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CALIFORNIA



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WASTEWATER ENGINEERING SERVICES DIV.
2714 MEDIA CENTER DRIVE
LOS ANGELES, CA 90065
FAX: (323) 342-6210

June 9, 2016

ELECTRONIC MAIL

To: 25 Pre-Qualified On-Call Contract Consultants of LA Sanitation

LA SANITATION ON-CALL CONSULTANT SERVICES CONTRACT ISSUANCE OF TOS SN-64 – RESIDENTIAL FOOD SCRAP IN-SINK DISPOSAL PILOT PROGRAM

LA Sanitation (LASAN) is soliciting responses from 25 Prime Consultants on Pre-Qualified On-Call List. Attached are details of the Task Order Solicitation (TOS) required services.

A pre-proposal meeting for this TOS will be held on:

Date and Time: Thursday, June 16, 2016, from 1:00 P.M. to 2:00 P.M.
Location: 1149 South Broadway, Los Angeles, CA 90015.
5th Floor, Executive Conference Room

All questions regarding this TOS must be submitted in writing via e-mail to Ms. Rowena Romano and her staff, Ms. Mai Bushara, before or at the meeting.

For the security clearance at the Public Works Building, please e-mail Ms. Mai Bushara the names of your representatives and subcontractors, who will be attending the meeting, and the company's name by Wednesday, June 15, 2016. (Please note that inviting your subcontractors to the meeting is optional.)

The deadline for proposal submittal is Thursday, July 14, 2016, before 2:00 P.M. If your firm is interested in this TOS, please submit proposal via e-mail on the indicated due date to the following LASAN's staff:

- Rowena Romano, rowena.romano@lacity.org
- Mai Bushara, mai.bushara@lacity.org
- Thu-Van Ho, Thu-Van.Ho@lacity.org

Thank you for your interest and we look forward to receiving your response to this TOS.

\\82MTCFS1\ Div Files\On-Call Contracts\New Oncall 2014-19\ TOS SN-64_Food Scrap In-Sink Disposal Pilot \INITIATION

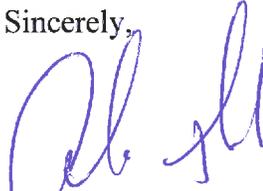
zero waste • one water

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

Recyclable and made from recycled waste



Sincerely,



Ali Poosti, Division Manager
Wastewater Engineering Services Division
LA Sanitation

AP:tvh

c: Ali Poosti, WESD
Abdul Danishwar, WESD
Scott Hare, WESD
Thu-Van Ho, WESD
Robert Potter, SRSSD
Rowena Romano, SRSSD
Mai Bushara, SRSSD

City of Los Angeles
Department of Public Works
Bureau of Sanitation (LASAN)
On-call Consultant Services Contract

Task Order Solicitation (TOS) SN-64
for
Residential Food Scrap In-sink Disposal Pilot Program

June 2016

1. Introduction

The City of Los Angeles' Solid Waste Integrated Resources Plan – A Zero Waste Master Plan, outlines the City's long-term plan for achieving zero waste by 2025. In addition, the Mayor's 2015 Sustainable City pLAN, calls for the execution and expansion of programs to increase landfill diversion and recycling. The City's current landfill diversion rate is 76.4%. According to CalRecycle's 2014 Disposal-Facility-Based Characterization of Solid Waste in California, food waste makes up approximately 21% of the waste stream generated by the residential sector. Therefore, to increase landfill diversion, LA Sanitation (LASAN) is proposing a residential food scrap in-sink disposal pilot program. This pilot will utilize residential food waste disposers (FWD) to divert food waste through the conveyance system to Hyperion Water Reclamation Plant (HWRP); the results will be used to determine whether the pilot should be expanded or implemented City-wide.

The program will be planned, implemented, and evaluated on a pilot scale initially. The objectives of this program are as follows:

- 1) Determine the level of residential participation in program.
- 2) Educate residents on benefits of program and food scrap recycling.
- 3) Increase the diversion rate of food waste.
- 4) Model the existing wastewater infrastructure to manage, convey, and process food scrap.
- 5) Determine the impacts of the program on participants, existing solid waste and/or wastewater collection and operation, as well as treatment systems.

The environmental, economical, and operational challenges and benefits of the program on the existing residential solid waste collection system (i.e., three-bin program), the conveyance system (i.e., sewer system), and HWRP will need to be assessed and evaluated. The study will include, but not be limited to conducting the following: resident behavioral surveys, food waste disposer needs assessment, installation of food waste disposers at City's discretion, community outreach, black-bin waste characterization, closed-circuit television video (CCTV) surveys, assessment of impacts on conveyance system, conveyance system wastewater sampling and characterization, bench-scale laboratory testing for food waste degradation and biogas production, conveyance system modeling, and water reclamation modeling.

The pilot program is expected to be implemented in 2016 and conducted in three phases consisting of a Pre-Implementation phase (3 months duration with an option to extend for an

additional 3 months at City's discretion), Implementation phase (12 month duration with an option to extend for an additional 12 months at City's discretion), and Post-Implementation phase (3 months duration).

2. Scope of Services

LASAN is soliciting proposals from qualified consultant firms to plan, implement, and evaluate the residential food scrap in-sink disposal pilot program. Consultants must demonstrate a high degree of operational and technical expertise and abilities in the field of solid waste and wastewater, and provide cost effective services. The following provides further details regarding the tasks to be performed for this pilot program:

Task 1: Provide program management oversight of scope, budget, and schedule.

Deliverables:

- Provide overall program management and coordination.
 - As needed coordination, conference calls and/or meetings, with City staff to plan and track progress, execute program schedule, budget, and deliverables.
 - Daily monitoring of team performance.
 - Timely submittal of monthly status reports, accurate invoices and supporting information.
- Provide program Implementation and Evaluation Plans:
 - Provide clear process objectives and outcomes of each plan.
 - Provide a detailed Resource Management Plan (e.g., list of employees with applicable skill set: what will be done, by whom, where, and when, information technology resources, modeling software, etc.).
 - Provide a detailed Communications Plan (e.g., process to ensure that information is effectively communicated between parties such as the City, residents, how the results will be presented and for what purpose, etc.).
 - Provide a detailed Data Management Plan (e.g., process for tracking various data related to the program, data to be collected for program monitoring, and compliance, etc.).
 - Provide a detailed Quality assurance/Quality control (QA/QC) Plan (e.g., process to ensure organized manner of conducting work, feedback, corrective action for the various tasks, etc.).
 - Provide a detailed schedule to include but not be limited to costs, milestones, meetings, and workshops. Schedule should reflect activities for Pre-Implementation, Implementation, and Post-Implementation phases.
 - Provide a detailed cost estimate to include but not be limited to the number of personnel, labor hours, and equipment.
 - Provide a list of key and progress meetings and workshops.
 - Provide a template for progress reports, meetings, and invoices.

Task 2: Provide a demographics report and informational maps of pilot area during the pre-implementation phase.

Deliverables:

- Provide maps of pilot area indicating boundaries, number of homes, and black-bin collection routes.
- Provide address list of homes in pilot areas indicating dwelling type, and occupancy.
- Provide a demographics report of pilot area using latest US census data.

Note: *Pre-selected Pilot Area (Figure 1):* The Westchester neighborhood community, located north of Los Angeles International Airport, in Playa Vista (West Los Angeles), currently houses approximately 40,000 residents. The area selected by LASAN for this pilot includes an area of approximately 519 residents as follows:

- Zone One – 183 homes on Henefer Avenue and Firebrand Street
- Zone Two – 84 homes on Nancy Street and McCool Avenue
- Zone Three – 118 homes on Nancy Street and Ogelsby Avenue
- Zone Four – 134 homes on Dunfield Avenue and Alverstone Avenue

Task 3: Provide community outreach during all three phases of the program in order to enlist participants, educate the community on the objectives, and report progress and results of the program. The ambassador program (based on availability) and non-governmental organizations are to be utilized for outreach activities.

Deliverables:

- Provide a detailed outreach plan.
- Provide an introductory letter, to be mailed to all participants during the pre-Implementation phase.
- Provide baseline assessment of solid waste disposal habits within pilot area through a participant behavioral survey. Assessment should be completed within the pre-Implementation phase. Assessment shall include but not be limited to quantitatively determining the following:
 - Number of residents who currently use FWD.
 - Number of residents who dispose of food waste in black-bin.
 - Number of residents who use backyard composting for food waste.
- Provide additional participant behavioral survey analyses every three to six months to evaluate pilot program and the need for additional outreach.
- Conduct outreach events during the pre-implementation, implementation, and post-implementation phases.
- Provide outreach materials to all participants in pilot area. Such material to include but not be limited to flyers, how-to-use brochure, and postcards that encourage participation in pilot program.

Task 4: Deploy and install food waste disposers during the Pre-Implementation phase of the program.

Deliverables:

- Provide recommendation for the type of food waste disposer to be purchased and installed. Food waste disposer should be capable of processing everyday food scraps, vegetable peels, fibrous materials (e.g., celery, corn husks, and artichokes), and hard materials (e.g., bones, and fruit pits).
- Provide a list of homes that will require installation of recommended food waste disposer (note: some homes may already have recommended food waste disposer), and an installation plan.
- Purchase, remove, and/or install food waste disposers including electrical and plumbing work, where applicable.
- Provide how-to-use brochure to be distributed with food waste disposers.
- Provide education on proper use of the food waste disposer and answer any questions regarding disposer and/or pilot program during installation.
- Provide additional as needed plumbing service for pilot program participants in the event that plumbing work in home and/or lateral conveyance lines is needed due to use of food waste disposers. This should be a contract between consultant/plumbing contractor and home owner with the objective of limiting the City's liability. Any and all additional plumbing work is to be pre-approved by the City.

Task 5: Conduct residential black-bin (i.e., household refuse) waste characterizations for the selected pilot area in order to determine the amount of food scrap material disposed in the landfill. A waste characterization shall be conducted once during the Pre-Implementation phase, and every six months during the Implementation phase.

Deliverables:

- Provide a waste characterization plan for the residential black-bin materials, including but not limited to waste characterization procedures, safety plans, and location of characterization, frequency, and sample size.
- Conduct one (1) waste characterization during the Pre-Implementation phase to establish baseline values.
- Conduct two (2) waste characterizations during the implementation phase, preferably at six (6) months and twelve (12) months.
- Provide two (2) additional waste characterizations if implementation extends beyond initial twelve (12) months.
- Provide a report on each black-bin waste characterization study conducted. Report shall include, but not be limited to, the following:
 - Quantity of sample (e.g., tons, number of households, etc.)
 - Date, time, and location of sample
 - Data Collection: weight-based and percentage of each type of waste characterized, including but not limited to the following categories:

- Food scraps
- Packaged foods (e.g., bag of potato chips, canned beans, etc.)
- Food-soiled paper
- Plastic
- Metal
- Glass
- Paper
- Electronics
- Yard Trimmings
- Wood/lumber
- Others
- Analyze data to determine quantity of food scrap diversion, recommendations, and conclusions.
- Provide pictures of waste characterization events, and type of waste found.
- Provide a final waste characterization report discussing all data collection, data analysis, interpretation, recommendations, and conclusions.

Task 6 [OPTIONAL]: Conduct CCTV survey analyses of the main sewer line(s) within the pilot area.

Deliverables:

- Provide a plan to conduct a complete CCTV survey analysis of the main sewer line(s) within the pilot area approximately every six (6) months.
- Conduct CCTV Surveys and analysis during the Pre-Implementation, Implementation, and Post-Implementation phases.
- Provide two (2) additional CCTV survey analyses if implementation extends beyond initial twelve (12) months.
- Provide a report for each CCTV survey conducted. Report on the characterization of sewer line(s) condition and contents including but not limited to:
 - Structural condition and integrity
 - Inflow characterization (i.e., continuous flow, and any locations that show still wastewater)
 - Root intrusion
 - Fats, Oils and Grease (FOG)
 - Debris
 - Corrosion
- Provide a final CCTV report discussing all data collection, data analysis, interpretation, recommendations, and conclusions.

Task 7: Conduct physical and chemical characterization of wastewater samples collected from designated sewer maintenance holes. Composite wastewater samples will be collected based on time and flow rate in order to measure head height and organic loading.

Deliverables:

- Provide wastewater testing plan, including but not limited to wastewater characterization procedures, safety plan, sampling frequency, sample sizes and location where tests will be conducted.
 - Wastewater samples to be collected using In-Situ Chemical Oxidation (ISCO) samplers placed at the following maintenance holes: 56012033, 56012016, 56012002, and 56011013 (See Figure 1).
 - Wastewater samples should be a composite 24-hour sample.
 - Wastewater samples to be collected at a frequency of every three (3) months from the start of the pre-implementation phase to the end of the implementation phase.
 - Wastewater samples should be sampled for the following characteristics:
 - Volatile Solids (VS)
 - Volatile suspended solids (VSS)
 - Total Solids (TS)
 - Total Suspended Solids (TSS)
 - Biochemical oxygen demand (BOD₅)
 - Soluble biochemical oxygen demand (sBOD₅)
 - Chemical oxygen demand (COD)
 - Soluble chemical oxygen demand (sCOD)
 - Carbohydrates
 - Proteins
 - Ash/inert
 - Volatile fatty acids
 - pH (measured before refrigeration)
 - Total alkalinity (measured before refrigeration)
 - Macro-nutrients (nitrogen (Ammonia nitrogen (NH₃) and Kjeldahl nitrogen), phosphorous, total sulfides, dissolved sulfide, and sulfate)
 - Total energy content
 - Fat Oil and Grease (FOG; settle ability tests to be conducted)
 - Samples are not to be refrigerated for more than two weeks.
- Provide a report on each test conducted including but not be limited to the following:
 - Wastewater characteristics
 - Hydraulic loading rate (gallons per minute) in conveyance system
 - Retention time in conveyance system

Task 8: Conduct a bench-scale laboratory test during pre-implementation phase to assess the transformation rates of food waste within the conveyance system, determine biochemical methane potential, and assess any impacts of influent wastewater characteristics at HWRP.

Deliverables:

- Provide a plan to conduct a bench scale laboratory test to predict transformation rates of food wastes, assess any impacts of food waste on conveyance system, and influent wastewater characteristics to HWRP.
- Conduct the lab scale tests. Test may consist of a minimum of four food scrap loading rates (i.e., food scrap to wastewater ratio), and one control, that mimic the pilot area conveyance system.
 - For accuracy, tests are to be triplicated and shall include the following:
 - One typical food scrap loading rate.
 - Three other food scrap loading rates.
 - One control sample of wastewater-only collected from maintenance holes within pilot area.
 - Representative temperatures of seasonal changes.
 - Representative biofilm scraping from maintenance hole where wastewater sample is collected.
 - Laboratory tests should be conducted under the following conditions:
 - Temperature-controlled environment
 - Nitrogen flushed to remove all oxygen
 - Hermetically sealed in order to avoid any contamination to the sample
 - Chemical and physical transformations sampled at 0, 4, 8, 16, and 24-hour and daily thereafter until biogas production is negligible
 - Off-gas sample analysis to include but not be limited to the following parameters:
 - Gas volume production
 - Gas pressure
 - Percent methane
 - Percent carbon dioxide
 - Percent oxygen
 - Percent hydrogen sulfide
 - Energy content of biogas
 - Samples shall be individually analyzed for the following liquid parameters:
 - Volatile solids (VS)
 - Volatile suspended solids (VSS)
 - Total solids (TS)
 - Total suspended solids (TSS)
 - Biochemical oxygen demand (BOD₅)
 - Soluble biochemical oxygen demand (sBOD₅)
 - Chemical oxygen demand (COD)

- Soluble chemical oxygen demand (sCOD)
- Carbohydrates
- Proteins
- Ash/inert
- Volatile fatty acids
- pH (measured before refrigeration)
- Total alkalinity (measured before refrigeration)
- Macro-nutrients (nitrogen (Ammonia nitrogen (NH₃) and Kjeldahl nitrogen), phosphorous, total sulfides, dissolved sulfide, and sulfate)
- Total energy content
- Fat Oil and Grease (FOG; settle ability tests to be conducted)
- Provide degradation kinetic constants based on the experimental data above.
- Provide a report on the data collected and results of transformation rates of food waste and its impact within the conveyance system, and influent wastewater characteristics at HWRP.

Task 9: Provide a water reclamation model to determine the impact of implementing a residential food scrap in-sink disposal program on a City wide basis on all LASAN wastewater reclamation plant operations, including, but not limited to, the primary influent characteristics, settling ability, and primary sludge characteristics.

Deliverables:

- Provide a plan to conduct a comprehensive model representative of HWRP to determine the effects of the project on operations.
- Model should include baseline chemical additions through various processes and model increase in chemical addition, and other operational variations.
- Influent wastewater characteristics may be assessed from the laboratory testing (Task 8) and conveyance modeling (to be provided by LASAN).
- Provide report on impact of food scrap loading on HWRP operations including but not limited to the following:
 - Headworks
 - Screening
 - Desilting
 - Primary sludge
 - Primary influent
 - Secondary sludge
 - Secondary influent
 - Digester gas production
 - Digester sludge
 - Dewatered cake
 - Dewatering sidestream characterization
 - Final effluent quality
 - Gas production from anaerobic digesters
 - Increased oxygen demand to secondary treatment

- Energy impact analysis to estimate the net energy impact on each unit process stated above
- Run the model with outputs from wastewater characterization (Task 7), food waste transformation rate (Task 8), and the conveyance system modeling (to be provided by LASAN) in order to determine impact of food scrap loading to the process and operation of HWRP.
- Provide a report on the impact of the program on the operations at each wastewater reclamation plant, including but not limited to the primary sludge, primary effluent, secondary sludge, digester gas production, digested sludge, dewatered cake, dewatering sidestream characteristics, and final effluent quality.

Task 10: Provide progress reports and an inclusive final report, including but not limited to the following deliverables.

Deliverables:

- Progress reports at each quarter shall include, when appropriate, but not be limited to the following:
 - Project progress overview (i.e., schedule and budget)
 - Behavioral Survey analyses and outreach
 - Homes with updated and/or installed FWDs
 - Waste characterization analysis
 - CCTV survey analysis
 - Wastewater characterization analysis
 - Laboratory testing analysis
 - Water reclamation modeling analysis
- Final Report shall be comprehensive of all tasks, and include but not be limited to the following:
 - Final project schedule and budget
 - Behavioral Survey analyses and outreach
 - Homes with updated and/or installed FWDs
 - Waste characterization analysis
 - CCTV survey analysis
 - Wastewater characterization analysis
 - Laboratory testing analysis
 - Conveyance modeling analysis
 - Water reclamation modeling analysis

3. Term of Engagement

The term of engagement is eighteen (18) months, with the option to extend for an additional twelve (12) months, from the issuance date of NTP. It is estimated that the cost ceiling for this TOS is approximately \$2,000,000.

4. Solicitation Schedule (Tentative)

- Issue Task Order SolicitationDate of Cover Letter.
- Receive Solicitation Responses.....As indicated in Cover Letter.
- Conduct Interviews if necessary.....5 weeks after issuance of TOS.
- Select and Negotiate.....7 weeks after issuance of TOS.
- Issue Task Work Order.....9 weeks after issuance of TOS.

5. Solicitation Response Requirements

Solicitation Responses shall not exceed twenty (20) pages, exclusive of cover, dividers and resumes. Solicitation Responses shall be submitted to the following Bureau’s staff via e-mail, no later than 2:00 pm of proposal due date indicated in cover letter:

- Rowena Romano, rowena.romano@lacity.org
- Mai Bushara, mai.bushara@lacity.org
- Thu-Van Ho, thu-van.ho@lacity.org

Solicitation Responses shall include:

- Resume demonstrating that the candidate is capable of meeting the requirements of the Scope of Work. Resume shall include work experience history with dates, and references from past employers, owners, and/or organizations.
- Provide a proposed individual cost breakdown by tasks.
- Provide a breakdown of estimated time for completion of task.
- Proposed Hourly Billing Rate Summary for the proposed candidate with all respective direct and indirect costs, markups, expenses, overhead rates and profit. (Sample Attached).
- MBE/WBE/SBE/EBE/DVBE/OBE subcontractors utilized and the percent utilization.

Note: Department of Public Works only recognizes:

- MBE/WBE certifications certified by City of LA – Bureau of Contract Administration (LABCA), LA County Metropolitan Transportation Authority (MTA), CalTrans, The Southern California Minority Supplier Development Council (SCMSDC), or Women's Business Enterprise National Council (WBENC)-WEST; and any member of California Unified Certification Program (CUCP); and
- SBE/EBE/DVBE certifications certified by LABCA or State of California – Department of General Services (CA-DGS)
- Provide a copy of valid MBE/WBE/SBE/EBE/DVBE Certifications of MBE/WBE/SBE/EBE/DVBE subcontractors utilized.
- Statement pertaining to the candidate’s availability.

6. Selection Criteria

The selection team will evaluate the proposals, considering but not limited to the following criteria:

- Capability, and experience in providing the Scope of Services as demonstrated by the proposal.
- Expert knowledge and work experience associated with solid waste treatment, the Hyperion Water Reclamation Plant, operational and technical understanding of sewer systems, and determining impacts of FWD on these systems.
- Knowledge and understanding of the Bureau's diversion and sustainability strategies and goals in integrated solid waste, water resources, and related activities.
- The value offered to the City considering cost in comparison to capabilities and experience of the candidates.
- Expert knowledge and experience in public outreach, education and participation, as well as knowledge in developing and analyzing surveys.
- Proven experience and capability in conducting food scraps/organics studies, modeling data analysis, and reports.
- Consultants are encouraged to review the TOS thoroughly, including all requirements to ensure submission of a timely and responsive proposal. Notwithstanding the requirements and expectations discussed in this TOS, the City is interested in reviewing progressive ideas. Therefore, consultants are encouraged to suggest alternatives and/or additions in their proposals. Although full consideration by the City will be given, the consultant is responsible to explain any alternatives and/or additions to the requirements of this TOS, and the anticipated benefits to the City.

7. Suggested MBE/WBE/SBE/EBE/DVBE/OBE Participation Levels

The City had set anticipated participation levels (APLs) for sub-consultants as follows: 18% MBE, 4% WBE, 25% SBE, 8% EBE, and 3% DVBE. The City encourages the Primes to utilize these subconsultants wherever feasible, especially MBE/WBE subconsultants.

Note: Sub-consultants that are not listed on Schedule A in your contract cannot be added and/or utilized without the performance of the outreach and approval of the LASAN.

8. Task Order Manager

The City's On-Call Contract Manager is: Ali Poosti, Division Manager, Wastewater Engineering Services Division, (323) 342-6228.

The Task Manager for this designated TOS is: Rowena Romano, Environmental Engineer, Solid Resources Support Services Division, (213) 485-3626.

9. Disclaimer

The City may or may not decide to award any or part of this task order based on its sole convenience and shall not be responsible for any solicitation response costs.

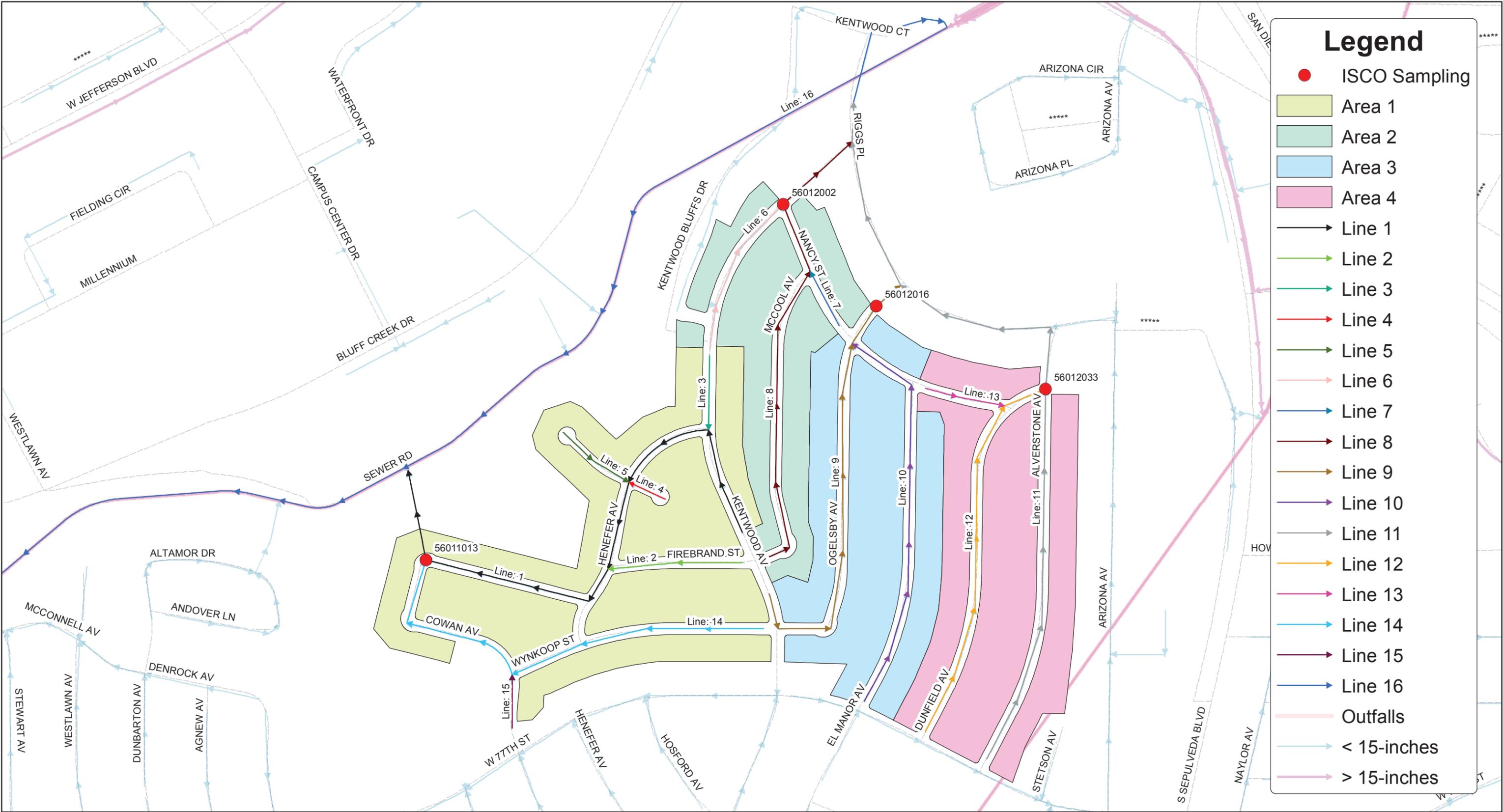
HOURLY BILLING RATES

(To be submitted for each Task Order Solicitation)

FIRM	Status	Last Name	First Name	Position	Rate (\$/hr)	Approved Overhead Rate	Approved Profit	Billing Rate (\$/hr)	Effective Date	Notes
Prime Firm	Prime									
Prime Firm	Prime									
Prime Firm	Prime									
MBE Firm Name 1	MBE									
MBE Firm Name 2	MBE									
MBE Firm Name 3	MBE									
WBE Firm Name 1	WBE									
WBE Firm Name 2	WBE									
SBE Firm Name	SBE									
EBE Firm Name	EBE									
DVBE Firm Name	DVBE									
OBE Firm Name 1	OBE									
OBE Firm Name 2	OBE									

Firm Name	Status	Fee	%Fee
MBE Firm Name 1	MBE		
MBE Firm Name 2	MBE		
MBE Firm Name 3	MBE		
WBE Firm Name 1	WBE		
WBE Firm Name 2	WBE		
SBE Firm Name	SBE		
EBE Firm Name	EBE		
DVBE Firm Name	DVBE		
OBE Firm Name 1	OBE		
OBE Firm Name 2	OBE		

Summary	Total Fee (\$)	% Fee
Prime		
MBE		
WBE		
SBE		
EBE		
DVBE		
OBE		
Total		



Wastewater Engineering Services Division
 Bureau of Sanitation
 City of Los Angeles



Figure 1
TOS Organics in Sewer
Sewer Map

