TRANSMITTAL NO. 2


# BUSINESS PROCESS WORKFLOW MAPPING AND SCHEDULING SERVICES

October 22, 2019


## Abstract

This proposal is to perform business process modeling to develop as-is and to-be workflows that will guide process reengineering for increased process efficiency, standardization, transparency and sustainability with consideration for applying technology solutions. Onside scheduler services are extended through June 2020.



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# Summary

This scope of work provides services to perform to support and enhance work management processes through Business Process Modeling (BPM), data flow process and reporting, piloting new asset management software tools, and providing an onsite scheduler through June 30 ,2020.

The result of these tasks will enhance the Bureau's ability for resource and project planning, data management, and resource management in the following ways.

- Document and evaluate existing business processes to identify specific workflow opportunities for process improvement with asset management best practices and technology.
- Engage Department staff in the workflow process to inform them of process improvement opportunities.
- Clarify asset management software requirements and priorities based on impact to specific workflow processes.
- Identify points of integration with existing and Nascent information systems and the future asset management program.
- Identify existing data compilation processes and streamline dataflows for regular KPI reporting and analysis using new automated reporting processes.
- Expose Bureau staff to modern asset management software solutions through hands on testing of CMMS software implementing select workflows identified in the BPM process.
- Validate benefits of centralized data input for work management and asset management representing a single system of record that can replace the complex web of existing data stores and associated update processes.
- Design and document enhanced data flows to reduce repetitive staff data tabulation and reporting by establishing automated data aggregation and reporting capabilities with dashboard interfaces.

| Task | Fee |
|---|---|
| 1. Project Scheduler (30 Weeks Additional) | $ 166,500 |
| 2. Business Process Modeling | $ 48,500 |
| 3. Scheduling Data Reporting | $ 35,000 |
| **Subtotal** | **$ 250,000** |
| Contingency | $ 25,000 |
| **Total** | **$ 275,000** |

# 1. Project Scheduler

This scope change extends the onsite scheduler through June 30, 2020 to address the scheduling requirements for our bid and award projects. Psomas and PMCS Group, Inc current involvement and knowledge of the Bureau' scheduling system and PMCS' experience and expertise in project scheduling will facilitate the successful extension of services.

# 2. Business Process Modeling

Business Process Modeling (BPM) is a technique that engages process owners and their team to guide documentation of process flows, data flows, and interactions to provide a clear understanding of existing processes, improvement opportunities, and to design a future To-be process. This work is undertaken when an organization wishes to enhance its efficiency and effectiveness and address other organizational objectives. Workflow mapping is Business Process Reengineering (BPR) in that there is a strong focus on changing existing processes including the incorporation of technology in the work process.

### Objectives

Business Process Workflow Mapping provides a visual representation of the As-is process and the To-be process. With involvement of the process owner and their team, the resulting As-is and To-be process maps provide a focus for:

- **Improving process efficiencies** - The main function of BPM is to improve the way the processes are done. Process improvement opportunities will lead to higher efficiency, productivity, output, and ability to execute.
- **Standardization of similar processes** – The To-be process map will standardize the way similar processes are performed across multiple groups. New and refined procedures will be influenced from best practices in other organizations.
- **Provide process transparency** – Everyone in the organization can understand how processes work now and how they can be improved. As the To-be process is implemented, the process model will become the As-is model for future reference.
- **Clarify the improved process and identify function and capability gaps** – The process models will clarify functionality and capability gaps that can be used to drive processes improvements.
- **Provide a detailed list of specific process implementation components** – The software and process gaps developed in the BPM process will be incorporated within the BSS Roadmap document.
- **Alignment with existing TOS initiatives** – The BPM process is complementary to TOS 31,32, and 33 processes and deliverables. BPM will build on the findings from the TOSs and provide a higher fidelity view of the future processes and changes needed to implement them.

## Approach

Performing BPM requires several straight forward steps for each process that is modeled. However, these steps outlined below are critical to the success of the process and each should be considered as important to the other steps.

**Step 1 – Select the processes to be improved** and identify the core objective of the improvement.

**Step 2. Create a team dedicated to making the improvement**. A process owner and a small core team (2-3 people) will be assigned to coordinate with Psomas on the BPM process. The Process Owner should be passionate about their work, opportunities for process improvement, and be prepared to drive the implementation of the changes.

Key characteristics of process owners:

- A process owner works with a process in which they have specialist expertise and in-depth knowledge. Their ideas and advice are highly relevant.
- Process owner brings and outline of each workflow to facilitate their participation in the workflow mapping process.
- Process owners provide a single point of contact for any part of a process they oversee.
- Process owners take responsibility for process results and work to improve efficiency, quality, and customer satisfaction.
- Process owners work with the owners of adjacent processes to coordinate and improve workflows.

**Step 3. Schedule BPM sessions.** BPM sessions should be scheduled with business units to specific time slots with minimal gaps between sessions. This approach will help with process mapping efficiencies and keeping everyone focused.

**Step 4 – Conduct BPM As-is sessions.** Document the As-is workflow on a white board so that all participants can contribute to the process. During the As-is process mapping, identity problematic areas and opportunities for improvement that participants may have in mind. Assess process variations and level of consistency.

**Step 5 – Evaluate As-is Process.** Review As-is process map, interview findings from prior process discussions, and compare with industry best practices to identify opportunities for process efficiencies, productivity, and quality improvements.

**Step 6 – Develop To-be Process.** Modify the As-is process incorporating opportunities for improvement from Step 5 into a To-be process diagram. Determine whether the process is stable. Using the data collected in the previous step, your team can better understand what is taking place in the process and what kind of variations occur.

**Step 7. Review To-be Process.** The Process Owner and Core Team will review the To-be process diagrams and mark them up with comments. Review meetings will be held to discuss markups and address questions.

**Step 8. Finalize Business Process Workflows**. Modify As-is and To-be workflows based on comments. Deliver Visio and PDF versions.

**Step 9. Compile Software and Procedural Needs.** Develop a list of BPR changes in a format suitable to incorporate into the system selection RFP(s) and into the StreetsLA technology roadmap document.

**Key Actions and Deliverables**

| Action | Lead | Deliverables |
|---|---|---|
| Target list of workflows (Current list of workflows are in Attachment A) | BSS | Workflows to be addressed |
| Identification of process owner and core team | BSS | Process owner and core team assigned to each workflow |
| Schedule BPM sessions | BSS & Psomas | Detailed schedule grouped by business unit |
| Conduct As-Is process mapping | Psomas | Visio As-is process diagram |
| Evaluate As-is process | Psomas | |
| Develop To-be process | Psomas | Visio To-be process diagram |
| Process Review | BSS | Witten notes and questions on process diagrams |
| Process Review | Psomas | Business unit meeting to review process diagram comments |
| Final Process Workflows | Psomas | Visio As-is and To-be diagrams |

## Workflow Diagraming Benefits

Workflow diagramming is a method for documenting and mapping business processes supporting business process reengineering. Clarifying existing business processes and documenting future business process structures through workflow diagrams brings a higher level of detail to processes. This detail will help StreetsLA set priorities and better understand expected outcomes.

- Clarify where the greatest business process reengineering is needed.
- Evaluate the impacts across the organization of process changes.
- Identify cross-group workflow alignment needs.
- Develop detailed list of needs for improvements in policies, processes and tools AND see what existing processes will be impacted.
- Understand how consistent or variable existing processes are performed.
- Prioritize implementation.

## Assumptions and Tools

This workplan is predicated on the following assumptions.

- **Team Participation.** Process leads and a small core team will be assigned and involved in the workflow mapping, review, commenting, and finalization of processes.

- **Alignment with Principles of Business Operation.** To-be workflows will be guided by the StreetsLA vision for the future that strives for processes that are efficient, repeatable, sustainable, consistent with best practices, and are integrated across StreetsLA divisions.
- **Level of detail.** Business process mapping will define processes, inputs, outputs, decisions, external process links, actors (roles), automated processes, equipment, and supplies.
- **Automated Process Names.** Automated processes will be assigned generic process names for new processes so that procurement documents can use these processes as descriptions of requirements for system selection.
- **Standardized notations and terminology.** Visio will be used for business process diagramming using standardized business process notation for consistency and ease of user by StreetsLA. Deliverables will be Visio and PDF documents.

## Workflow Scope

The following table identifies the 17 workflows to be evaluated and redefined for asset management and data management streamlining.

| | |
|---|---|
| **Pavement Renewal Process** | **3** |
| Street Selection (Micropaver, other considerations) | |
| Slurry | |
| Reconstruction (Asphalt, Concrete, & Alley) | |
| **Capital Improvement Process (Planning, PM, & CM)** | **3** |
| Project Development | |
| Project Design | |
| Project Construction / Project Closeout | |
| **Urban Forestry Process** | **2** |
| Reactive Maintenance | |
| Proactive Maintenance | |
| **Plan Review Process (Landscape Plan Review)** | **2** |
| Metro / LAWA | |
| A & B Permit | |
| **Street Maintenance Process** | **2** |
| Small Asphalt Repair | |
| Large Asphalt Repair | |
| **Programmatic Construction Process** | **3** |
| S/W Repair | |
| Curb Ramp | |
| Bus Pad | |
| **Contracting/Procurement Process** | **2** |
| Concrete & Asphalt Procurement | |
| Contracting | |

**Assumptions**

- Four or more workflows will be developed per day.
- Working sessions shall be scheduled to fill a four-day period.
- Working sessions are confirmed at least two weeks in advance.
- Labor and expenses are included.

# 3. Scheduling Data Reporting

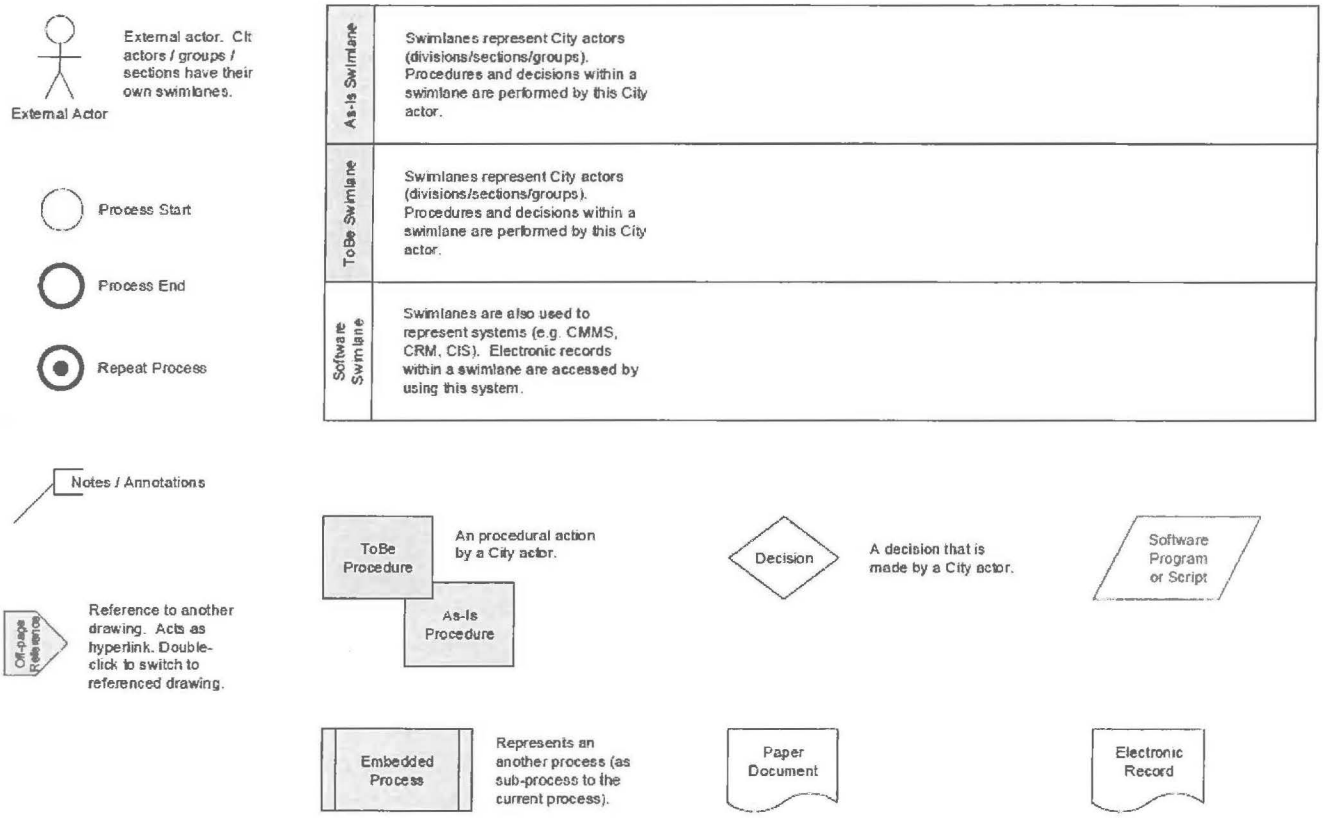
Psomas will provide support to increase accessibility to Bureau data through a data flow mapping and the establishment of reporting and dashboard tools to provide input to improve crew and project scheduling with timely data updates. Data flow mapping identifies individual data sources throughout the Bureau and identifies the steps for updating the data and publishing in reports that facilitate project scheduling and resource evaluation. The process will engage District staff to identify project and workload information sources and develop visual reporting to support scheduler planning and decision making.

Areas of data flow mapping and reporting include

- Pavement Condition and Improvement
- Tree inventory, trimming, planting
- Bus pads and benches
- Sidewalk and ramp improvements

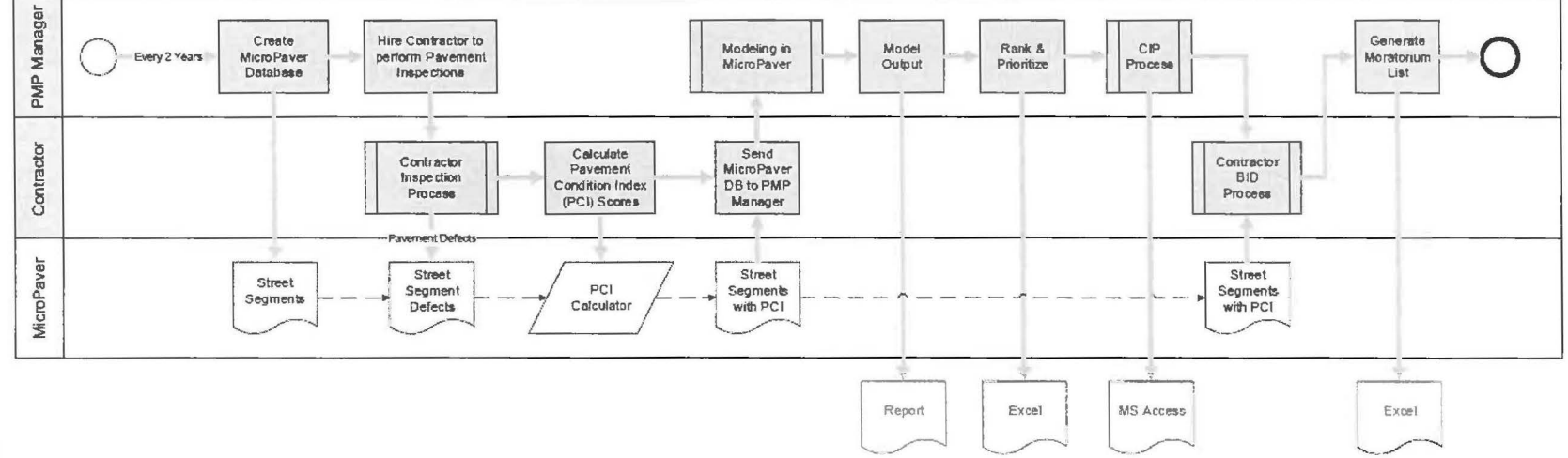
# Appendix A: Workflow Notation Examples

## LEGEND



Goal: Generate CIP for Pavement Management and Street Moratorium List
Initiating event: Biannual process
Outcome: Projects with CIP funding defined and Street Moratorium List

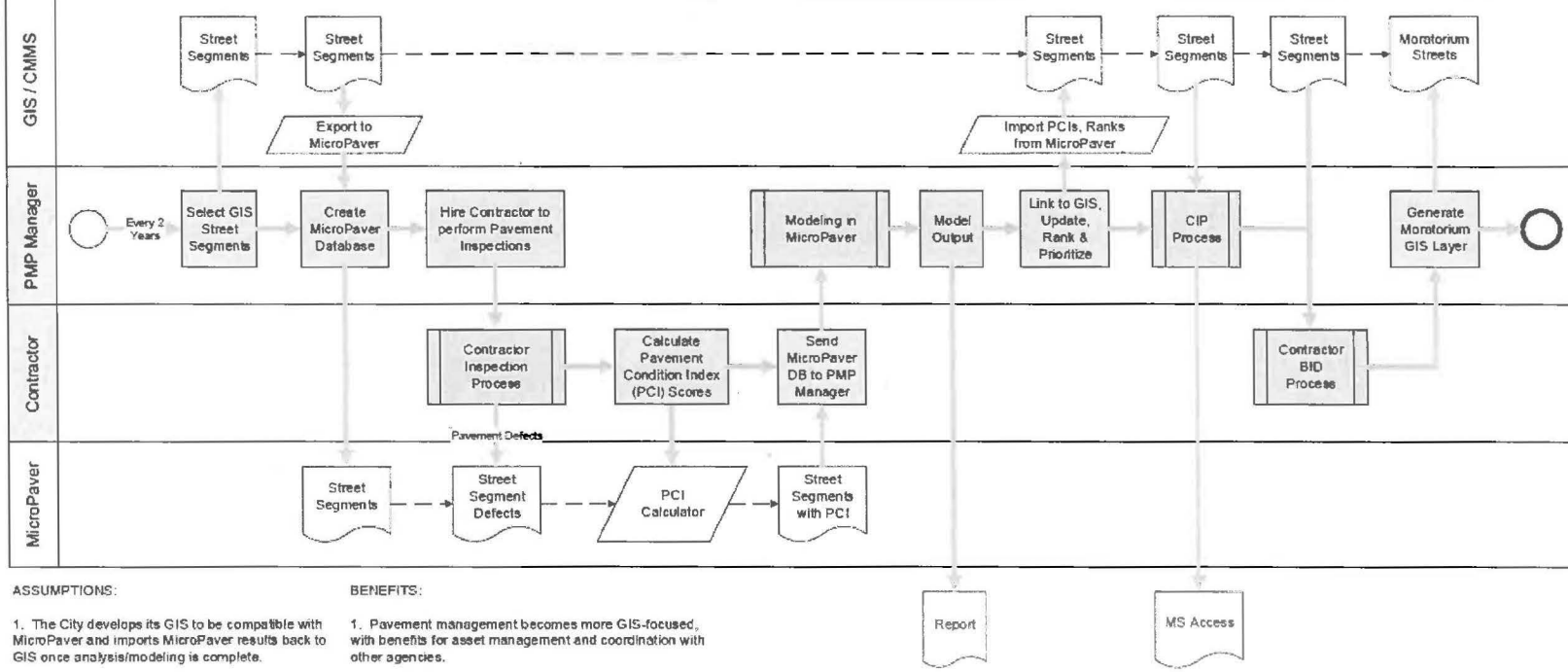
## 4a. As-Is: Pavement Management Program CIP and Moratorium Process




| | | | |
|---|---|---|---|
| PROJECT: Enterprise GIS and Asset Management Strategic Assessment Project | DESCRIPTION: Current generation of biannual CIP and moratorium list for pavement projects. | DATE: 4/7/17 | DRAWN BY: PSOMAS |
| PROCESS NAME: 4. As-Is: Pavement Management Program CIP and Moratorium Process | | VERSION: 1.0 | |

Goal: Generate CIP for Pavement Management and Street Moratorium List
Initiating event: Biannual process
Outcome: Projects with CIP funding defined and Street Moratorium List

## 4b. To-Be: Pavement Management Program CIP and Moratorium Process




ASSUMPTIONS:

1. The City develops its GIS to be compatible with MicroPaver and imports MicroPaver results back to GIS once analysis/modeling is complete.

BENEFITS:

1. Pavement management becomes more GIS-focused, with benefits for asset management and coordination with other agencies.

2. Use of Excel based lists of moratorium streets is eliminated and replaced with GIS maps (more effective).

| PROJECT | DESCRIPTION | DATE | DRAWN BY |
|---|---|---|---|
| Enterprise GIS and Asset Management Strategic Assessment Project | Future generation of biannual CIP and moratorium list for pavement projects. | 4/7/17 | PSOMAS |
| PROCESS NAME: 4b. To-Be: Pavement Management Program CIP and Moratorium Process | | VERSION: 1.0 | |