LEE COUNTY BOARD OF COUNTY COMMISSIONERS

AGENDA ITEM SUMMARY

BLUE SHEET NO: 20030006-UTL

1. REQUESTED MOTION:

ACTION REQUESTED:

Approve the Orcom Solutions, Inc. Change Order No. 12 in the amount of $186,295.00 for Contract No. 732, which will provide payment to Orcom Solutions, Inc. for tasks identified and completed in Section 2, Cost Summary.

WHY ACTION IS NECESSARY:

To allow for: 1) Gulf Environmental Services (GES) customer records to be merged with all other Lee County Utilities (LCU) customer records into one database; and, 2) Custom enhancements to the customer information system allowing for greater efficiencies in meeting LCU's business requirements and operating standards.

WHAT ACTION ACCOMPLISHES:

Combines separate Lee County and GES' customer databases into one database, converting GES rates to Lee County rates, service orders, bill print and reminder notice print programs to better meet LCU's business practices and operating standards.

2. DEPARTMENTAL CATEGORY: 10 - UTILITIES COMMISSION DISTRICT #: CW *C/OA*	3. MEETING DATE: *02-04-2003*

4. AGENDA:	5. REQUIREMENT/PURPOSE:	6. REQUESTOR OF INFORMATION:
X CONSENT	*(Specify)*	A. COMMISSIONER: _____
___ ADMINISTRATIVE	___ STATUTE _____	B. DEPARTMENT: Lee County-Public Works
___ APPEALS	___ ORDINANCE _____	C. DIVISION/SECTION: Utilities Division
___ PUBLIC	___ ADMIN. CODE _____	BY: Rick Diaz Utilities Director
___ WALK ON	X OTHER Change Order	
___ TIME REQUIRED: ____		DATE: 1/14/03

7. BACKGROUND:

On March 9, 1999 (BS #990153) the Board approved four Agreements with Orcom Solutions, Inc. including a Service Agreement, an Agreement for Supply of Hardware and Third Party Software, an End-User Software License Agreement, and a Software Support Agreement allowed Orcom to proceed with providing the hardware and software necessary to convert Lee County Utilities' existing customer billing system. The Service Agreement that the Board approved on March 9, 1999 provided an itemized listing of each of the following: Lee County Utilities-$298,000; Gulf Environmental Services, Inc.-$48,000; and, Florida Cities Water Company-$168,500. Funds were previously approved for the Lee County Utilities (LCU), Gulf Environmental Services, Inc. (GES) and Florida Cities' portion of the Service Agreement.

(CONT'D.)

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL

(A) DEPARTMENT DIRECTOR	(B) PURCH. OR CONTRACTS	(C) HUMAN RESOURCES	(D) OTHER	(E) COUNTY ATTORNEY	(F) BUDGET SERVICES				(G) COUNTY MANAGER
	See signature on change order	N/A			*HJ for TM 1/15/03*				
					OA	OM	Risk	GC	
J. Lavender				D. Owen	PM 1/15/03	1/15/03	1/15/03	1/15/03	J. Lavender
Date: 1/14/03	Date:	Date:	Date:	Date:					Date:

10. COMMISSION ACTION:

_____ APPROVED	
_____ DENIED	
_____ DEFERRED	
_____ OTHER	

Rec. by CoAtty	RECEIVED BY COUNTY ADMIN. *PM*
Date: 1/15/03	1/15 4:50
Time: 1:53	
	COUNTY ADMIN. FORWARDED TO:
Forwarded To: Budget 1/15/03 2:55pm	1/16

On November 26, 2002 the Board authorized (BS 20021096-UTL) authorizing LCU staff to commence procedures and all necessary steps to assume the assets and refinance the bonded debt of Gulf Environmental Services, Inc. (GES), with a county bond issue, pursuant to I.R.C. Ruling 63-20. LCU is now requesting approval to commence the data conversion needed to merge GES customer database with the LCU customer database and have custom programming performed to allow greater efficiency to the customer information system to meet LCU's business practices and operating standards. Plans are to have these customer accounts merged and customer work complete on or by June 30, 2003.

<div align="center">

Funding will be available in Account Number:

OD5361048700.506410
(Utilities/Billing and Collection/Furniture and Equipment)

</div>

Attachment: Copy of Proposal
                Change Order No. 12 (3 Originals)

<div align="center">

♦ ♦ ♦

</div>

CHANGE ORDER FORM

_____ SERVICE AGREEMENT
_____ END-USER SOFTWARE AGREEMENT
__X__ SOFTWARE SUPPORT AGREEMENT
_____ SUPPLY OF HARDWARE & THIRD PARTY SOFTWARE AGREEMENT

(Change Order Requires Approval by the Board of County Commissioners)

CONTRACT/PROJECT NAME: _Lee County Enterprise CIS Quick Start Implementation Program_

CONSULTANT: ____ORCOM SOLUTIONS INC_____   PROJECT NO.:

CONTRACT NO.: ____732_____   CN NO.: _____N/A

REQUESTED BY: _Carolyn Andrews_____   DATE OF REQUEST: _12/20/02

Upon the completion and execution of this Change Order by both parties the Consultant is authorized to and shall proceed with the following:

EXHIBIT "CO-A": EXHIBIT A: DATED: ___12/20/02

EXHIBIT "CO-B": EXHIBIT B: DATED: ___12/20/02

All of which are attached hereto and are made a part of this Change Order.

It is understood and agreed that the acceptance of this modification by the CONSULTANT constitutes an accord and satisfaction.

RECOMMENDED: ACCEPTED: APPROVED:

By: _____   By: _____   By:_____
_____/1/6/03____   Consultant c.f.f   Chairman
Department Director Date   GARY LAWLER   BOARD OF CO. COMMISSIONERS

By:_____1/10/03   Date Accepted:1/2/c 3
Dept. of Public Works Date   Date Approved: _____
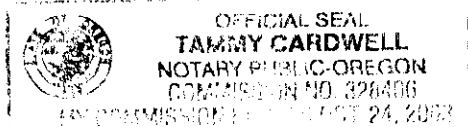   (Corporate Seal)
                                                             By: _____
                                                             County Attorney's Office

CSD:063   Date Approved:_____
REV:03/06/96

OFFICIAL SEAL
TAMMY CARDWELL
NOTARY PUBLIC-OREGON
COMMISSION NO. 326406
MY COMMISSION EXPIRES OCT 24, 2003

Tammy Cardwell

EXHIBIT "CO-A"

Date:_____12/20/02___

SCOPE OF SERVICES

for Orcom Solutions, Inc./GES-LCU Data Conversion for the Utilities
Billing System

(Enter Project Name from Page 1 of the
Change Order Agreement)

SECTION 1.00   CHANGE(S) TO SERVICES

The "Scope of Services" as set forth in Exhibit "A" of the Agreement,
referred to hereinbefore is hereby changed, so that the CONSULTANT, shall
provide and perform the following services, tasks, or work as a change to, the
scope of services previously agreed to and authorized:

(List each previously established phase of task to be changed, and
provide a comprehensive description of the services, tasks, or work
resulting from the Change(s).

Task 21800 GES database conversion into the Lee County customer
            service data base

Task 21900 Custom modifications needed to more fully meet Lee
            County business requirements.

Task 22000 Reimbursable Travel Expenses for GES conversion

Change Order tasks and hours are based on estimates for the agreed upon Custom
Modification Documents, defining the expected scope of work. Should additional
tasks be necessary, or should the scope of tasks increase, additional Change Orders
will be required.

Page __A 1__ of __A 1__

REV:04/21/93

EXHIBIT B COMPENSATION

for Orcom Solutions, Inc./ GES-LCU Data Conversion for the Utilities
Billing System

(Enter Project Name from Page 1 of the
Change Order Agreement)

SECTION 1.00   CHANGE(S)

The compensation the CONSULTANT shall be entitled to receive for providing and
performing the changed services, tasks, or work as set forth and enumerated in
the Exhibit "CO-A", attached hereto shall be as follows:

NOTE: A Lump Sum (L.S.) or Not-to-Exceed (N.T.E.) amount of compensation to be paid the
CONSULTANT should be established and set forth below for each task or sub-task described
and authorized in Exhibit "CO-A". Change Order tasks and hours are based on estimates for
the agreed upon Custom Modification Documents, defining the expected scope of work. Should
additional tasks be necessary, or should the scope of tasks increase, additional Change
Orders will be required.

Task Number	Task Title	Amount of Compensation	Indicate Basis of Compensation LS or NTE	Comments
21800	GES data base conversion into the Lee County Utilities' data base	$106,470	NTE	
21900	Custom Modifications	$ 74,025	NTE	
22000	Reimbursable Travel Expenses	$ 5,800	NTE	
TOTAL		$186,295		

REV:04/21/93

CHANGE ORDER No. __12__ (Continued)
(Service Agreement)

SECTION 2.00   SUMMARY OF CHANGE(S) IN COMPENSATION

Pursuant to and in consideration of the change(s) in the Scope of Services set forth in the CHANGE ORDER AGREEMENT, Exhibit "CO-A", the compensation the COUNTY has previously agreed to pay to the CONSULTANT, as set forth in the Agreement shall be changed to be as follows:

Section/Task Number	Section/Task Name	Compensation in the Basic Agreement	Adjustment(s) by Previous Change Order Nos. 1,2,3,4, 5, 6, 7, 8, 9, 10 & 11	Adjustment(s) due to this Change Order No. __12__	Summary of Changed Compensation
		$339,135.00			$339,135.00
			$ 402,403.61		$402,403.61
21800	GES conversion in LCU database			$106,470.00	$106,470.00
21900	Custom Modifications			$ 74,025.00	$ 74,025.00
22000	Reimbursable Travel Expens.			$ 5,800.00	$ 5,800.00
TOTAL		$339,135.00	$402,403.61	$186,295.00	$927,833.61

REV:04/21/93

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Proposal Overview

	Projects	Estimated Hours
1	GES–LCU Data Merge	676 h
2	Service Order Print Custom Modification	44 h
3	Enter crew by route# (4 areas) Custom Modification	18 h
4	Clear Leading Zeros Custom Modification	82 h
5	Bad Debt Cleanup Custom Modification	64 h
6	Purge Dummy Accounts Custom Modification	48 h
7	Hide SRVM Wellfield Type Custom Modification	16 h
8	Add "Do Not Pay" Custom Modification	26 h
9	Collection Letter Custom Modification)	14 h
10	Custom Base Usage Program Custom Modification	22 h
11	Additional Deposit Calculation Custom Modification	82 h
12	Retransmit AP Interface Custom Modification	54 h
	TOTAL:	**1,146 h**

Cost:

1,146 hours @ $175.00/hour	$ 200,550
- 10% Discount*	$ 20,055
Total:	$ 180,495
Expenses:	$ 5,800
Total:	**$ 186,295**

* Discount applicable only if a total of at least 1000 hours are approved by 12/31/2002. Hours to be used within calendar year 2003.

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Where Utilities Go Next .

REQUEST FOR WORK (RFW): GES–LCU Data Conversion

To:	Carolyn Andrews	**Date:**	12/17/02
Client:	Lee County Utilities		

Prepared By:	Peter Rebhan
Company:	Orcom Solutions, Inc.

Hourly Rate:	$ 175.00

Estimate:		
	676 hours @ $175.00/hour	$ 118,300
	- 10% Discount*	$ 11,830
	Total:	$ 106,470
	Travel Expenses:	$ 5,800
	Total Estimate:	**$ 112,270**

* Discount applicable only if a total of at
least 1000 hours are approved by 12/31/2002.
Hours to be used within calendar year 2003.

Statement of Work:

This Request For Work presents a summary of the project and the estimated
hours. Details of the project scope, project schedule, allocation of hours,
approach, resources, business requirements and solution design are
described and controlled by the attached documents:

a) Custom Modification Document "SVI#94438 - Merge GES Data into LCU
Data Set"
b) Project Plan - GES-LCU Data Conversion

Estimated Hours

Project Phases	Estimated Hours
1. Scope and Foundation Phase	**54 h**
2. Model Phase	**78 h**
2.1. Preparation: Model Control Files and Processes	40 h
2.2. Model Control Files and Processes	38 h
3. Build Phase	**428 h**
3.1. Base Conversion	256 h
3.1.1. Environment Set-Up, Source Code Transfer & Modification	150 h
3.1.2. Cross-Reference Files, Trouble Shooting, Create Control Files, Update Application Software	82 h
3.1.3. Perform Conversion	24 h
3.2. Conversion Refinement	172 h
3.2.1. Modifications Refinement / Rework	76 h
3.2.2. Unit Testing	96 h
4. Testing Assistance	**40 h**
5. Deploy Phase	**76 h**
5.1. Pre Go-Live Support	12 h
5.2. Go-Live Support	32 h
5.3. Conversion Go-Live	8 h
5.4. Post Go-Live Support	24 h
Total:	**676 h**

The listed hours are estimates, based on the agreed on CMD document. Any changes of scope may affect the total hours. LCU will be invoiced monthly for hours incurred on a time and material basis.

Expected Trips and Estimated Travel Expenses:

The project scope, as defined in the attached project plan, includes 2 scheduled site visits. Travel expenses include airfare, hotel, meals ($21 employee/day) and ground transportation. All listed expenses are estimates.

Trip 1: Model Phase

2/10/03 – 2/12/03*:   2 employees for approx. 3 days on-site (Dianna Shawver and an additional analyst)

Estimated Expenses:

Airfare: 2 flights @ $700: $ 1,400

Hotel:	2 employees for 4 nights @ $90/day:	$	720
Meals:	2 employees for 3 days @ $21/day:	$	126
Transportation:	Rental car for 4 days:	$	140
	Estimated Total:	$ 2,386	

Trip 2: Deploy Phase (Go-Live Support)

6/26/03 – 7/02/03*:   2 employees for approx. 7 days on-site (Dianna Shawver and Lance Bloch)

Estimated Expenses:

Airfare:	2 flights @ $700:	$ 1,400	
Hotel:	2 employees for 8 nights @ $90/day:	$ 1,440	
Meals:	2 employees for 7 days @ $21/day:	$	294
Transportation:	Rental car for 8 days:	$	280
	Estimated Total:	$ 3,414	

Total estimated travel expenses: $ 5,800

* Targeted dates. Dates may change depending on necessity, or change in scope or project plan.

Acceptance/Authorization:

This document is an addendum to the software licensing agreement between Orcom Solutions, Inc. and Lee County Utilities when it has been authorized by Lee County Utilities and has been accepted by Orcom Solutions, Inc.

Lee County Utilities, Authorization: Orcom Solutions, Inc. Acceptance:

_____   _____
Signature   Signature

_____   _____
Name   Name

_____   _____
Title   Title

_____   _____
Date   Date

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REQUEST FOR WORK (RFW) - CUSTOM MODIFICATIONS

To:	Carolyn Andrews	**Date:**	12/17/02
Client:	Lee County Utilities		

Prepared By:	Peter Rebhan
Company:	Orcom Solutions, Inc.

Hourly Rate: $ 175.00

Estimate:	470 hours @ $175.00/hour	$ 82,250
	- 10% Discount*	$ 8,225
	<u>Total:</u>	<u>$ 74,025</u>

* Discount applicable only if a total of at least 1000 hours are approved by 12/31/2002. Hours to be used within calendar year 2003.

Description of Work:

This Request For Work presents a summary of the projects and the estimated hours. Details of the project scope and business requirements are described and controlled by the individual Custom Modification Documents (CMDs) for each project.

All listed hours are estimates, based on the agreed on CMD documents. Any changes of scope may affect the total hours. LCU will be invoiced monthly for hours incurred on a time and material basis.

	Projects	Estimated Hours
1	Service Order Print Custom Modification	44 h
2	Enter crew by route# (4 areas) Custom Modification	18 h
3	Clear Leading Zeros Custom Modification	82 h
4	Bad Debt Cleanup Custom Modification	64 h
5	Purge Dummy Accounts Custom Modification	48 h
6	Hide SRVM Wellfield Type Custom Modification	16 h
7	Add "Do Not Pay" Custom Modification	26 h
8	Collection Letter Custom Modification)	14 h
9	Custom Base Usage Program Custom Modification	22 h
10	Additional Deposit Calculation Custom Modification	82 h
11	Retransmit AP Interface Custom Modification	54 h
	Total	**470 h**

Acceptance/Authorization:

This document is an addendum to the software licensing agreement between Orcom Solutions, Inc. and Lee County Utilities when it has been authorized by Lee County Utilities and has been accepted by Orcom Solutions, Inc.

Lee County Utilities, Authorization: Orcom Solutions, Inc. Acceptance:

_____   _____
Signature   Signature

_____   _____
Name   Name

_____   _____
Title   Title

_____   _____
Date   Date

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IMPLEMENTATION SERVICES

Custom Modification Document

Orcom Solutions, Inc. (Orcom) has prepared this document for Lee County (LCU) to describe the GES Merge custom modification. (For general information about CMDs, please refer to the SDM *Client Preparation Guide: Introduction.*)

Orcom SVI #:	94438		Date:	September 10, 2002
Project Team Members			**Name**	
Orcom Project Manager				
Orcom Solution Lead			Dianna Shawver	
Orcom Product Specialist			Lance Bloch	
LCU Project Manager			Carolyn Andrews	
LCU Solution Lead				

Related Documents:	
Title	**Description**

Document Change Log:

Date	Author	Description of Revision
September 10, 2002	Lance Bloch	Original writing
September 27, 2002	Lance Bloch	Added the details of master files to be updated so that we can estimate better.
October 1, 2002	Lance Bloch	Update testing and technical.
October 31, 2002	Lance Bloch	Update based on CMD review

Table of Contents

Modification Overview

This section provides the requirements for this modification, which are associated with the test cases in the Testing section. Most of the requirements are numbered and cross-referenced by type, using the abbreviations shown below.

Requirement Types

Business Requirement – BR	Functional Requirement – FR
User Requirement – UR	Non-Functional Requirement – NF
Use Case* – UC	Output Requirement – OR

* A way to capture user requirements

Business Requirements

Lee County is composed of what were three separate utilities: Lee County Utilities (LCU), Florida Cities Water Company (FCWC), and Gulf Environmental Services (GES). All three provided water and sewer services. Lee County and Florida Cities are already merged into a single file set contained in the library: LCFILES. Gulf Environmental Services is in a separate data set (LGFILES) on the same iSeries machine. The client is now prepared to merge GES data into the Lee County data set. The job will first involve merging the code and control files so that we have a setup that encompasses LCU and GES. As a part of the code and control file merge we must identify all areas of business process overlap. Then we will need to merge all of the GES master files into the LCU master files. Concurrent with those processes we will need to train the GES staff for any identified overlap changes. Finally, we need to review all GES custom code and custom files for compatibility with Lee County processes.

As an add on to the merge process we will review the current business processes so that we can identify any areas where the LCU Business Processes can be made more efficient for the merged entity.

User Requirements

Use Case 1: GES CSR Data Entry

Use Case Overview	Currently the Gulf Environmental Services CSR's have setups, which bring them into the GES environment (LGFILES). These setups will be modified, and the CSR's will be required to adapt their processes accordingly. Also, to the extent that the GES CSR's have become accustomed to a range of accounts, customers, premises, etc...these will be modified to start above the highest ones used by LCU.

Use Case 1: GES CSR Data Entry

Initiating Actor	GES CSR's
Supported Business Event	Daily logon, lookup and update by CSR's
Pre-condition(s)	Separate data sets for LCU (LCFILES) and GES (LGFILES).
Post-condition(s)	Merged into LCFILES.
Author	Lance Bloch
Last Revised Date	September 11, 2002
Revision History	

Use Case 2: Code File Maintenance

Use Case Overview	Code File Maintenance is accomplished by supervisors in LCU and GES.
Initiating Actor	Rosa Silcox
Supported Business Event	Control and Control (including security information) file updates.
Pre-condition(s)	Controlled separately
Post-condition(s)	Controlled by LCU only
Author	Lance Bloch
Last Revised Date	September 11, 2002
Revision History	

Use Case 3: Query

Use Case Overview	All user queries must be modified, and any new queries must point to the files in LCFILES.
Initiating Actor	CSR Supervisors
Supported Business Event	Ad Hoc database queries
Pre-condition(s)	GES queries point to the LGFILES library.
Post-condition(s)	GES queries point to the LCFILES library.
Author	Lance Bloch
Last Revised Date	9/12/2002

Use Case 3: Query

Revision History	

Functional Requirements

This section contains a numbered list of LCU)'s functional requirements, including issues related to system behavior, calculations, creations, additions, updates, and/or deletions made to the database. These functional requirements likely relate to system response steps in the above use case(s).

Table 1. Functional Requirements

Functional Requirement	Use Case #
1. All GES information will be merged into LCFILES, and removed from LGFILES after saving to tape.	1
2. All client setup information for GES will be checked for duplication, and merged into LCFILES.	2
3. All GES queries must be modified to point to LCFILES.	3
4. GES custom code and files must be reviewed for compatibility with LCU processes.	

Non-Functional Requirements

This section contains a numbered list of LCU)'s non-functional requirements.
1. GES staff must be trained for differences in their daily procedures. Lee County staff will perform this.

Output Requirements

This section contains a numbered list of LCU)'s output requirements.
1. Validation Reports
    a. There is a standard set of approximately 30 Conversion Validation Reports. These will be made available as part of the LCU- GES merge process.
    b. CISBAL will be run near the end of the merge process in order to balance the ledger and the deposits.

Output Layout – Validation Reports

The following is an example of the report layout, as it should appear when printed. This consists of just a few records from validation report CNVE02.

9/12/02   PAGE 2

OCLANCEB   CNVE02

COMPANY NAME LINE V5R1M9 PTF1

ECIS FILE EDIT - UACT

ACCOUNT #	VALUE	ERROR	FIELD/FILE	LEGACY #
3355	104610	LAST BILL DATE <>	UMLBD/UACT	105542104610000
	2002/06/01	LAST BILL DATE	UPLBD/UPRM	105542104610000
3356	114467	LAST BILL DATE <>	UMLBD/UACT	105542114467000
	2002/07/24	LAST BILL DATE	UPLBD/UPRM	105542114467000
3357	114860 2001/07/24	LAST BILL DATE <>	UMLBD/UACT	105542114860000

Assumptions

Assumptions are items that are assumed to be true; if they are found to be untrue, the scope of this modification might be impacted.

1. All duplication in information for which unique values are required in master files, will be resolved. One example of duplicate date which exists is in meter ID's. Some of the unique fields include Account Numbers, Customer Numbers, Premises Numbers, Meter ID's, transaction ID's, and Service Order Numbers.

2. Duplication in code files must be checked to see if the information for those codes is, in fact, identical. For instance, an identical rate schedule name may mean no new entry need be made in LCFILES if all the information, including the calculations, for the two rates schedules is identical.

3. All production queries are kept in standard libraries, and they can be easily identified. It is also assumed that GES will provide the personnel to change queries created by them.

4. All product and merge validation testing will be the responsibility of Lee County.

5. All training will be the responsibility of Lee County.

6. Rate Schedules, Meter Read Scheduling, Bill Cycle Scheduling, Calendar entries, and compatibility with ITRON devices will all have to be analyzed to determine if we have further setup complications.

7. GES will use the same General Ledger numbers and accounting processes and procedures after the merge. This does not include changing the ledger history however.

8. All processes for GES that are currently different from LCU processes will be modified to match LCU processes. This will include, but not be limited to, collections, bad debt, late charges, deposits, rates, and fixed charges. Any deviations from this will be discussed during the scoping phase of the merge.

9. Orcom and LCU will analyze all GES custom path setup in order to determine whether it will be included in the LCU custom path setup.

10. If the work described in SVI#92880 is to be done, it must be completed prior to the LCU – GES merge. (Purge of old dummy accounts)

11. If the work described in SVI#93126 is to be done, it must be completed prior to the LCU – GES merge. (Remove leading zeros from meter ID's)

12. If the work described in SVI#98290 is approved, it must be completed prior to the LCU – GES merge. (Purge of history)

13. If the work described in SVI#76451 is approved, it must be completed prior to the LCU – GES merge. (Custom Path changes)

Risks

Risks are items that are not expected to occur, but if they do, the project might be impacted.

1. Duplication of unique items is discovered in files not initially identified. An iterative process of merge validation to be performed after each trial merge will mitigate this risk.

Proposed Solution

The merge project is similar in scope to one of the three conversion projects that LCU has already completed. It will be staffed on the Orcom side with, at least, a project manager, a solution lead, and a technical lead (merge/conversion programmer). A testing lead, and a training lead may be required if LCU does not do their own testing and training.

During the scope phase we will need to determine the code files to be merged, and which ones will require duplicate entries to be deleted. We will determine which history files will be merged, and which ones will require duplicate fields to be modified prior to the merge. I have reviewed the master files, history files, and code and control files. I have included listings of these files with comments referring to special considerations in the Technical Details section of this document. There are a total of 44 master files, with 24 of them requiring special processing. There are a total of 33 history files, with 30 of them requiring special processing. The history files almost always have a transaction ID number in them, which must be modified during the merge. Of the 277 code and control files 99 will have to be reviewed. Their names are listed in the Technical Details section of this document.

The merge process will have all of the phases of the initial conversion process including Scope, Modeling, Training, Testing, Programming, Conversion, and Deploy (including Go-Live Support). The phases will, however, be abbreviated for the merge. As was implied above, the data merge, the automated phase, will, by itself, have two steps. The first will merge the code

and control files. This step is required for the validation of the second step, which is the merge of the master files and history files. LCU will perform the Training phase. The Testing phase will not include a system or regression test since the ECIS software will not be modified. However, merged data validation is required after each trial run of the merge software. Orcom and LCU will perform this testing jointly.

Work and batch files will not be merged, and pre-merge procedures will cover the posting of information from these files into the master and history files.

The data merge process will be a series of programs that sequentially read the files in LGFILES; check for duplicate data, which must be handled individually, and writing the other data to the corresponding files in LCFILES.

We are fortunate in that we have no overlapping Account Numbers, Customer Numbers, or Premises Numbers. As of this date (9/12/2002) we have 241 Meter ID's which are duplicates. This number can be handled manually. Virtually all of the Service Order numbers are duplicates, and starting on 8/30/2002 the GES transaction ID's started duplicating ones used in LCFILES. Transaction ID's are used on virtually all history records in order to combine the components of a single transaction such as a bill. We will have to generate new Service Order numbers, and Transaction ID's as we bring them over.

One example of duplicate date which exists is in meter ID's. These are identified by the following SQL request . . . . > 'select ucsrlc.ucprm, ucsrlc.ucmtr, ucsrlg.ucprm from ucsrlc inner join ucsrlg on ucsrlc.ucmtr = ucsrlg.ucmtr where ucsrlc.ucmtr <> '' '''
This SQL was run after first copying the UCSR file from LGFILES into a temporary file called "ucsrlg", and copying LCFILES/UCSR into ucsrlc. There are also duplicate meter ID's within the LCFILES dataset. Some of the unique fields include Account Numbers, Customer Numbers, Premises Numbers, Meter ID's, transaction ID's, and Service Order Numbers.

NOTE: For specific pricing information, please refer to the Request for Work (RFW) or Project Change Request (PCR).

Testing

This section details the test cases required to ensure that all requirements defined in the Modification Overview section have been met. Each test case is cross-referenced to the requirements associated with it, using the abbreviations listed under Requirement Types above.

The characteristics of a good test are that it:

- Has a reasonable probability of catching an error.
- Is not redundant.
- Is the best of its breed.
- Is neither too simple nor too complex.
- Makes program failures obvious.
- Has expected test results that can be clearly stated without ambiguity.
- Is traceable to requirements.

Unit/Integration Testing

Unit and integration testing should specifically exercise new code, and should include boundary and negative testing. Validation of data into and out of each component enables you to combine unit and integration testing. Boundary testing tests field values at their boundaries of valid and invalid values. Negative testing ensures that the code rejects data when it should, which is particularly important in front-end edit functionality.

It is an assumption of this project outline that all testing, including conversion validation will be performed by Lee County personnel. Therefore, no test plan is provided here.

Test Case 1

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		

Test Case 2

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		

Test Case 2

2.		

Test Case 3

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		

Regression Testing

The goal of regression testing is to ensure that the changes introduced did not 'regress' any existing functionality.

Test Case 1

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		

Test Case 2

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		

Test Case 3

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		

Test Case 3

2.		

Parallel Testing

A copy of production data should be used, and identical processes should be run in test and production environments. All variances should be reviewed and explained as criteria for successful completion of the test. Parallel testing is appropriate when the modification should not result in data variations, such as performance-related modifications.

Test Case 1

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		

Test Case 2

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		

Test Case 3

Objectives		
N/A		
Process Steps	**Expected Results**	**Pass/Fail**
1.		
2.		