

# Memorandum

## City of Lawrence

### Public Works Department

**To:** David L. Corliss, City Manager  
Cynthia Boecker, Assistant City Manager  
Casey Liebst, Budget Manager

**From:** Charles F. Soules, Public Works Director

**Subject:** 2010 Budget Request -- Letter of Transmittal

**Date:** April 17, 2009

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With this memo, I transmit to you the Public Works Department budget request for 2010. The budget requests submitted reflect two options – a flat budget and a 5 percent reduction (excluding personal service expenditures). Given the nature of public works activities, both the flat and reduced budgets represent deferrals of basic infrastructure and maintenance activities.

The Public Works Department is organized into three sections.

- Engineering: small design group, traffic engineering and maintenance, stormwater engineering (13 fte's)
- Infrastructure & Maintenance: pavement management, street/stormwater maintenance, buildings, structures, and airport maintenance (51 fte's)
- Services & administration: solid waste, fleet management, administration (119 fte's)

The organization chart is attached at the end of this memo for general reference.

The instructions requested budget submittals to meet flat and reduced budget scenarios. In order to meet those goals, the budget each of the divisions trimmed where they could to minimize programmatic impact. In Public Works, many expenditure categories are not within direct or immediate control (energy costs including utilities and fuel, equipment maintenance, which increases as replacement is deferred). The areas where we have more discretionary control are areas that address more preventive maintenance or long-term asset management (related to equipment, facilities, or streets).

Attached to the transmittal memo, you will find a summary of notes for budget areas, as well as a highlight of additional needs to provide basic services in the City. We look forward to answering your questions during the budget process and providing any additional information that may be useful.

Respectfully submitted,

*Charles F. Soules*

Charles F. Soules, P.E.  
Director of Public Works

# Public Works Budget Attachment 2010

## Critical issues for operational divisions and comments on submittal requests

### **Street Maintenance Division (gas tax, general fund maintenance, levee)**

1. funding for radio replacement ([memo attached](#))
2. adequate funding for pavement maintenance, both contracts and materials ([memo](#))
3. equipment replacement program (several large pieces of equipment used in multiple streets operations need to be replaced)
4. protection of gas tax fund balance

### **Engineering (traffic operations, stormwater, design)**

1. upgrades for traffic signals to LED (up to \$150,000 to complete project)
2. intersection striping program
3. additional funding for approved traffic calming devices

### **Buildings and Structures (building maintenance, parking garages, airport)**

1. adequate funding for facility maintenance (capital improvement program for large maintenance items, such as Fire Station 1 roof \$100,000, exterior ITC repairs \$400,000, downtown street light replacement \$250,000, boiler replacements at senior center and community health \$300,000 each)
2. airport funding (signage and tractor replacement)

### **Solid Waste Division (residential, commercial, waste reduction / recycling)**

The budget submitted includes a \$0.66 rate increase for residential customers and \$0.96 rate increase for minimum commercial customers. The division has experienced several years of significant increases in equipment costs due to emissions regulations (2007 and 2010) and the increasing costs of fuel and metals. The rates proposed provide a positive fund balance forward, as required, without decreases in residential, commercial, or recycling services. As proposed, at least 7 major equipment purchases are being deferred an additional year.

### **Central Maintenance Garage**

This is an internal service fund, and is not a legally budgeted fund. The request submitted provides an additional \$650,000 in expenditures for fuel based on the current operational model for the transit system. Fuel and maintenance is billed to the departments. Funding authority not needed in fuel, parts, or repairs is not expended during the operational year.

### **Additional needs identified for divisions**

The operational divisions often identify needs for staffing, equipment, and funding to maintain an acceptable level of operations for the community. While the department appreciates the limited ability of the community to support any additional services or staffing, we do request your indulgence in reviewing the list of identified issues. We understand these are not going to be funded in 2010.

- Snow removal improvements: additional fabric structure for covered material storage (\$45,000) and construction of liquid pre-treatment system (\$60,000)
- Field Supervisor / Buildings and Structures (1 FTE, \$60,000, salary and benefits)
- Maintenance Worker / Buildings (1 FTE, \$40,000, salary and benefits)
- HVAC replacement at Public Library (\$400,000) and roof (\$500,000)

**Attachments:**

[Radio replacement](#)

[2010 infrastructure maintenance budget](#)

[Road projects, capital sales tax initiative](#)

[Organization chart \(detailed\) for department](#)

**City of Lawrence**  
**Public Works Department**  
**MEMORANDUM**

DATE: April 13, 2009  
 TO: David Corliss, City Manager  
 FROM: Steve Stewart, Fleet Manager  
 RE: **REPLACEMENT RADIO SYSTEM – PUBLIC WORKS DEPARTMENT**

The current radio system used by Public works is a VHF wide band system. Changes in the FCC regulations to expand cell phone use will eliminate these bands January 1, 2013.

To minimize impact to the budget 800 mhz Smart Net would be phased in over the next few years. Phase one would be Street, Storm Water crew trucks, and base stations for all of Public Works. This is the most immediate need and will provide maximum benefit to be able to communicate across the city and with the County, KDOT, and Kansas Highway Patrol during emergency operations. The length of time and total cost of the radio replacement project would depend on the depth of Utility and Parks Department participation. Phases two through four are estimated in the documentable below.

**Funding**

| Year | Phase-in elements   | Estimated cost / source                          |
|------|---|--|
| 2010 | Street and Storm Water division trucks (48 mobile radios) and 6 base stations<br><ul style="list-style-type: none"> <li>Replace equipment that is currently unreliable and will become obsolete; provide base stations.</li> </ul>  | \$160,000<br>general fund                        |
| 2011 | Street construction equipment, Traffic, Property Management, Airport, and Engineering vehicles (37 mobile radios)<br><ul style="list-style-type: none"> <li>Provide communications for off-road equipment and between divisions for effective response efforts</li> </ul>   | < \$105,000<br>general fund                      |
| 2012 | Solid Waste fleet (57 mobile radios)<br><ul style="list-style-type: none"> <li>Replace 220 MHz trunking system currently used. Will save monthly lease fees for the trunk lines and allow communication across solid waste and street fleets, as well as Parks and Recreation and Utilities supervisors.</li> </ul> | \$160,000<br>solid waste                         |
| 2013 | Add channels for Parks and Utilities, if desired<br><ul style="list-style-type: none"> <li>Centralize communication abilities. Eliminate need for cell phones and monthly bills for Parks and Utilities crews</li> </ul>  | Optional<br>Cost tbd<br>General fund & Utilities |

**Recommendation Action:**

Approve implementation of phase one for the 2010 budget at a cost of \$160,000.00. Phases two through four would follow in subsequent budgets.

# Memorandum

## City of Lawrence

### Public Works

**TO:** David L. Corliss  
**FROM:** Chuck Soules  
**CC:** Cynthia Boecker, Diane Stoddard, Jonathan Douglas  
**Date:** April 15, 2009  
**RE:** 2010 Infrastructure Maintenance Budget

In 2006 staff completed the first review (cycle) of the City's street infrastructure. The overall average PCI was reported at 69 for 299 miles of streets. Deterioration rates were calculated for the classifications of residential, collector and arterial streets and it was determined that 31.5% of city streets were unacceptable and needed to be reconstructed. Our plan focused on "keeping good pavement in good condition".

Goals outlined were:

- Slow the deterioration rate of city streets.
- Extend the life cycle of city streets.

Objectives included:

- Timely application of preventative maintenance techniques to effectively postpone pavement deterioration/failure.
- It is more economical to preserve streets than to delay the proper repairs and end up with the need for minor/major rehabilitation of streets.

Public Works has addressed the deterioration of streets in good condition by implementing a more aggressive crack seal program and using microsurfacing (thin asphaltic surface seal) maintenance work. These applications have slowed the deterioration rate of our "good" streets. We are also addressing streets that are near the critical point, where preventative maintenance would no longer be effective, by performing mill and overlay and other significant rehabilitation maintenance work. As the program progresses a greater number of city streets will be considered in good condition and thus will be maintained at a lower cost. As we increase the inventory of streets rated "good" or better additional focus will be placed on the streets that have deteriorated below the critical range and are in a condition requiring more expensive maintenance. This program will allow us to apply more funding toward critical streets without negatively impacting the deterioration of our "good" streets.

Since 2006 staff has requested between \$6.4 and \$6.8 million/year for maintenance of street infrastructure (approximately \$26.4 million total). We received \$2.94 million in 2006, \$3.42 million in 2007, \$4.85 million in 2008 and \$5.05 million in 2009 (approximately \$16.26 million – or 62% of requested/necessary funding to maintain current infrastructure condition). Construction costs have significantly increased affecting the progress of the program. In 2006 asphalt prices were \$44/ton; at the high point in 2008 the City saw \$84/ton. Street miles have also increased 7% to approximately 320 lane miles.

All this being said, the program is making a difference on the streets that we can service. Staff has improved material specifications, more permanent repairs are completed, and the City has increased their tool box using crack sealing, microsurfacing, patching, and mill and overlay

treatments to extend pavement longevity. These efforts have decreased deterioration rates and have increased pavement service for streets that have been maintained.

In 2008 the City overwhelmingly supported a sales tax for infrastructure maintenance that will provide funds to reconstruct the City's major arterial/collector streets that are failing. The election results confirmed that the citizens agree that additional funds need to be spent on street infrastructure and that the City was making progress on those streets that we had budgeted to address.

In the current economy the outlook for the 2010 budget is not promising. However, providing timely application of preventative maintenance techniques can effectively and cost efficiently postpone pavement deterioration and failure.

Staff is recommending the following for infrastructure maintenance:

|  |    |                  |
|--|----|------------------|
| Crack Sealing                          | \$ | 300,000          |
| Patching and Microsurfacing            |    | 450,000          |
| Mill and Overlay                       |    | 2,900,000        |
| Curb and Gutter Repair                 |    | 750,000          |
| Concrete Street Repair                 |    | 400,000          |
| KLINK (\$200,000 KDOT; \$400,000 City) |    | 600,000          |
| Chip and Seal                          |    | 50,000           |
| Concrete materials                     |    | 150,000          |
| Asphalt materials                      |    | 250,000          |
|  | \$ | <u>5,850,000</u> |

This does not include any infrastructure sales tax funds.

Whatever the funding level, we will develop a recommended program for final City Commission approval that bests uses the resources and funding available staying true to the goals established of "keeping our good pavement in good condition".

Respectfully submitted,

Charles F. Soules, P.E.  
Director of Public Works

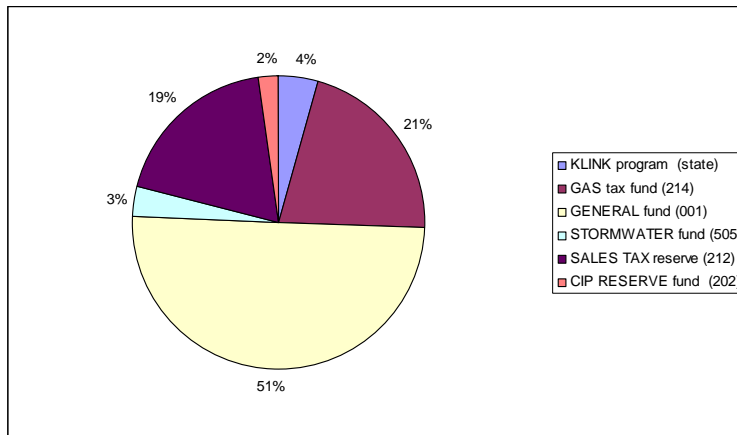
CFS/je

## Comparison of maintenance budgets and needs

|                         | 2009 budget existing | 2010 budget flat budget | 2010 budget reduced | 2010 budget NEEDS |
|-------------------------|----------------------|-------------------------|---------------------|-------------------|
| KLINK program (state)   | 200,000              | 200,000                 | 200,000             | 200,000           |
| GAS tax fund (214)      | 945,000              | 955,000                 | 955,000             | 955,000           |
| GENERAL fund (001)      | 2,240,500            | 2,136,419               | 2,011,509           | 3,705,000         |
| STORMWATER fund (505)   | 140,000              | 140,000                 | 140,000             | 140,000           |
| SALES TAX reserve (212) | 850,000              | 850,000                 | 850,000             | 850,000           |
| CIP RESERVE fund (202)  | 100,000              | 195,000                 | -                   | -                 |
| Total budget available  | 4,475,500            | 4,476,419               | 4,156,509           | 5,850,000         |

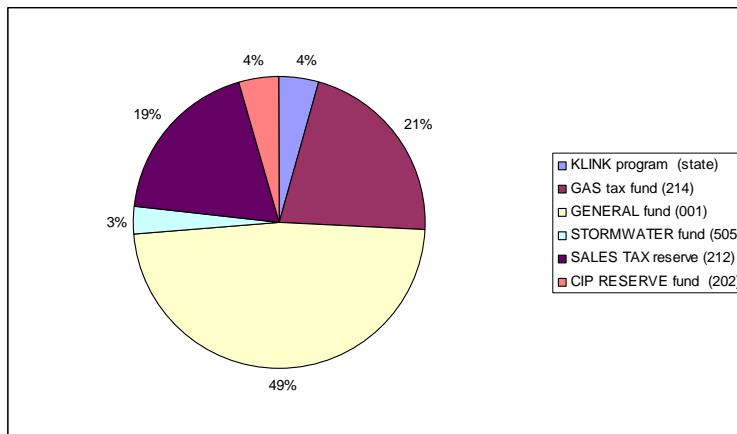
### 2009 budget

Total funding:  
\$4,765,500



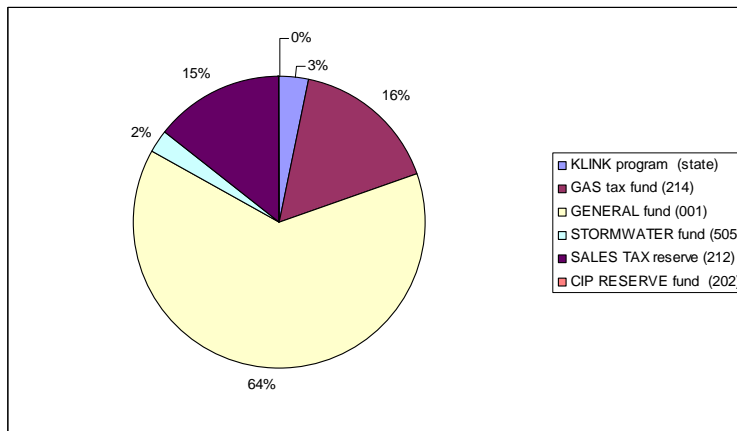
### 2010 flat funding

Total funding:  
\$4,766,419



### 2010 needs

Total funding:  
\$5,850,000



**POTENTIAL ROAD RECONSTRUCTION PROJECTS  
FOR CAPITAL SALES TAX INITIATIVE**

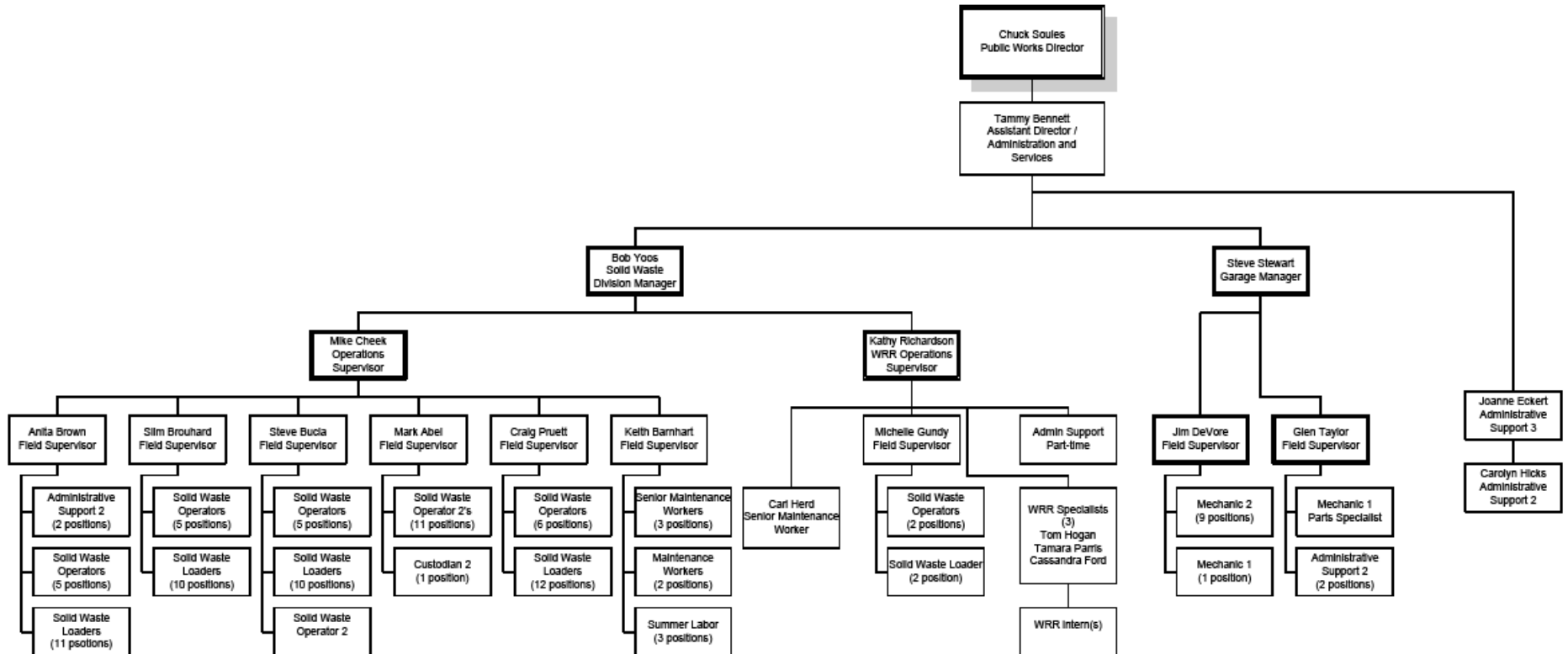
By: cfs

updated 4-2009

| Road                         | Segment                  | Approx. Length (ft) | PCI       | Existing X-Section | Proposed X-Section | Major Intersection Improvements | Approx Unit Cost for \$/LF | Approx Cost Intersection \$/Each | Approx Road Const Cost (2007 \$) | No. of Properties Affected | Esmt Costs Est Avg \$1500/tract | Est Design, Survey ,Testing Costs | Utility Relocations (1% of const) | Estimated Total Project Cost |
|------------------------------|--------------------------|---------------------|-----------|--------------------|--------------------|---------------------------------|----------------------------|----------------------------------|----------------------------------|----------------------------|---------------------------------|-----------------------------------|-----------------------------------|------------------------------|
| 19th Street                  | Iowa to Naismith         | 2600                | 62.5      | 2 lanes            | 3 lanes            |                                 | \$1,050                    |                                  | \$2,730,000                      | 17                         | \$25,500                        | \$341,250                         | \$27,300                          | \$3,124,050                  |
|                              | Naismith to Indiana      | 2400                | 31.5      | 2 lanes            | 3 lanes            |                                 | \$1,050                    |                                  | \$2,520,000                      | 26                         | \$39,000                        | \$315,000                         | \$25,200                          | \$2,899,200                  |
|                              | Louisiana to Tennessee   | 700                 | 31.5      | 2 lanes            | 3 lanes            |                                 | \$1,050                    |                                  | \$735,000                        | 7                          | \$10,500                        | \$91,875                          | \$7,350                           | \$844,725                    |
|                              | Tennessee to Mass        | 1000                | 51.1      | 2-3 lanes          | 3 lanes            |                                 | \$1,050                    |                                  | \$1,050,000                      | 11                         | \$16,500                        | \$131,250                         | \$10,500                          | \$1,208,250                  |
| 15th Street/BBP              | Monterey Way to Kasold   | 2680                | 74/82.2   | 4-lane, undiv      | Same               |                                 | \$1,200                    |                                  | \$3,216,000                      | 15                         | \$22,500                        | \$402,000                         | \$32,160                          | \$3,672,660                  |
|                              | Iowa to Crestline        | 3320                | 71.4      | 4-lane, div        | Same               |                                 | \$1,275                    |                                  | \$4,233,000                      | 6                          | \$9,000                         | \$529,125                         | \$42,330                          | \$4,813,455                  |
|                              | Crestline to Kassold     | 1920                | 100       | 4-lane, div        | Same               |                                 | \$1,275                    |                                  | \$2,448,000                      | 15                         | \$22,500                        | \$306,000                         | \$24,480                          | \$2,800,980                  |
| Kasold                       | 15th to Harvard          | 2640                | 46.3      | 4-lane, div        | Same               |                                 | \$1,275                    |                                  | \$3,366,000                      | 28                         | \$42,000                        | \$420,750                         | \$33,660                          | \$3,862,410                  |
|                              | Harvard to 6th           | 2800                | 46.3      | 4-lane, div        | Same               |                                 | \$1,275                    |                                  | \$3,570,000                      | 30                         | \$45,000                        | \$446,250                         | \$35,700                          | \$4,096,950                  |
|                              | 6th to Trail             | 1200                | 53        | 4-lane, undiv      | Same               |                                 | \$1,200                    |                                  | \$1,440,000                      | 21                         | \$31,500                        | \$180,000                         | \$14,400                          | \$1,665,900                  |
|                              | 23rd to 31st             | 4700                | 41        | 4-lane, undiv      | Same               |                                 | \$1,200                    |                                  | \$5,640,000                      | 80                         | \$120,000                       | \$705,000                         | \$56,400                          | \$6,521,400                  |
|                              | Trail to Peterson        | 4340                | 50        | 4-lane, div        | Same               |                                 | \$1,275                    |                                  | \$5,533,500                      | 77                         | \$115,500                       | \$691,688                         | \$55,335                          | \$6,396,023                  |
| Wakarusa                     | 23rd to 18th             | 3320                | 77.7      | 4-lane, undiv      | Same               |                                 | \$1,200                    |                                  | \$3,984,000                      | 26                         | \$39,000                        | \$498,000                         | \$39,840                          | \$4,560,840                  |
|                              | 18th to 15th/BBP         | 1940                | 77.7      | 4-lane, undiv      | Same               |                                 | \$1,200                    |                                  | \$2,328,000                      | 15                         | \$22,500                        | \$291,000                         | \$23,280                          | \$2,664,780                  |
|                              | 15th to Legends          | 2160                | 87.4      | 4-lane, undiv      | Same               | 1- Legends                      | \$1,200                    | \$1,000,000                      | \$3,592,000                      | 17                         | \$25,500                        | \$449,000                         | \$35,920                          | \$4,102,420                  |
|                              | Legends to 6th           | 3140                | 87.4      | 4-lane, undiv      | Same               | 1- Harvard                      | \$1,200                    | \$1,000,000                      | \$4,768,000                      | 27                         | \$40,500                        | \$596,000                         | \$47,680                          | \$5,452,180                  |
| 31st Street                  | Ousdahl to End City Sect | 1820                | 78.8/52.8 | 4-lane, undiv      | Same               |                                 | \$1,200                    |                                  | \$2,184,000                      | 4                          | \$6,000                         | \$273,000                         | \$21,840                          | \$2,484,840                  |
|                              | Haskell to O'Connell     | 5280                |           |                    |                    |                                 | \$1,200                    |                                  | \$6,336,000                      |                            |                                 | \$792,000                         | \$63,360                          | \$7,191,360                  |
| 15th Street                  | Haskell to Cemetery      | 1950                | 50        | 2lane/bike         | Same               |                                 | \$1,050                    |                                  | \$2,047,500                      | 24                         | \$36,000                        | \$255,938                         | \$20,475                          | \$2,359,913                  |
| 19th Street                  | Harper to Maple          | 1400                | 56        | 2lane/ bike        | same               |                                 | \$1,050                    |                                  | \$1,470,000                      | 50                         | \$75,000                        | \$183,750                         | \$14,700                          | \$1,743,450                  |
| 13th Street                  | Brooke to Connecticut    | 3500                | 42/58     | 2lane w/ Park      | same               |                                 | \$1,200                    |                                  | \$4,200,000                      |                            | \$0                             | \$525,000                         | \$42,000                          | \$4,767,000                  |
| 14th Street                  | Connecticut to Mass      | 1100                | 36.5      | 2lane              | same               |                                 | \$1,050                    |                                  | \$1,155,000                      | 6                          | \$9,000                         | \$144,375                         | \$11,550                          | \$1,319,925                  |
| 3rd Street                   | Locust to North          | 3000                | 33        | 2lane              | same               |                                 | \$1,050                    |                                  | \$3,150,000                      | 37                         | \$55,500                        | \$393,750                         | \$31,500                          | \$3,630,750                  |
| 8th Street                   | Connecticut to RR        | 1300                | 30        | 2lane              | same               |                                 | \$1,050                    |                                  | \$1,365,000                      | 0                          | \$0                             | \$170,625                         | \$13,650                          | \$1,549,275                  |
| 9th Street                   | Connecticut to Delaware  | 1300                | 45        | 2lane              | same               |                                 | \$1,050                    |                                  | \$1,365,000                      | 0                          | \$0                             | \$170,625                         | \$13,650                          | \$1,549,275                  |
| Bob Billings/K10 Interchange |                          | N/A                 | N/A       | N/A                | N/A                |                                 |                            |                                  | \$14,000,000                     | All R/W appears to exist   |                                 | \$1,750,000                       | \$140,000                         | \$15,890,000                 |
|                              |                          |                     |           |                    |                    |                                 |                            |                                  | \$88,426,000                     |                            | \$808,500                       | \$11,053,250                      | \$884,260                         | \$101,172,010                |
|                              |                          |                     |           |                    |                    |                                 |                            |                                  |                                  |                            |                                 | <b>TOTAL</b>                      |                                   |                              |

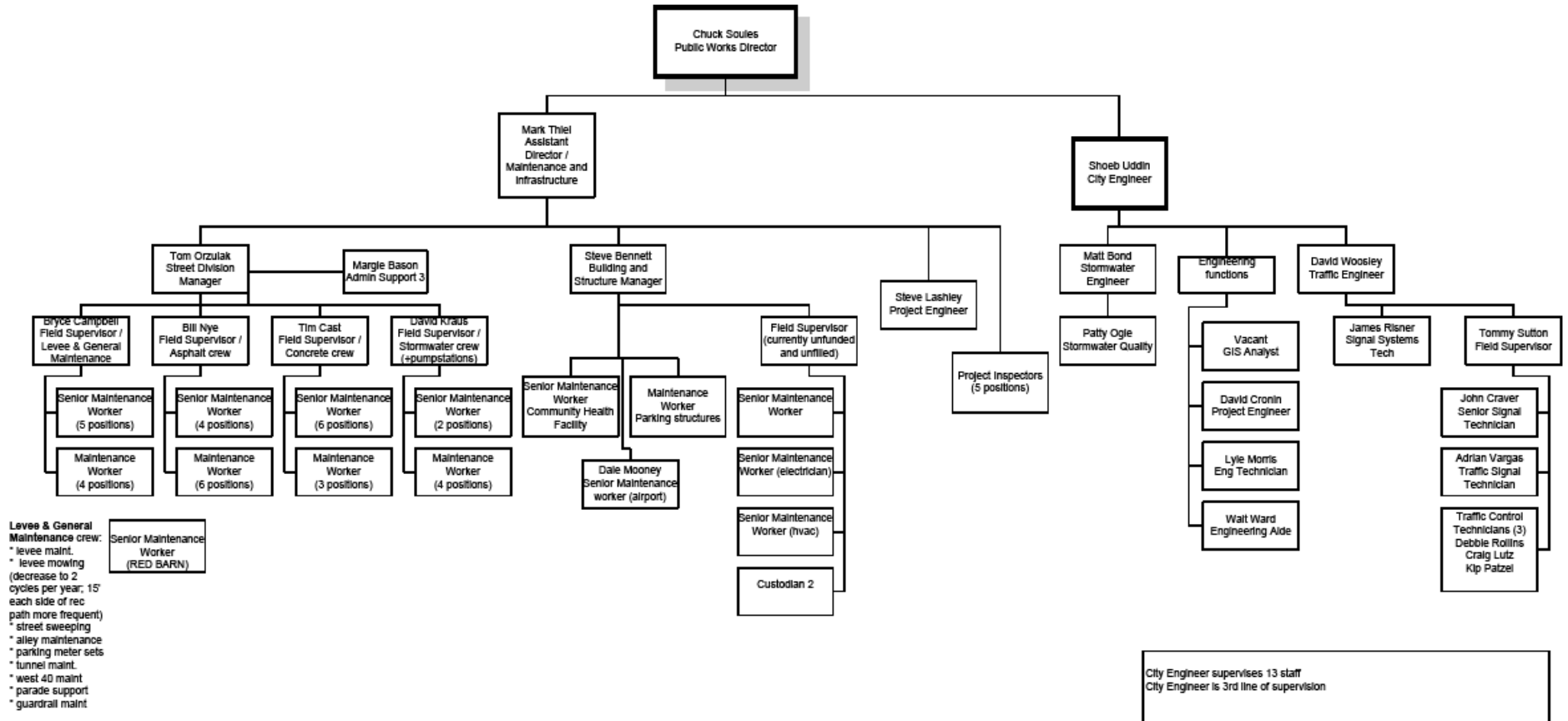
- Assumptions:** 1. All inspection and construction contract administration will be performed by city personnel.  
 If provided by a consultant add 5% of construction cost to project estimate.  
 2. Most R/W exists along all corridors. Majority of property acquisition will be construction easements.  
 3. Major utility relocations will likely be at expense of owning utilities. However, minor relocations within easements may be required.

# Public Works Department



NOTES:  
 Assistant Director supervises total work group of 119  
 4th Full level of supervision  
 Director = 5th full level of supervision

# Public Works Department



NOTES:  
 Assistant Director / Maintenance and Infrastructure supervises total work group of 51  
 Assistant Director is 3rd full line of supervision  
 Director is 4th line of supervision

City Engineer supervises 13 staff  
 City Engineer is 3rd line of supervision