



CITY OF  
**Tulsa**  
A New Kind of *Energy*™

# City of Tulsa

---

## Performance Review and Assessment

Judith Cascio  
Brian Hurding  
Larry Lederer  
Denise O'Berry



# Table Of Contents

---

- Introduction
- Approach
- Observations and Findings
- Communications Plan
- Organizational Readiness Assessment
- Recommendations
- Next Steps



# Introduction

---

# Project Understanding and Objectives

- The City of Tulsa contracted EMA to perform a performance review and assessment of Designated Public Works functions and develop an action plan for improvement of service delivery. Public Works divisions included in this project:
  - Public Facilities Maintenance and Operations Division – Street Maintenance.
  - Engineering Services Division – Street Rehabilitation and Street Widening Program Management.
- The objectives were to:
  - Determine Public Works’ current position relative to the best in the industry.
  - Provide the City with recommendations to improve to achieve or exceed established industry standards. Sources for standards include ICMA, APWA, USCM.
  - Help the City maintain those improvements.
  - Help the City put processes in place to maintain the “Fix Our Streets” projects.

# Performance Evaluation

---

Three areas of focus were evaluated:

- Organization
  - Information Management / Communications
  - Organizational Effectiveness
  - Organization Change Readiness
- Practices
  - Standards and Procedures
  - Service Delivery
  - Fiscal Management
  - Resource Utilization
- Technology
  - Information Technology Systems
  - Equipment and Materials



# Approach

---

# Engage Leadership

---

- ❑ Created a Steering Team made up of leadership and division managers to provide oversight and perspective.
- ❑ Interviewed City Council and Mayor to understand the issues and expected outcomes.

# Desk Audit

---

- Reviewed over 200 Street Maintenance and Engineering Services documents.
- Compared material costs, staffing levels and other expenses of the Street Maintenance function with comparable cities.
- Reviewed written standards and procedures that are in place and compared to best practices.

# Interviews

- Over 60 interviews with leadership, management, and staff gave EMA a broad and in-depth understanding of the organization.
  - Street Maintenance
    - Labor Trade Employee Groups
    - Supervisors and Managers
    - Administrative and Support Staff
  - Engineering Services
    - Engineering Planning – Management and Staff
    - Engineering Design – Management and Staff
    - Construction Inspectors – Management and Staff
    - Right-Of-Way and Utilities Coordination – Management and Staff
    - Engineering graphics
  - Selected support groups
    - City IT - Management
    - Mayor’s Action Center (MAC) – Supervisors and Staff
    - Capital Improvement Projects (CIP) Finance
    - Communications
    - Finance.

# Observance of Work Practices

---

- ❑ Visited Work Sites.
  - Crews' work practices, equipment, and skills.
  - Documentation of completed work.
  - Transition from one job to the next.
- ❑ Visited Work Centers.
  - Crews receiving work assignments.
  - Material issuance.
  - Work Order preparation, recording, and completion.
  - Interaction between supervision and crews.

# Organizational Assessment / Communication

---

- ❑ Conducted Organizational Readiness Assessment.
  - ❑ Administered an Organizational Readiness Survey.
  - ❑ Consolidated responses from over 100 personnel.
- ❑ Interviewed management and staff.
- ❑ Make communication recommendations.



# Observations and Findings

---

# Major Opportunities

---

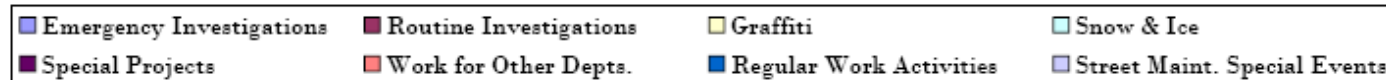
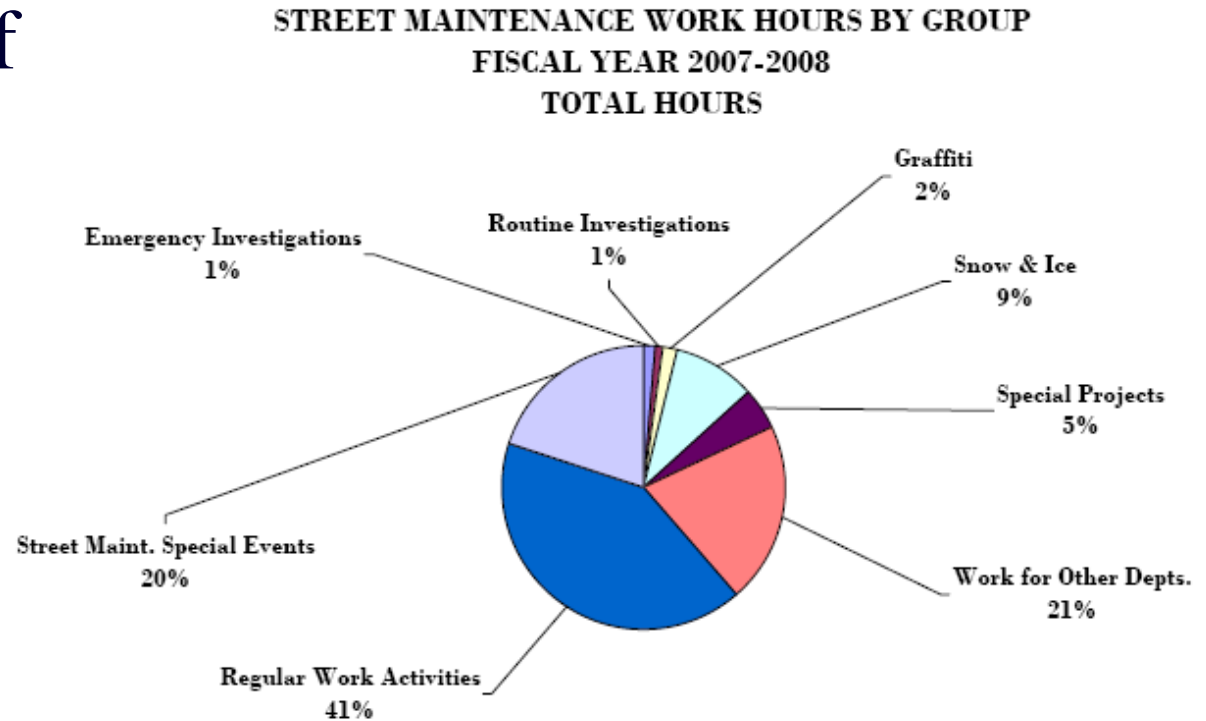
- ❑ Street maintenance programs must organize around the “Fix our Streets” initiative and existing infrastructure.
- ❑ Engineering functions require a team-based approach to assure quality and conformance.
- ❑ Current technology applications do not provide required consolidated operational information for management decisions.
- ❑ Management style is top-down – Team-based management engages the organization.
- ❑ Performance management program will identify gaps and trends.
- ❑ Reactive response to MAC service requests effect efficiency and cost.
- ❑ Charge back resources and equipment to other agencies.

# Street Maintenance Section Observations

- ❑ The Street Maintenance Section works hard on their assigned tasks and takes pride in their work.
- ❑ The work done for special events and other departments has been well received.
- ❑ A fifteen year street maintenance program was researched and identified. Council supported bonding and tax increases for the first five years of a long-term commitment.
- ❑ Pavement Management System Report recommended a minimum of 10% of the routine and preventive maintenance backlog (approx. \$59 million) be funded by the annual budget.
- ❑ Pavement Management System Report funding recommendations have not been implemented.
- ❑ The Street Maintenance Section's efforts to respond to the Mayor's Action Center requests meet or exceed the target response times, often causing significant reactive work.

# Street Maintenance Section Observations

Distribution of work hours is inconsistent with maximizing Street Maintenance.



# Street Maintenance Section Observations

- ❑ Street Maintenance appropriations are not adequate to fund acceptable levels of street maintenance.
- ❑ General Fund budget for materials is annually depleted by April/May.
- ❑ Current Street Maintenance Section work practices focus only on short-term repair.
- ❑ Long-term maintenance is provided by voter-approved funding, however, this 5-year funding is not adequate to meet Pavement Condition Index targets.
- ❑ “Fix Our Streets” Program is well done and well documented. It is the default street maintenance program.
- ❑ Snow and ice removal has been done effectively.

# Street Maintenance Section Observations

- ❑ The Street Maintenance Section is not focused on the maintenance of the streets.
- ❑ Public Works allocates minimal funding for street maintenance materials.
- ❑ Over 50% of Street Maintenance Section work is for special/projects events (e.g., D-Fest, Tulsa Tough, Tulsa Run) and work for other departments. Less than 50% of the labor is devoted to repair and preventative maintenance.
- ❑ First line supervision and crews consider pothole repair to be emergency work.
- ❑ Curb repairs are not done; a one year backlog has been accumulated.
- ❑ Management expect repairs to be done as planned and scheduled work rather than as emergency work.
- ❑ Current preventive and routine maintenance backlog is 20 years based on present day budgets (\$3M/\$59M).

# Street Maintenance Section Observations

- ❑ Best practices for street maintenance reactive work is 25% or less. Tulsa reactive work is > 50% .
- ❑ Most street repairs are temporary.

	<b>Arterial</b>	<b>Non-Arterial</b>	<b>Total</b>
Permanent Patches	175	147	322
Temporary Patches	23,826	6,062	29,888
Injection Patches	8,339	163	8,502
Skim Patches	1,757	2,946	4,703

Tulsa Source: Street Maintenance Statistical Information 2007-2008

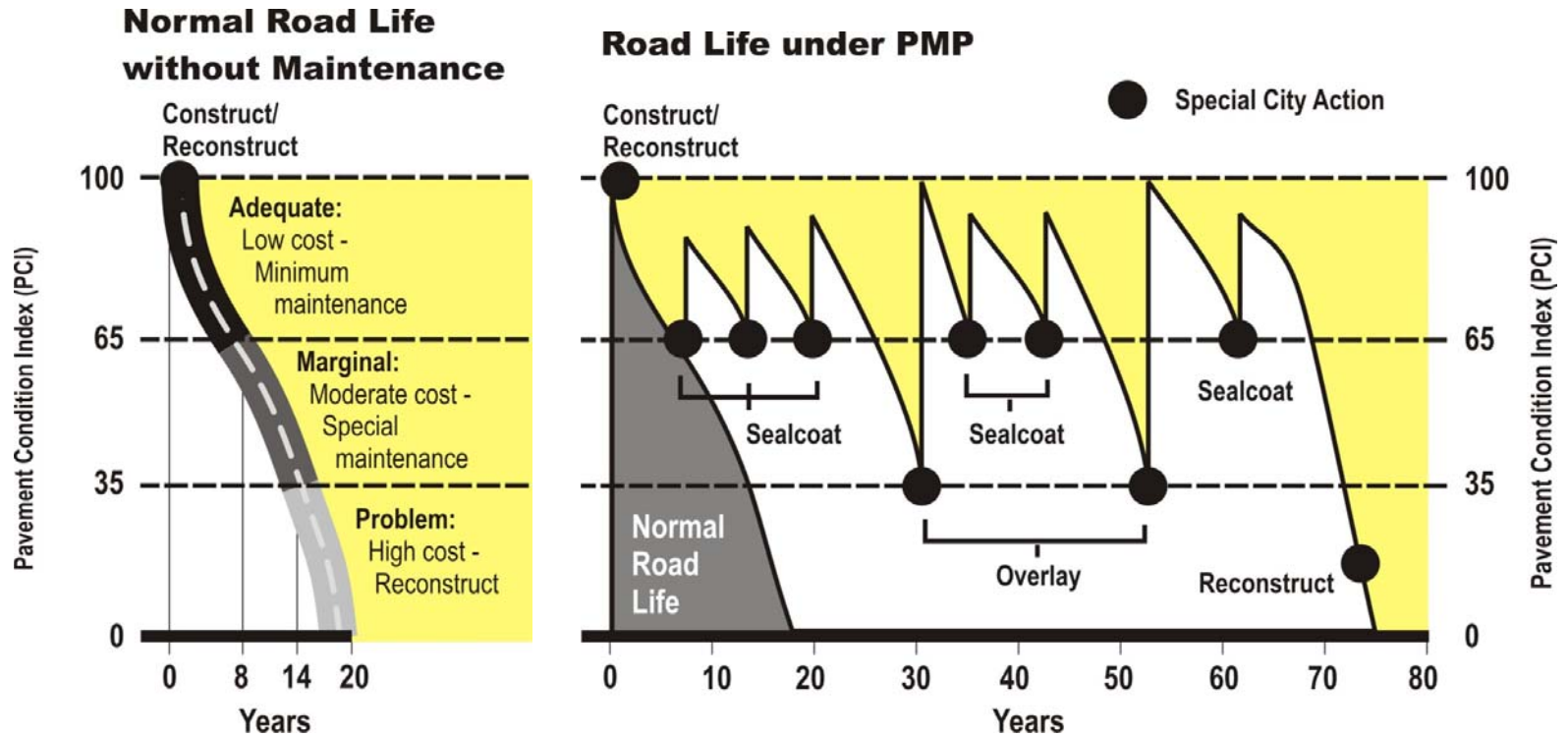
# Street Maintenance Section Observations

---

- ❑ Pavement Condition Index (PCI):  
Tulsa Streets per Pavement Management System Report:  
PCI = 61.
- ❑ Normal target for roads is an average PCI = 70-75 .
- ❑ PCIs below 65 require more than preventive maintenance and minor repair.
- ❑ Tulsa's existing target is 60% or more of the roads at a PCI of 70 or above.
- ❑ Less than 10% of the roads are at a PCI of 75 or above.

# Street Maintenance Section

## Best Practices: Continuing Maintenance



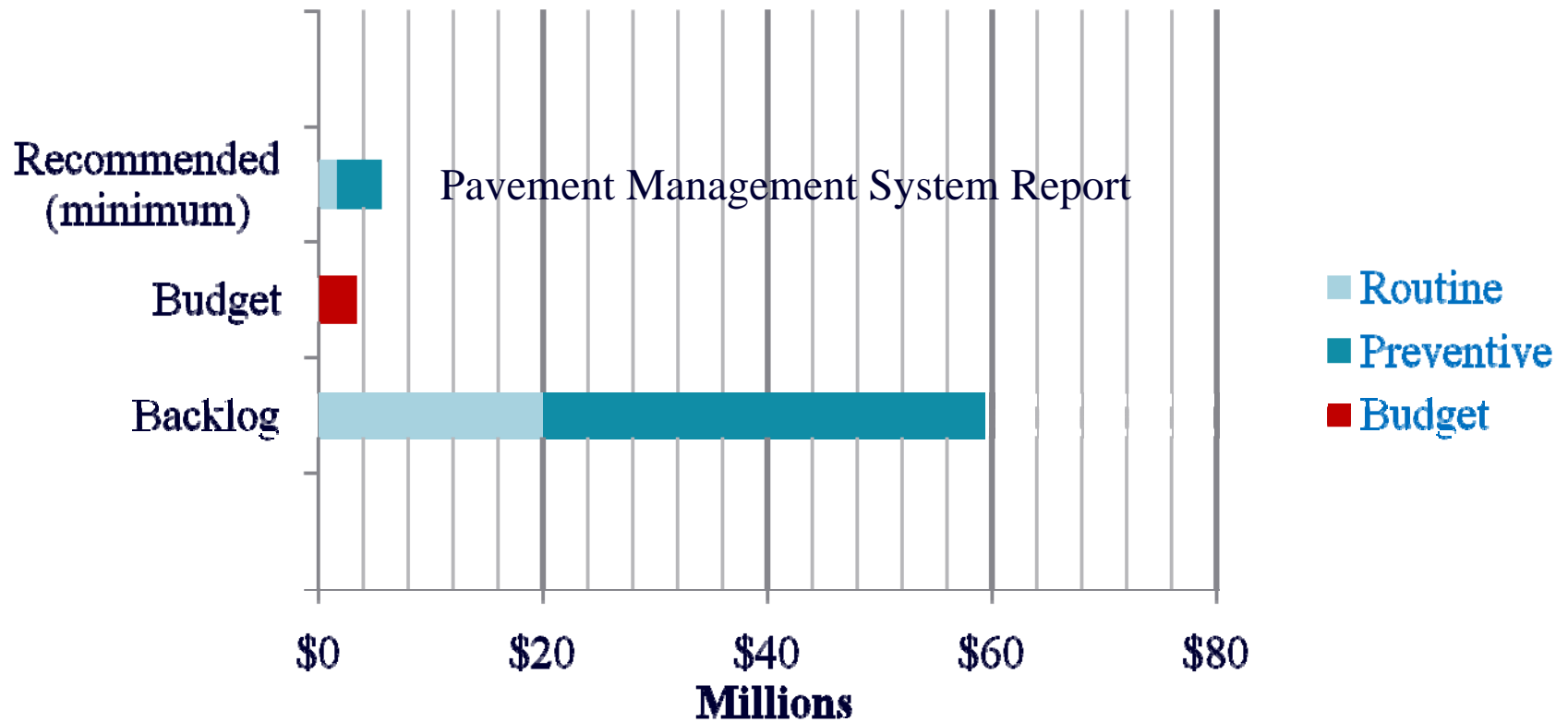
DRAFT

# Street Maintenance Section Observations

- ❑ Street Maintenance deploys resources primarily to fill potholes, deferring preventive and corrective maintenance. This has led to expensive rehab work as the primary solution.
- ❑ Supervisors and crews estimated reactive work to be about 50% of street maintenance.
  - Much of that is due to MAC work being done in less than 24 hours.
  - MAC reports show all repairs are done within the 24 hour timeframe.
- ❑ Interviews and observations reveal that scheduled work is at times abandoned to perform non-emergency pothole repair.
- ❑ Some new technologies and equipment exist (pothole truck, crack sealing equipment, etc.), though not all serviceable equipment is used. Purchasing practices don't allow the purchase of new equipment without replacing old equipment in the process. As a result, Street Maintenance prefers to retain unused equipment until they can purchase replacements.

# Street Maintenance Section Observations

General Fund Budget vs. Backlog



# Engineering Services Observations

- ❑ Coordination with utilities is done by a dedicated work group – an industry best practice. In some cases utilities do not call before digging.
- ❑ New infill development should comply with City Standards for Street Construction.
- ❑ Planning and Design must stay engaged once the plans are under construction.
- ❑ Up-to-date standards are documented for the work and materials required to complete street maintenance design and construction.
- ❑ Punch-list walk-throughs are often conducted separately by the field inspectors and the assigned engineers .
- ❑ Inspectors are utilized as construction managers on some construction projects.
- ❑ When asked to see SOPs, Engineering presented lengthy checklists, not procedural documents. Transportation checklist is 14 pages .
- ❑ Two inspectors did not know in interviews that there was a contractor evaluation form.

# Engineering Services Observations

---

- ❑ Engineering Services does not track employees' time on projects.
- ❑ According to field engineers, work plans are not developed for larger projects .
- ❑ Design changes are made to meet schedules without following established procedures. Invoices for these changes are approved without understanding and documenting impacts.
- ❑ Work load is not balanced among inspectors because of differences in qualifications or experience.
- ❑ Inspectors can be over-ruled on issues.
- ❑ Inspectors desire more support from Design Engineering.
- ❑ The Inspectors require additional training and direction.

# Comprehensive Observations

---

- ❑ “Fix Our Streets” plan is well done and well documented.
- ❑ Career development plans for various positions exist but are not well communicated.
- ❑ A formal training program is critical.
- ❑ Data exists, but is not readily available in a format that supports management decisions.
- ❑ With the exception of pavement management, department tracks outputs rather than outcomes.
- ❑ The organizational structure for coordinating work with other agencies and utilities is in place, however the utilities do not always participate.
- ❑ Preventive maintenance is contracted out and managed by the Engineering Division. The Street Maintenance Section focuses on other activities such as responding to the Mayor’s Action Center and Councilors’ requests, special project work, and work for other departments.

# Comprehensive Observations

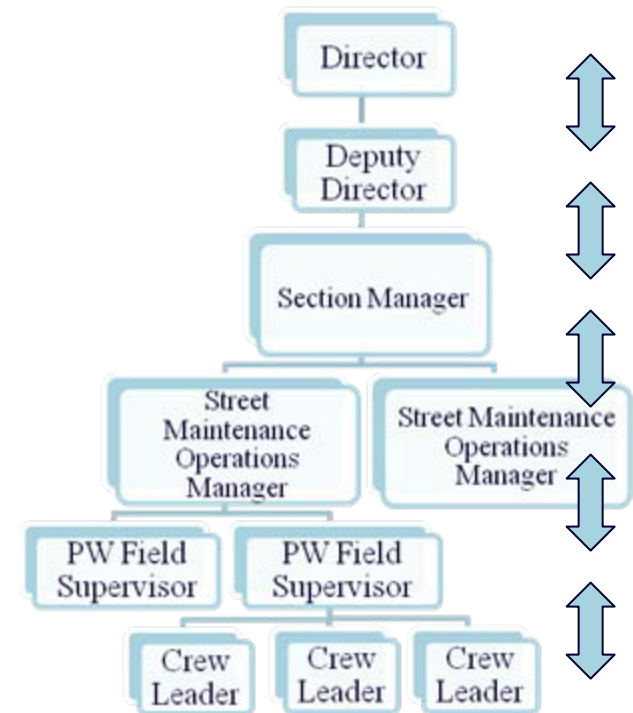
---

- ❑ Leadership of the City, constituents, and the management of Public Works have dissimilar priorities. Issues with funding, service delivery expectations, and resource allocation result in mismatched priorities between constituents, City leadership, and Public Works management.
- ❑ The organizational culture is resistant to change.
- ❑ Communication is limited.
- ❑ Consolidation of Information Management and Administrative Services was not well-received.
  - ❑ During interviews several staff members commented on perceived lower service levels.
- ❑ Monthly budgeting documents provide some reporting.
- ❑ The Statistical Report lists project status and some activities such as pothole repair. No other documents were found or provided that measured the performance of the Street Maintenance Section, Engineering Services, or individual staff.

# Comprehensive Observations

- ❑ Information moves through the organization one level at a time.
- ❑ Senior Managers have little direct interaction with staff.
- ❑ Management has many layers and is hierarchical.
  - There are four levels of management including the Deputy Director, eight managers, and supervisors.
  - Supervisor/manager to Labor/Trades ratio is 1:6.
- ❑ Group lacks communication both vertically and horizontally.
  - Senior managers have little direct interaction with staff more than one level below them.

## Street Maintenance Hierarchy



# Comprehensive Observations

---

- ❑ A Strategic Technology Plan is not available.
- ❑ Technology in Public Works is ad hoc. Lack of IT integration, standards and governance impact:
  - The ability to coordinate and share information.
  - The ability to track assets across divisions.
- ❑ Public Works lacks the strategic technology systems needed to drive performance improvement.
- ❑ The goal of City IT is to consolidate applications.
- ❑ The diversity of business applications within Public Works makes it difficult for IT to provide business agents to support them.
- ❑ Many technology systems are aging and are no longer compatible with the implemented technology, limiting the ability to share information and track performance.

# Comprehensive Observations

---

- ❑ Streets Maintenance, Water Distribution, and Underground Collections use different work order systems that are not integrated.
- ❑ The IQ system does not directly tie into the work order system, but rather through the e-mail system, by-passing planning and scheduling. As a result, much non-emergency work is done as emergency work.
- ❑ Documents provided for tracking work and projects were mostly MS Excel spread sheets, MS Word documents, MS Project, or MS Access databases; none of them roll up to provide a single view of performance of function or department.
- ❑ No documentation was provided to show the existence of an asset management strategy and program.



# Communications Plan

---

# Communication Plan Purpose

---

Effectively deliver information to and receive feedback from people and organizations, both internally and externally, affected by the Fix Our Streets program.

# Expected Outcomes

---

- ❑ Demonstrate transparency and accountability
- ❑ Gain the commitment and involvement of internal and external stakeholders.
- ❑ Increase support to stakeholders resulting in increased support from stakeholders.
- ❑ Improve working relationships and engender trust and a sharing of ideas.
- ❑ Strengthen the Public Works department identity, credibility, and work philosophy in the minds of stakeholders.

# Communications Recommendations

---

- ❑ Regular, consistent face-to-face. communication sessions with internal staff to allow Q&A and feedback.
- ❑ Development of cross functional teams where appropriate to strengthen interdepartmental communication.
- ❑ Engagement of business associations (e.g., Tulsa Young Professionals, chamber, etc.) to gain public support and provide feedback.
- ❑ Engagement of bloggers to gain public support and provide feedback.
- ❑ Utilization of current social media (Twitter, Facebook) to inform and engage public.
- ❑ Establish [www.fixourstreetslive.com](http://www.fixourstreetslive.com) as the communication hub.



# Organizational Readiness Assessment

---

# Organizational Readiness Assessment

---

Assess the condition of six key organizational elements necessary to support successful change efforts.

1. Viable Leadership
2. Performance Framework
3. Communication System
4. Employee Support
5. Learning Culture
6. Process Improvement.

# Survey Method and Reach

---

- ❑ 36 Statements
  - Strongly Disagree to Strongly Agree
- ❑ Administered in group setting
- ❑ Streets
  - 46 Maintenance Staff
  - 5 Managers / Supervisors
- ❑ Engineering
  - 33 Engineering Staff
  - 20 Managers / Supervisors

# General Observations

---

- ❑ Managers and supervisors in both Streets and Engineering rated most areas more favorably than staff.
- ❑ Low perception of appropriate staff involvement in decisions that affect their work may impact ability to engage staff.
- ❑ Communication system and performance framework are areas needing most improvement.
- ❑ Staff generally feel supported within their work unit except in the area of career development.
- ❑ There does not appear to be an openness for new ideas, suggestions, or training and development which are key components of a learning culture required for change.
- ❑ Excessive “red tape” and resistance to change could hinder process improvement.



# Recommendations

---

# Recommendations

- ❑ To meet the City’s needs, the City Administration, City Council, and the Public Works Department must align around mission, goals, and objectives. If the mission, goals, and objectives are not aligned between all groups it will result in unmet expectations.
  - ❑ A formal, externally facilitated alignment session including all parties is recommended to align and document mission, goals, and objectives.
  - ❑ Service delivery and resources must align with agreed upon service targets.
  - ❑ The Public Works Departments mission, goals and objectives need to be aligned to individual and team performance to meet delivery expectations and work assignments.
  - ❑ Focus street maintenance program on routine and preventive maintenance.
  - ❑ Assess options for special events and special projects work. Perform special projects internally only with strong business case.
  - ❑ Adopt a comprehensive program management and project management system for initiating, tracking, and recording the activities associated with the large-scale Fix our Streets Initiative.
- ❑ Develop a Special Communications Program for “Fix our Streets” focused on communicating with the citizens and businesses.
- ❑ Service levels must be within organizational capacity. Train Street Maintenance Section personnel on the MAC service levels and how they are to be applied.

# Recommendations

- ❑ All requests from MAC should be performed as planned and scheduled maintenance unless an actual emergency situation (as defined by established criteria) exists.
- ❑ Develop a training and knowledge retention plan for the MAC staff related to street maintenance service requests to include:
  - ❑ Spend time with field operations observing various work types.
  - ❑ Understand information needed to evaluate, plan, and schedule work.
  - ❑ Understand criteria for emergency work versus routine maintenance.
  - ❑ Understand service levels and how they are to be applied.
- ❑ Optimize distribution of budget for streets maintenance.
- ❑ Design and implement a formal maintenance program.
- ❑ Implement a performance management program.
- ❑ Develop and implement an asset management program involving key stakeholders from Finance, Maintenance, Engineering, Purchasing, and other key stakeholders. Implement optimum levels of routine, preventive, and reconstruction work and future funding.

# Recommendations

- ❑ Fund a formal training and certification program for inspectors requiring technical training and proper procedures for documenting projects.
- ❑ Train Team Leaders, Teams, and Managers in latest materials use, equipment, and methods.
- ❑ Promote communication training for all staff.
- ❑ Increase Managers' and Supervisors' participation in leadership training.
- ❑ Develop a plan to reduce Supervisor / LT (Labor/Trades) ratio from 1:6 to 1:15 by implementing a team-based organization.
  - ❑ Establish teams of employees.
  - ❑ Team training for LTs.
  - ❑ Leadership development for Managers and Supervisors.
- ❑ Implement “management by walking around.”
  - ❑ Attend front-line staff meetings on a regularly scheduled basis
  - ❑ Hold regular communications meetings
  - ❑ Celebrate achievements

# Recommendations

---

- ❑ Develop and communicate a broadband career performance framework that includes regular opportunities for feedback and interaction with staff.
- ❑ Define a succession strategy with knowledge management, training and development, and career path components.
- ❑ Involve staff in department decisions by using a cross functional team based approach. Cradle-to-grave project teams typically improve quality, reduce cost, and increase accountability
- ❑ Identify, assess, and modify complicated administrative business processes that are obstacles for staff.
- ❑ City business functions and policies (Human Resources, Purchasing, etc.) should support operational needs.
- ❑ Examine division of responsibilities between the Street Maintenance Section and Engineering Services as it relates to performance of routine and preventive maintenance.
- ❑ Maintain processes defined in the KPMG recommendations.
- ❑ Increase Street Maintenance Section's materials and labor for routine and preventive maintenance to meet minimum requirements for reducing backlog.

# Recommendations

---

- ❑ Implement recommendations of the Pavement Management System Report: increase maintenance, provide funding, improve street conditions steadily to acceptable levels, continue construction.
- ❑ Implement charge-back procedures for when Street Maintenance Section does special events or work for other departments.
- ❑ Formal work plans for projects over \$100,000 should be communicated, routed and returned, and easily accessible electronically to team members and their supervisors throughout the project.
- ❑ Identified project manager shall maintain responsibility for project from beginning to end.
- ❑ Require all project team members to electronically track their time.
  - ❑ Consider exempt employees' project time as part of the actual cost of the projects that require their work.
  - ❑ Capture other important tasks and activities for workload analysis and balancing of the engineering staffing levels.

# Recommendations

---

- ❑ Develop a Five Year Technology Master Plan, led by City IT with the collaboration of all City departments:
  - Establish IT governance, including standards for selecting and implementing new technology.
  - A needs assessment, prioritization criteria, and implementation schedule.
  - Consolidate and integrate multiple applications (e.g., CMMS and GIS).
  - Implement an enterprise time and attendance system.
  - Address field data access needs.
  - Tracking and reporting systems for productivity and performance evaluation.



# Next Steps

---

# Fix Our Streets

- ❑ Create/implement new street, reconstruction, and maintenance plan.
- ❑ Identify/document SOPs for QA/QC of design, contracts, materials, and inspections.
- ❑ Align/document and manage performance expectations with leadership and management.
- ❑ Document, communicate, and train resources in street construction and maintenance processes.
- ❑ Create/monitor performance targets for inspections and maintenance.
- ❑ Publish/educate public and private partners regarding street cuts and restorations.
- ❑ Create communication plan for citizens, businesses, and commuters to identify street closings, detours, start/finish dates, and progress.
- ❑ Adopt a comprehensive program management and project management system for the activities associated with the Fix our Streets.
- ❑ Develop Key Performance Measures.

# Departmental

---

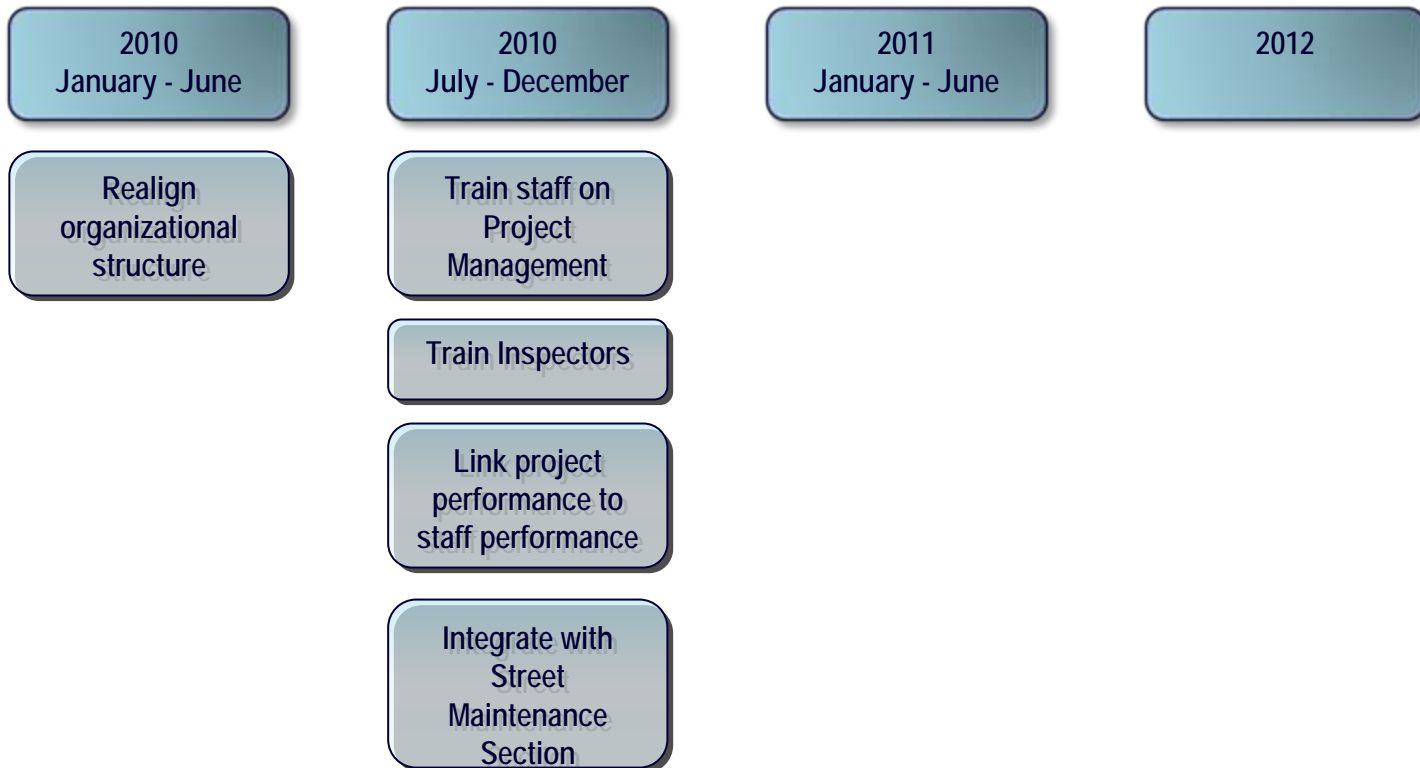
- ❑ Assess all functions of Public Works for synergy, consolidation, redundancy, and shared resources.
- ❑ Develop an action plan to align organizational capacity with service delivery.
- ❑ Implement efficiency and effectiveness improvements
  - ❑ Consolidate and coordinate with non-City providers.
- ❑ Design/implement performance management to achieve strategic plan objectives.
- ❑ Develop the workforce and provide leadership training.
- ❑ Create/implement repair plan for existing streets and infrastructure.

# City-Wide

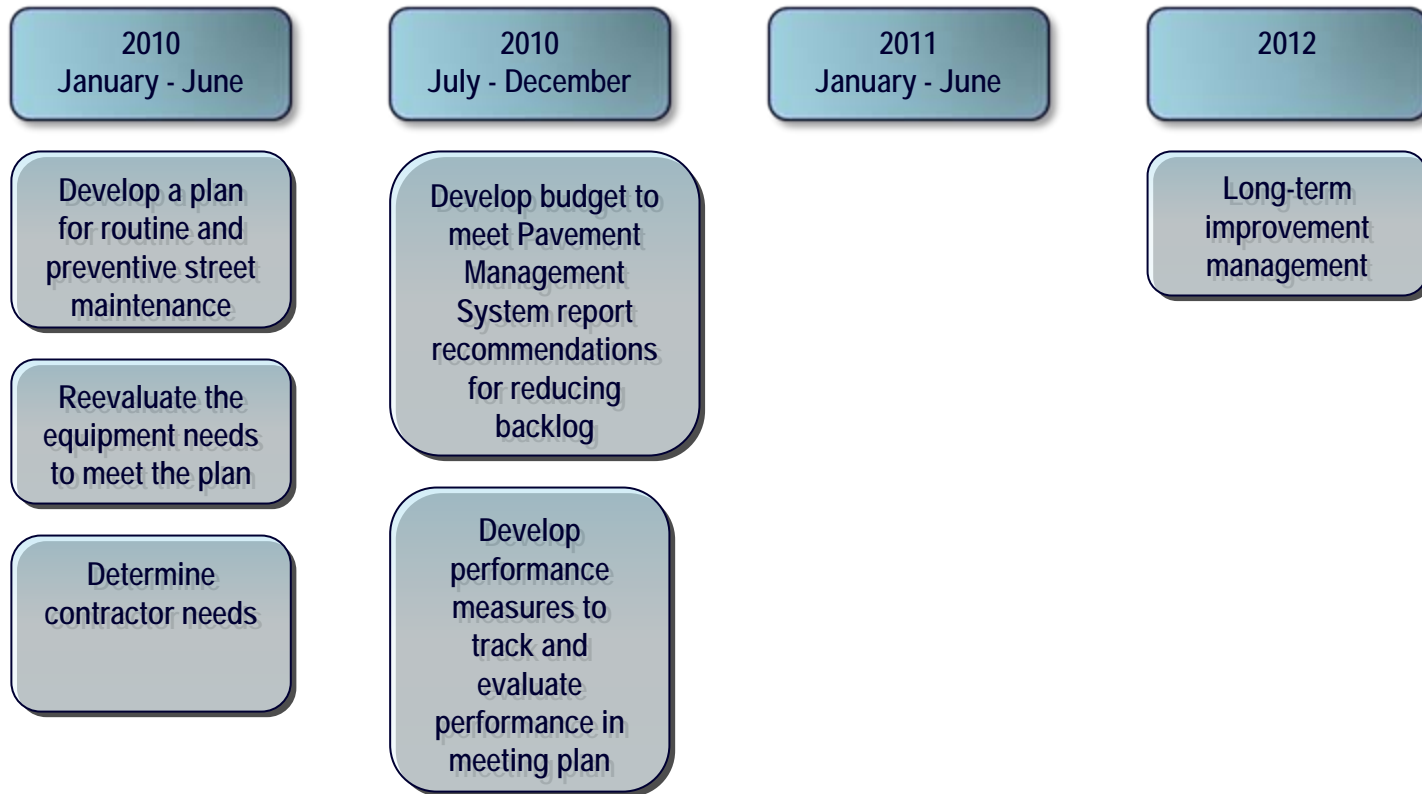
---

- ❑ Develop vision for Information Technology.
- ❑ Assess current state of City IT systems (software and hardware)
  - ❑ Assess data quality
  - ❑ Assess business practices and organizational goals
  - ❑ Assess standards and procedures.
- ❑ Determine IT governance, resource, and system needs.
- ❑ Technology roadmap and master plan.

# Timeline – Engineering



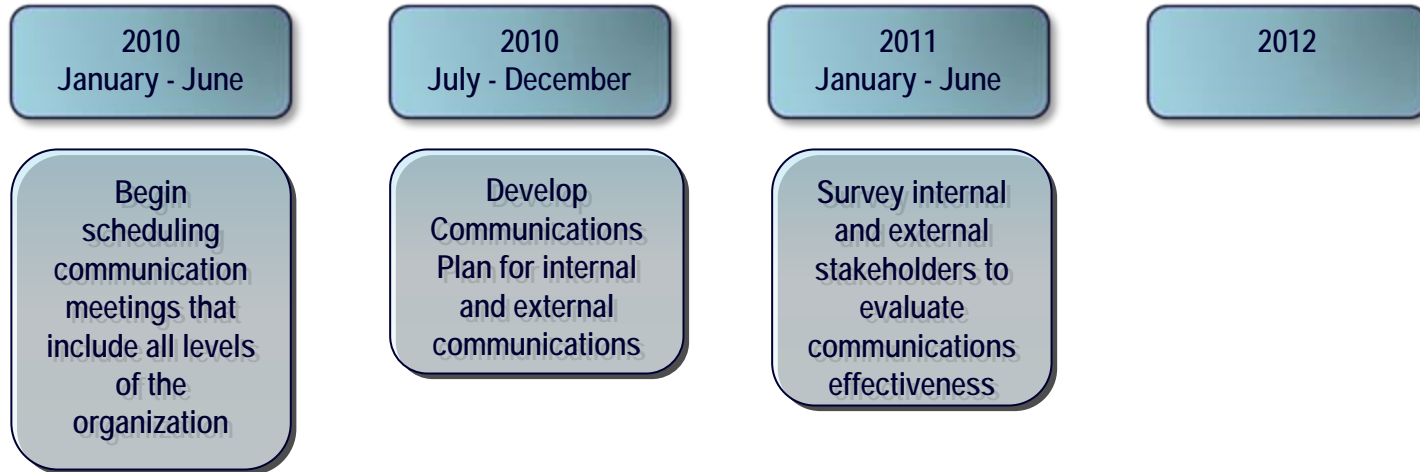
# Timeline – City-Wide Street Maintenance



# Timeline – Technology



# Timeline – Communication



# Questions