

## PHASE 1 PROJECT APPROACH

Phase 1 is the documenting and operational and financial analysis of the City's current waste management system. The analysis will include our initial evaluation in a technical memorandum. The technical memorandum will provide the City the ability to determine the next steps in Phase 2 of the project.

### Task 1: Data Request and Background Review

The Project Team is requesting is request the following documents in electronic format:

1. Detailed customer data with billing information by level of service
2. Schedule of residential and commercial collection routes
3. Daily route sheets in electronic format (Excel / CSV / database)
4. Collection route map(s) / City map with street details
5. Billing reports necessary to identify customer counts by line of business
6. Current year budget for collection operations
7. Year-end general ledgers for the last two years with line item detail by account
8. Collection rate schedules
9. Year to date (fiscal year) billing register for 2016 and the last billed month in 2016
10. Organizational chart
11. Schedule of all disposal invoices for solid waste (electronic format)
12. Schedules of all assets assigned to the Solid Waste Division
13. Daily collection truck hours by truck / route for the last three months from the on-board GPS system
14. Demographic forecasting data used by the City for planning purposes
15. Camas City Ordinance for solid waste
16. Contracts with Waste Connections for collection / annexation

During the project, other items or issues may come to our attention that will require additional supporting documentation. We will make those requests as soon as possible in order to not disrupt the daily operations of City staff.

### Task 2: Data Analysis of Information / Desktop Review of Collection Routes

Route information from daily route sheets and the GPS system will be consolidated into data sets, by route, to establish daily workloads, collection productivity, route balances, average set-out weights, productive route time, and route costs (cost per hour / cost per route).

### Task 3: Kick-off Meeting / Staff Interviews / Route Evaluations

Once we have received and reviewed requested data from Tasks 1 and 2, we will schedule a series of meetings with City staff. The kick-off meeting will serve as a mechanism to discuss preliminary findings of our research, inventory existing information, continue the data collection process, and identify project issues, goals, roles and responsibilities. We will conduct field observations and tour the City facilities. Interviews will be conducted with the City's Solid Waste Department management and operations staff to provide additional background information.

Gary Lima will accompany route drivers over a four day period (Tuesday to Friday) to document operational factors including, but not limited to the following: refuse collection methods; collection frequency; collection equipment type and condition; refuse container variations; number, size, and pattern of routes; collection time per route; collection time per refuse service “stop” or pick-up in residential and commercial sectors; and work assignments.

Chris Bell and Gary Lima will complete field research to document operational factors to include the following: refuse collection methods; recycling programs; collection equipment type and condition; transfer system, and disposal operations. The objective of the on-site field work is to document the system, solicit input from City staff, follow up on questions raised during the first two tasks, and to continue the collection of information.

As part of the kick-off meetings, the Project Team will identify primary contacts for both our Project Team and the staff and establish protocols for the exchange of information and the resolution of issues that may arise in the course of this engagement.

#### **Task 4: Draft System Overview Technical Memorandum Operational Assessment /**

Information obtained from the first three tasks will be compiled into a Technical Memorandum of the City's current system and services. The memorandum will be comprised on the following sections:

1. Document the City's current waste management system
2. Provide an evaluation of the collection routes
3. Calculate the costs of providing collection services
4. Highlight areas of strength, weakness, opportunities, and concern

The results of the route analysis and evaluations will be the basis for any recommend changes to increase collection productivity and decrease collection costs. The following operational aspects to be reviewed include the following, but not limited to:

- Overlapping and or fragmented routes
- Coordination with Waste Connections recycling collection operations
- Equalized workloads with consistent customer count / collection time for each collection day
- Route break-off points for disposal
- Avoidance of high traffic areas / working around the rush hours

#### **Task 5: Submit Draft Technical Memorandum / Follow up with City Staff**

The initial draft report will be prepared for the City staff's review and input with the second draft submitted to City officials and interested stakeholders.

#### **Task 6: Finalize Technical Memorandum**

If changes to the proposed draft memorandum are necessary or requested, then the report will be updated and a final will be submitted.

**PHASE 1 BUDGET / SCHEDULE**

Task No.	Task Description	Hours	Total Cost
Task 1	Data Request / Background Review	20	\$2,620
Task 2	Data Analysis / Desktop Review	40	\$5,240
Task 3	Kick-off Meeting / Route Evaluations	64	\$8,240
Task 4	Draft Technical Memorandum	36	\$4,800
Task 5	Submit Technical Memo / Follow ups	16	\$2,120
Task 6	Finalize Memorandum	8	\$1,060
	Total Hours and Cost	184	\$24,080
	Travel Expenses (Gary Lima, 5 days on-site)		\$1,855
	<b>Project Totals</b>	<b>184</b>	<b>\$25,935</b>

The fees for Phase 1 of the project are based on the estimated time to complete. This proposed fee is a not to exceed fee based on the outlined work program. If the project can be completed in less than our estimates, then Bell & Associates will invoice accordingly. If we find it will take considerably more time, due to a change in scope, we will discuss any changes with City staff and will not proceed without prior written authorization. Fees for the project are estimated at \$24,080 (184 hours x a blended rate of \$131 per hour) plus \$1,855 of travel expenses for Gary Lima.