EXHIBIT "D"
Schedule of Services

For the Project, Lucity agrees to perform various professional services related to implementation of the software programs listed in Exhibit "B".

Specific workflows to be addressed by the Asset, Inventory & Work Order System (in this Exhibit "D" referred to as the "System") are

- City-used facilities maintenance
- Public facilities and parks maintenance
- Roadside tree planting
- Roadside tree maintenance
- Street maintenance
- Traffic maintenance
- Bridge management
- General asset management
- Pavement management
- Pavement markings management
- Inventory management

Initial use of the System targets approximately

- 185 field employees
- 40 office employees
- 20,000 individual assets
- 10 inventory storerooms
- 40,000 annual work orders

Goals of the System are

- Reduce the cost of paperwork
- Expedite execution and recording of work orders
- Improve efficiency of scheduling
- Improve the accuracy of tasks
- Track metrics for process improvement
- Track job costs for budgeting, job estimation and capital planning
- Track asset costs to inform repair/replace decisions
- Standardize processes

If the System proves successful, the System may be expanded to include additional employees and workflows.

A list of those Lucity software solutions proposed for the System, and additional solutions that may be appropriate for future expansion of the System, is provided as Exhibit D.1. We recommend the City goes into production with the current Lucity software Version release at the time of "Go Live".

A. IMPLEMENTATION PLAN

A.1 Project Kickoff

We will facilitate a Workshop with key Project Team members to review the Implementation Plan and discuss

- Specifics of the Plan's tasks, timeline, milestones and deliverables

- Methods used for communications and reporting, progress tracking and invoicing, resource management, change management and risk management throughout the project
- Details of the technical specifications for all software and hardware to be utilized with the System

A.2 Installation

Installation components of the Lucity software will be downloaded by the City directly from the Lucity Clients Portal Web site. Once downloaded, we will assist the City's assigned System Administrator with installing the System application components. Installation efforts will include

- Establishment of multiple environments for testing, production, and backup and recovery
- Definition of a core set of end-user accounts with initial security roles
- Configuration of integration with the City's Windows Active Directory
- System-level testing to ensure satisfactory performance, and (if necessary) performance tuning actions

Documentation that will be provided with the software (in electronic formats allowing reproduction by the City) as deliverables upon installation includes

- On-line Help system
- Administration Manuals, User Manuals and Training Guides with tutorial videos
- Installation Help Guide and Security Help Guide
- Version Release Notes, Installation Quick Guides and Upgrade Checklists
- Data dictionaries with descriptions of table/field attributes and relationship diagrams

A.3 Configuration

We will facilitate an initial Workshop to assist the City in developing criteria for configuration of the System to support specific workflows and achieve specific goals. Topics of discussion will include

- Business drivers and rules
- Best Management Practices (BMPs)
- Processes and workflows
- Data and associated requirements
- Reporting requirements
- Key Performance Indicators (KPIs)

Our subsequent configuration efforts will focus on

- Creating and applying parameters used by the Work Flow Setup module of the Work Administrator solution for management of service requests and work orders
- Creating and applying PM schedules to be managed with the PM/Work Template module of Work Administrator
- Creating and applying Dashboards (based on various end-user roles), menus, grids and forms to be managed by the software's inherent UI Administrator application for use by the System's various Web components
- Including any required custom report templates (*note* – these can be developed by us, the City or a third-party)
- Linking electronic documents to System records using the software's inherent Document Control feature

- Applying settings for field properties for the various System Web and Desktop components
- Applying group and individual Security permissions managed by UI Administration based on end-user System access and use requirements

After the initial configuration efforts are complete, we will facilitate follow-up Workshops to provide the City presentations of the configured System iterations to determine if any revisions are necessary.

A.4 Integration

311

The City desires integration of their existing 311 application to the System such that:

- Issuance of applicable customer service requests within 311 will trigger creation of work requests within Lucity Requests. These requests will be those that apply to operations of the Department of Public Service, Department of Recreation & Parks, and Facilities Maintenance Division of the Department of Finance & Management.
- Information for applicable requests that will be "pushed" from 311 to the System includes (but is not limited to):
  - Contact name
  - Address
  - Phone number(s)
  - Email address(es)
  - Data
  - Problem code/description
  - Comments
  - 311 Request number/ID (used to link records)
- Status changes to work requests within Lucity Requests will be pushed back to corresponding customer service requests within 311.

We understanding the 311 application supports a web service interface. We will utilize this interface with the Lucity Integration API product to integrate the two systems. The 311 interface product and code will be provided as a deliverable to the City.

Lucity will develop a design document based on collaboration with the City to identify the specific System/311 integration needs (specifications for applicable requests, field mapping, default values, etc.). The City will be responsible for providing technical assistance as it relates to the design and interface protocols to the 311 application. Having this information documented prior to the start of development is preferred.

The installation, acceptance and testing of the integration will be a shared responsibility of the City and Lucity. The City will be responsible for establishing the proper test environment with assistance from Lucity. The integration will be supported and maintained by Lucity as part of the Annual Support & Maintenance (ASM) Program described in Exhibit "C".

Esri ArcGIS

The System/GIS integration is provided with the Lucity GIS Desktop and GIS Web solutions. We will configure this integration as described below.

With the Lucity GIS Desktop solution,

- The Geodatabase Configuration application (extension in ArcCatalog) is used to configure the System to link directly to the asset feature classes currently managed within the City's GIS
  - This configuration allows attribute field mapping from the feature classes to the associated Lucity asset tables. The City can determine which GIS attributes to share with the System, and which to maintain solely in the GIS.
- The Force Synchronization application (extension in ArcMap) is used to incorporate GIS data (attribute and spatial information for assets, street names, etc.) into the System
  - Synchronization of GIS and System data is made when add/edit processes are saved (in either the GIS or the System). Upon saving a GIS edit session, the synchronization automatically (with no user intervention required) updates the System with edited data. Upon saving edits in the System, updates are automatically "pushed" to the GIS.
- Valid and appropriate data from the GIS is "loaded" into the System, map-related query and display functions to be supported by the System are configured, and the integration is refined as needed

With the Lucity GIS Web solution,

- ArcServer services (map, geometry and geocode) published using standard Esri tools (primarily ArcMap) are consumed to display a Web-based map for System users. The MetaData Server Object extension is enabled on certain map services to allow the System to query field and table name information. Once the map services are created and configured, the City can author maps in the UI Administrator application by selecting one or more of these published services.
- The System can push edits to the geodatabase. This functionality requires a map service to be authored containing the feature classes to be updated. The Geodatabase Update service object extension must be enabled for this map service. The City can use the UI Administrator application to configure the URL to the map service that handles updates to the geodatabase, and configure settings to handle situations when the map service cannot be reached or the update fails.

A.5 Data Migration

Valid and appropriate data currently available that will be migrated from existing sources to the System include:

- Public Service
  - Bridge inventory (Microsoft Access)
  - Traffic Maintenance Operations inventory (Microsoft Access)
  - Pavement management data (IMS)
  - Traffic signals inventory (Microsoft Access)
- Facilities Management (assume ASCII file format)
  - Lists of facilities, related equipment and parts
- Recreation & Parks
  - Lists of facilities, related equipment and parts (MicroMain)
  - Lists of parks and related assets (MicroMain)
  - Information for work orders with "open" status (MicroMain)
  - Roadside tree planting information (Microsoft Access)
  - Roadside tree maintenance information (Microsoft Access)

The City will be responsible for providing Lucity source data, and reviewing and accepting migrated data. Lucity will be responsible for developing field mapping between source and target tables, converting and migrating data into the System, and documenting the completed Data Migration efforts.

A.6 Training

We will provide a Training Plan detailing hands-on efforts that are "customized" as appropriate given the specifics of the City's implemented System – solutions, configuration, data, reports and integration. The goals of training are

- End-users are confident in their specific day-to-day use of the System, readily accept change associated with improved processes and workflows, and effectively distribute information through meaningful reporting
- The System Administrator is reasonably self-sufficient in applying system upgrades, adding end-users and assigning security permissions, making modifications to the System configuration and GIS integration, and exchanging data as needed in the future

The Training Plan, to be approved by the City, will detail

- How the City's end-users are to be segregated into various "User Groups" that share similar needs regarding System access and use
- Specific content of on-site training sessions for the User Groups, which will be provided in a "classroom-style" with end-users having access to workstations
- How specialized attention during end-user training will be applied to "Power Users"
    - The role we anticipate for these Power Users are to be "resident experts" among each User Group that other end-users can seek out for assistance. The Power Users will participate in supplemental remote sessions convened between on-site sessions to review previously presented material, and preview upcoming material.

A.7 Go-Live Support

We will be on-site to provide the City any needed assistance with the "Go-Live" effort (i.e., transition of the System from the Test Environment to the Production Environment).

B. PROJECT SCHEDULE

A timeline of twelve (12) months onto which the sequencing and duration of the various Implementation Plan tasks is provided as Exhibit D.2.

C. IMPLEMENTATION COSTS

Exhibit D.3 provides a summary of the various proposed Implementation Plan tasks, their respective levels of effort, and costs (labor, estimated expenses and total).

The standard rates used for implementation cost calculations are

- Labor
    - For Lucity (per person), $1,500.00 per on-site day and $100.00 per remote hour
    - For Stantec (per person), $1,000.00 per on-site day and $100.00 per remote hour

- Expenses
  - For Lucity (per person), $450.00 per on-site trip and $250.00 per on-site day
  - For Stantec (per person), $50.00 per on-site day

D. ALLOCATION OF RESOURCES

An estimate of the allocation of key resources throughout the project is provided as Exhibit D.4.

EXHIBIT "D"
Schedule of Services

EXHIBIT D.1 – Software Solutions

Workflow	Lucity Solutions	
Proposed		
City-used facilities	Facilities	
Public facilities and parks	Equipment	
	Parks	
Roadside trees	Trees	
Streets	Streets	Requests
Traffic control	Signs	Work Orders
	Signals	Work Administrator
	Street Lights	GIS Desktop
Bridges	Bridges	GIS Web
General assets	Equipment	
	Rights-of-Way	
Pavement management	Pavement Analysis	
Pavement markings	Rights-of-Way	
Inventory management	Inventory Control	
	Mobile Bar Coding	
Mobile	Mobile Desktop	
	Mobile Work Orders	
311 Integration	Integration API	
Additional for Expansion		
Refuse collection	Refuse & Recycling	
Utilities	Water	
	Sewer	
	Storm	
	Electric	
Fleet management	Fleet	
Traffic analysis	Traffic Analysis	
Interfaces	Sewer CCTV	
	Storm CCTV	
	Fleet Fueling	
	Equipment SCADA	

EXHIBIT "D"
Schedule of Services

EXHIBIT D.2 – Project Completion Schedule

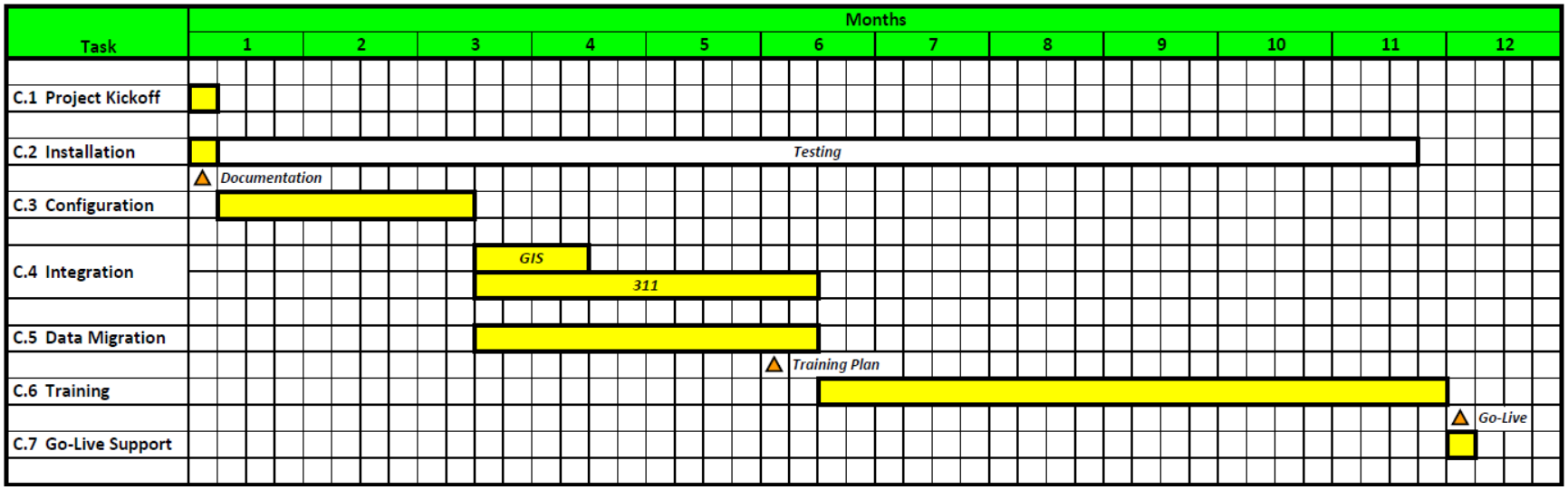

EXHIBIT D.3 – Implementation Costs

Task	Level of Effort			Cost		
	On-site Person-Days	Remote Hours	Lump Sum	Labor[1]	Expenses[2]	Total
C.1 Project Kickoff	6	16		$11,040.00	$2,000.00	$13,040.00
C.2 Installation	1	8		$2,645.00	$250.00	$2,895.00
C.3 Configuration	13	96		$31,740.00	$4,450.00	$36,190.00
C.4 Integration			$30,000.00	$34,500.00	$0.00	$34,500.00
C.5 Data Migration			$25,000.00	$28,750.00	$0.00	$28,750.00
C.6 Training	32	112		$63,480.00	$10,000.00	$73,480.00
C.7 Go-Live Support	3	16		$6,440.00	$1,000.00	$7,440.00
TOTALS	**55**	**248**	**$55,000.00**	**$178,595.00**	**$17,700.00**	**$196,295.00**

Notes

[1]Labor rates are $1,500 per on-site day for Lucity personnel, $1,000 per on-site day for Stantec personnel, and $100.00 per remote hour. An additional fifteen percent (15%) is applied to labor costs to cover project management and contract administration efforts.

[2]Expense estimates are $450.00 per on-site trip and $250.00 per on-site day for Lucity personnel,and $50.00 per on-site day for Stantec personnel.

EXHIBIT D.4 – Resource Allocation

Task		Lucity		City (hours)		
		Hours	Lump Sum	Project Manager	System Administrator	Application Administrator (each)*
Project Management & Contract Administration		232		160		
C.1	Project Kickoff	64		16	4	16
C.2	Installation	16			16	
C.3	Configuration	200		24	8	80
C.4	Integration		$30,000.00	16	40	
C.5	Data Migration		$25,000.00	16		24
C.6	Training	368		64	16	128
C.7	Go-Live Support	40			8	24
TOTALS		**920**	**$55,000.00**	**296**	**92**	**272**

Note

*Assume an Application Administrator for each Department/Division - Public Service, Facilities, and Recreation & Parks.