.

3. **New PIN Screen.** A "new PIN" screen" is needed. This screen would prompt the user through the necessary fields to be populated, ensuring that all critical fields are populated. (NOTE: If the user is merely *updating* an existing PIN, a different "update screen" would be invoked.)

4. **Sort / Sub-Sort Reconfiguration.** Currently, when the user sorts on Work Type, the PINs are listed (sub-sorted) in ascending PIN order. We would prefer that the default sub-sort be alphabetical, by Route (and to apply this to all data sorts).

F. Functionality to be Enhanced and/or Revised in CPMS

1. **Reporting.** The following reports currently produced by CPMS using Crystal Reports Version 8.5 will be redeveloped to Crystal Reports 14 using updated ADO.Net data objects:

1	Summary Project List Report
2	TIP Project Report
3	TIP Project Report - Split Funded
4	TIP Project Report - Multi Funded
5	Budget Lists Tax Funds Report
6	Budget Lists Bond/Debt Svc Report
7	Detailed TIP Project Report
8	Table of Project Costs / Cross Tab
9	Annual Update Carryforward Report
10	Financial Reports - Excel
11	Detailed Project Report -General Tab

The reports contained in the Excel "financial" file (which are currently launched from the Access database) will remain unchanged (but may be part of future redevelopment work.)

G. Functionality that is Obsolete and Can be Dropped from CPMS

1. Tab: **GENERAL TAB:**
   Data field to be removed: **MP1 (ft), MP2 (ft), FAS**

2. Tab: **PROJECT MANAGEMENT TAB:**
   Data field to be removed: **(drop this entire tab EXCEPT FOR the "Original Date," "Plan Available Date" and "Available Let Date" fields, which must be moved to another tab)**

3. Tab: **POLITICAL TAB:**
   Data field to be removed: **(drop this entire tab)**

4. Tab: **GIS:**
   Data field to be removed: **(drop this entire tab)**

H. Other Matters

1. **Equipment.** The existing equipment at LCDOT is more than sufficient to support the proposed migration to SQL. LCDOT shall supply all pertinent details (server specs, memory, processor speed, etc.), of said existing equipment to Victor Teglasi.

2. **Legal.** The existing CPMS Licensing Agreement provides Lake County with a non-exclusive right to the CPMS source code. Lake County retains the unrestricted right to use/modify the CPMS source code as it so wishes (for its own use), using either its "in-house" staff or another consultant (besides Victor Teglasi/ Capital Program Management Associates). In the past, Victor Teglasi has provided LCDOT's Manager of Capital Programming and LCDOT's GIS Supervisor with updated source code upon request. The current licensing agreement would continue to apply to any future modifications to CPMS. As such, LCDOT will be provided with a copy of the source code files at 50% complete, completion and acceptance and each subsequent update..

EXHIBIT B
PROJECT TASKS AND COST ESTIMATE

			Rate/Hr	$95

PHASE I-A - COMPLETED UPGRADE WORK

		Original Budgeted Hours	Total Expended Hours	Total Invoiced Amount		Original Budget Amount	Remaining Budget Amount
Tasks 1-12	SUBTOTAL (Invoiced)	1,672	748	$71,060		$158,840	$87,780

PHASE I-B - REMAINING REDEVELOPMENT WORK

Task No	TASK DESCRIPTION	Budgeted Hours	Total Expended Hours	Budget Amount	Previously Invoiced	Current Invoice Amount	Total Invoiced Amount
1	Viewing and Selecting Projects	160	0	$15,200	$0	$0	$0
2	Editing and Validation	420	0	$39,900	$0	$0	$0
3	Reports	320	0	$30,400	$0	$0	$0
4	Database Operations	128	0	$12,160	$0	$0	$0
5	Network Deployment and Optimization	120	0	$11,400	$0	$0	$0
	SUBTOTAL (Cost to Complete)	1,148	0	$109,060	$0	$0	$0

PHASE 1-A AND PHASE 1-B

TOTAL REVISED BUDGET (previously invoiced + cost to complete)	$180,120

Remaining CPMS Redevelopment Schedule
September 25, 2015

Timeline phases:
- **COMPLETION OF CPMS REDEVELOPMENT WORK - BETA VERSION (44 Weeks)** — weeks 1–44
- **LCDOT REVIEW (9 Weeks)** — weeks 45–53
- **FINAL REVISIONS (12 Weeks)** — weeks 54–65

TASK DESCRIPTION	Week(s) (Pending bar)
Task 1 - Viewing Projects	
Finalize Fields to Display	1–2
Finalize User Interface	2–3
Complete Project Selection	4–6
Task 2 - Editing	
Add/Delete Projects	7–8
Select Available PINs	9–10
Edit General Tab	11–12
Edit Funding/Work Description	13–14
Edit Outside Revenue Tab	15–16
Edit MFT Tab	17–18
Edit Comments Tab	19
Edit File Information	20
Task 3 - Reports - Priority I	
Summary Project List Report	21
TIP Project Report	22
TIP Project Report - Split Funded	23
TIP Project Report - Multi Funded	24
Budget Lists Tax funds Report	25
Budget Lists Bond/Debt Svc Report	26
Detailed TIP Project Report	27
Table of Project Costs / Cross Tab	28
Annual Update Carryforward Report	30
Financial Reports - Excel	31
Detailed Project Report -General Tab	32
Task 4 - Database Operations	
Publish to Users	33
Publish to Archive	34
Publish/Send to Deleted DB	35
Retrieve from Archive	36
Retrieve from Deleted	37–38
Task 5 - Network Deployment and Optimization	
Final Testing	39–41
Deployment of Beta Version	44 — *LCDOT Review - 9 weeks*
LAKE COUNTY DOT REVIEW OF BETA VERSION	
Lake County DOT Review	45–51
Review Meeting	52
Lake County Comments	53 — *Final Revisions*
CPMS REVISIONS AND ACCEPTANCE	
Address LCDOT Comments	54–57
LCDOT Final Rreview	58–59
CPMS Final Revisions (if required)	60–63
LCDOT Acceptance	65

Legend:
- 🟨 Pending
- 🟦 Complete

Task No.	TASK DESCRIPTION	Estimated Hours	Rate	Task Budget	Previous Completed %	Current Completed %	Invoice Amount
1	*Viewing and Selecting Projects*	160	$95	$15,200	0%	0%	$0
1a	Finalize Tabs and Fields to View	12					
1b	Complete User Interface	32					
1c	Complete Project Selections	80					
1d	Refine Project Navigation	12					
1e	Testing and Debugging	24					

Task No.	TASK DESCRIPTION	Estimated Hours	Rate	Task Budget	Previous Completed %	Current Completed %	Invoice Amount
2	*Editing and Validation*	420	95	$39,900	0%	0%	$0
2a	Add/Delete Projects	40					
2b	Identify/Select Available PINs	40					
2c	Edit Edit General Tab	40					
2d	Edit Funding Tab	100					
2e	Edit Outside Revenue Tab	40					
2f	Edit MFT Tab	40					
2g	Edit Comments Tab	40					
2h	Testing and Debugging	80					

Task No.	TASK DESCRIPTION	Budgeted Hours	Rate	Task Budget	Previous Completed %	Current Completed %	Invoice Amount
3	*Reports*	320	95	$30,400	0%	0%	$0
3a	Summary Project List Report (remaining work)	12					
3b	TIP Project Report	32					
3c	TIP Project Report - Split Funded	16					
3d	TIP Project Report - Multi Funded	16					
3e	Budget Lists Tax Funds Report (remaining work)	24					
3f	Budget Lists Bond/Debt Svc Report (remaining work)	24					
3g	Detailed TIP Project Report	12					
3h	Table of Project Costs / Cross Tab	32					
3i	Annual Update Carryforward Report	40					
3j	Financial Reports - Excel	100					
3k	Detailed Project Report -General Tab	12					
			13	24	312		

Task No.	TASK DESCRIPTION	Budgeted Hours	Rate	Task Budget	Previous Completed %	Current Completed %	Invoice Amount
4	*Database Operations*	128	95	$12,160	0%	0%	$0
4a	Publish to Users	16					
4b	Publish to Archive	16					
4c	Publish/Send to Deleted DB	16					
4d	Retrieve from Archive	16					
4e	Retrieve from Deleted	16					
4f	Publish to PRISM	16					
4g	Testing and Debugging	32					

Task No.	TASK DESCRIPTION	Budgeted Hours	Rate	Task Budget	Previous Completed %	Current Completed %	Invoice Amount
5	*Network Deployment and Optimization*	120	95	$11,400	0%	0%	$0
5a	Identify Network Issues	40					
5b	Coordinate with LCDOT IT to Resolve Issues	40					
5c	Modify CPMS	40					