

## STAFF COMMENTS

October 12, 2015

The City of Corpus Christi has a street reconstruction problem that is substantially larger than the money we have and will probably not be completely addressed within a generation. Hence, the current goal is to start the process of fixing the streets even though there is complete agreement that the work will never be finished.

If we intend to spend nothing on the project, then nothing more should be done.

However, it is very likely that \$10 to \$20 million per year will be allocated to street reconstruction. It is precisely because these are small amounts in relation to the total need that issues of efficient spending and prioritization become so important.

Repairing the streets has an engineering component, an accountability component, and an information sharing component. Each of these elements must be assessed; some may be improved. In no way do we engage in this task to pass judgement on current street efforts. This is a process of evolutionary progress.

What is necessary is a plan. The process of making the plan vets ideas so that good ones can be elevated and bad ideas discarded. It provides complete and coherent consideration of the activity with assignment of responsibilities. It allows City Council, City Staff, contractors, and taxpayers to be on the same page with regard to the cost and the expected results. Any plan must be specific, actionable, and produce tangible results.

The plan is not a forever thing; it will change based on a variety of factors and for good reasons. This is healthy and does not invalidate the need for a plan.

Planning starts by looking at the recent activities. It is the right starting point because one presumes these current activities reflect the current understanding that exists within the City with respect to engineering, accountability, and information sharing. I presume that because this discussion solely relates to well defined street activities that have already occurred, that the impact on City Staff will be negligible because the information is at their fingertips.

Irrespective of any additional funding for any street related project, the City should benefit from this review because the City already spends significant amounts on street construction and maintenance.

However, this largest impact occurs in the near future when tens of millions of new funding is committed for reconstruction. The most important aspect of planning for this expansion of street activity is for City Staff to specifically propose what gets done with new dedicated street reconstruction budget. I propose that City Staff plan for only one year ahead. By doing so, it is not a waste of resources, because if any funding is to occur, virtually everyone agrees that near-term planning is a necessary first step. The quality and efficiency of their plan will be judged on its own merits, and the exercise itself will likely cause improvement.

I submit this to the City Council as the charging document to define a course of action for the Infrastructure Committee, City Staff, and City Council. I have met with many, many stakeholders in the street process, and this incorporates the valuable feedback that I have received. It remains an open document to be improved.

We will showcase the successes before asking for new money from the taxpayers. We will fix what is wrong before scaling-up processes to ensure that tens of millions of dollars are spent wisely.

Faithfully submitted,

Andy Taubman

## Deliverables of the Infrastructure Committee

1. Information communications standard for overall City streets  
**NOT RECOMMENDED FOR AD HOC COMMITTEE: CURRENTLY BEING WORKED ON BY STAFF.** Although not a part of the Residential Reconstruction program, a total, comprehensive, street data base is a valuable tool and currently a goal of the Street Operations Department. Development of this data base is an extensive process and will take significant time and coordination. Some of the information identified below is maintained by the Street Operations Department and will be incorporated into, or linked to, GIS as part of the recently approved Automated Pavement Condition Index (PCI) Survey contract.
  - a. GIS map of City streets that link to the following if they exist:
    - i. Information related to last repaving (e.g. when, who)
      - City staff is currently working towards incorporating this information into the City's work management software (Maximo).
    - ii. Current condition of surface
      - This information is kept within the City's PAVER database.
    - iii. Current condition of utilities/subsurface
      - Utilities department maintains records of utilities infrastructure conditions.
    - iv. Current maintenance/reconstruction workplan
      - Approved Street Preventative Maintenance Program (SPMP) workplan locations are maintained in GIS.
      - Bond projects are also in the City's Geographic Information System (GIS).
    - v. Budget for maintenance/ reconstruction workplan
      - Monetary/budget information is currently not an attribute within GIS.
    - vi. Estimated timing for maintenance/ reconstruction workplan
      - Scheduling of Bond projects is maintained in the City's Project Management System.
      - Scheduling of contracted maintenance is at the discretion of the contractor.
      - Reactive work by City staff is maintained in the Maximo system.
    - vii. Log of street cuts by third parties
      - Development Services maintains records of third party street cuts as part of the permitting process.
    - viii. Log of last documented review (e.g. automated evaluation)
      - Street inspections for PCI purposes are recorded daily in the PAVER system.
    - ix. Log of key dates (e.g. warranty expiry)
      - This information is maintained by Engineering Services.
    - x. Log of Out of Cycle repairs (e.g. pothole repair)
      - This information is maintained in the Maximo system.
    - xi. Inventory of street characteristics that match potential variance options
      - Factors which can impact the variability of work performed on streets, such as PCI scores and underlying utility conditions, may eventually be available on the GIS maps as the comprehensive data base is developed.

- b. Publish all reporting described herein, and roll-up report of Project Units activities
  - This is a valuable information systems project, but integrating different information systems is long-term in nature.
  - Public access to the GIS data base is available at [www.cctexas.com/customer-service-center/maps](http://www.cctexas.com/customer-service-center/maps).
2. Reporting with respect to future direct street work

**NOT RECOMMENDED FOR AD HOC COMMITTEE: CAN BE EVALUATED DURING THE PROPOSED ENGINEERING SERVICES (ES) DEPARTMENT EFFICIENCY & EFFECTIVENESS ASSESSMENT.** All activities are currently addressed by City standards and Codes. These processes can be further evaluated by the ES Assessment.

  - a. Street acceptance and documentation standards
    - Development Services has standards for construction which are published in the Unified Development Code (UDC).
    - Engineering Services performs inspections to confirm that contractors are following construction standards and are meeting project plans, specifications, terms and conditions.
    - Progress payments are authorized on all City contracts per local government code and retainage is withheld until acceptance of the project.
    - Performance and Payment bonds are executed to guarantee completion of projects and protection of payments to all suppliers and subcontractors.
    - A minimum one year warranty period is established upon substantial completion of a project.
    - Warranty inspection occurs approximately 30 days prior to expiration of the warranty.
  - b. Budget variance analysis standards
    - Both Engineering Services and Street Operations continuously perform analyses regarding project budget versus project execution.
  - c. Change order documentation and process standards
    - Change order documentation and process standards are set by law.
    - Council recently approved changes to a policy regarding reporting of Change Orders. This includes quarterly reporting of all change orders as well as immediate reporting of any Change Order authorized by the CM which exceeds 75% of a project Contingency.
    - The City follows all regulatory requirements regarding Change Orders.
  - d. Sources and uses of funding report standards
    - The use of funds from various funding sources is set by law.
    - The City follows all regulatory requirements in regards to the use of funds.
    - Special Revenue Fund 1041 is dedicated to street maintenance.
    - Special Revenue Fund 1042 is dedicated to residential street reconstruction.
    - Bond projects are funded by citizen-approved Bonds, and paid for through property tax revenues.
    - Utilities work is funded through utility rates.
    - Other projects are funded through General Obligation bonds and are paid for through property tax revenues.
  - e. Check register from dedicated funds
    - Check registers are available at [www.cctexas.com/government/financial-services/check-registers](http://www.cctexas.com/government/financial-services/check-registers).

3. Reporting with respect to future indirect street work

**NOT RECOMMENDED FOR AD HOC COMMITTEE: CAN BE EVALUATED DURING THE PROPOSED ENGINEERING SERVICES (ES) DEPARTMENT EFFICIENCY & EFFECTIVENESS ASSESSMENT.** The City's budget process establishes the overhead costs associated with administration of maintenance efforts. Staff adheres to City policy regarding management of budgets and development of the General Fund budget which is approved by Council. "Out of cycle" maintenance as a result of premature failures is not currently funded. "Out of cycle" maintenance as a result of recurring failure is funded out of Street Operations.

a. Overhead allocation report standards

- Engineering Services budgets a standard percent for overhead on construction projects and manages the projects to control these costs within the budgeted amount.

b. Street repair worklist (e.g. out of cycle maintenance) standards

- Currently, the City's Call Center takes calls from citizens citywide and generates work orders in the City's Maximo work management system for "out of cycle" (reactive) work.
- Street Operations assesses the work orders and prioritizes them according to need.
- Reactive work performed by Street Operations staff is performed as resources and conditions warrant.

c. Street repair cost (e.g. out of cycle maintenance) standards

- Currently, "out of cycle" maintenance (reactive work) is tracked in Maximo.
- Work orders document the cost associated with each job.
- Departmental reactive work is budgeted in the Street Operations Department.

4. Decision support methodology

**RECOMMENDED FOR AD HOC COMMITTEE.** Currently, many of the items below are performed by staff. However, review and recommendations by the Residential Street Reconstruction Ad Hoc Committee may be of value.

a. Review street engineering standards and understand variance options

- The City's "Standard Construction Specifications PDF Package" is available at <http://engineercc.com/Processes/Standard Specifications>.

b. Identify assumption in-field checklist/activities to minimize maintenance becoming reconstruction or other errors immediately prior to letting contract for street work

- Until pavement is actually removed, it is impossible to know with 100% certainty the underlying condition of the base and sub-base of a street even with testing.
- Of the approximate 200 streets that have been completed under the SPMP, five (5) streets have resulted in more extensive repairs due to unanticipated base and subgrade conditions.
- Budgeting for contingencies or allowances is standard procedure due to the uncertainties of site conditions.
- The recently approved Automated PCI Survey contract will provide a timely and accurate snapshot of current city street conditions.
- Certain situations such as excessive rainfall can cause a street in Fair condition to decline precipitously. The City is implementing changes within the SPMP program to require more testing (coring) of streets prior to maintenance work

- beginning.
- c. Methodology and criteria for upfront cost v. lifecycle cost for decision making between paving methods
    - At Council's request, Engineering Services is bidding Bond street projects for both Hot Mix Asphalt Concrete (HMAC) and Concrete.
    - Construction contracts will be awarded to the lowest responsible & responsive bid, regardless of the pavement material.
    - Engineering Services is currently assessing the lifecycle maintenance costs of concrete versus HMAC for cost analysis purposes.
  - d. Develop standard costing model to set standards (e.g. cost per foot per type of material). Periodic update to reflect market cost and current contract pricing
    - Materials costing is volatile; a standard costing model to establish cost per foot, for example, would be fluid and based on market conditions.
    - Proper estimation is essential.
    - Cost per square foot by material cannot be universally applied to all projects because it does not take into account subsurface conditions and other factors.
    - Engineering Services routinely compares bid amounts to existing/previous contracts and TxDOT or other cities' pricing information to be used for estimating future project costs.
  - e. Identify potential new contractor / engineer / service provider options
    - The City currently posts RFQs and RFPs on CivCast in order to maximize exposure and increase the number of entities available to provide responses.
    - CivCast is a web-based purchasing system that can be accessed by anyone with an internet connection.
    - Additional suggestions for bringing in new contractors could be a valuable product.
  - f. Identify and catalog factors other than PCI which might change prioritization of street activity
    - Many factors are involved in evaluation of streets for either reconstruction or maintenance. PCI score is only one aspect of the evaluations.
    - The selection criteria matrix for bond projects has been approved by City Council.
    - The selection criteria (guiding principles) for SPMP candidate streets has been approved by City Council.
    - The Transportation Advisory Commission (TAC) recently developed an update to the existing bond street selection matrix.
5. Inventory of current street projects currently active within the City
- NOT RECOMMENDED FOR AD HOC COMMITTEE: CURRENTLY PERFORMED BY STAFF.** This inventory of information is similar in nature to the comprehensive street data base requested and described in Item #1. It is not directly associated with the Residential Reconstruction program, but is a goal towards which the Street Operations Department is working.
- a. Bond program
    - Inventory kept in City's Project Management Software
    - Reported on Engineering Services website (<http://engineercc.com>)
  - b. Maintenance program
    - Inventory on SPMP maintained in GIS
    - Reported on SPMP webpage ([www.cctexas.com/government/street-](http://www.cctexas.com/government/street-)

- operations/preventative-maintenance-smp)
  - c. Reconstruction program
    - Inventory kept in City's Project Management Software
    - Arterial/Collector streets reported on Engineering Services website
  - d. Identify third party, inter-departmental, or indirect dependencies
    - Project management involves identifying impacted third parties.
    - Project design requires identification of impacted departments.
    - Traffic control plans are one method in which indirect impacts are assessed and addressed.
6. Review of recent street maintenance / reconstruction
- NOT RECOMMENDED FOR AD HOC COMMITTEE: CAN BE EVALUATED DURING THE PROPOSED ENGINEERING SERVICES (ES) DEPARTMENT EFFICIENCY & EFFECTIVENESS ASSESSMENT.** . City departments are responsible for management of their operating budgets. The budget for the SPMP (maintenance) is part of Street Operation's operating budget.
- a. Financial accounting for expenditures since program start / review of dedicated fund expenditures
    - The SPMP is budgeted within its own unique division and expenses and revenue associated are used only towards the program.
    - Street Operations Department closely monitors execution of the SPMP program against program budget and tracks expenditures.
    - Engineering Services manages projects for execution within their budgets.
  - b. Publication of completed work description
    - Engineering Services updates the status of Bond projects on its website quarterly.
    - Street Operations updates the status of SPMP annual work plans on its webpage monthly.
  - c. Review of contracting methods and outcomes
    - Engineering Services utilizes many procurement strategies to achieve the best result for the City, i.e., tradition Design-Bid-Build, Design-Build, Indefinite Delivery Indefinite Quantity (on-call services), and Construction-Management-At-Risk.
  - d. In-field sample review of completed work
    - Although actual construction inspection is done by Engineering Services, Street Operations does monitor completed work.
    - The City uses TxDOT specifications and quality control (or similar) for Bond projects.
7. Miscellaneous
- a. Design elements of dedicated fund for street reconstruction
    - The Financial Policies Resolution which approved as part of the annual Budget Process identifies sources and amounts of funds for the Residential Reconstruction Special Revenue Fund 1042.
    - Currently identified sources of funds include the General Fund and Industrial District revenues.
    - A scheduled contribution of \$1 Million per year from the General Fund for a period of three years was initiated in Fiscal 2015.
    - Beginning in Fiscal 2016, 5% of the revenue from the Industrial District will be contributed to Fund 1042.
    - In Fiscal 2021, one third of one percent (.33%) of General Fund revenue (less Grants and

- Industrial District revenues) will be contributed to Fund 1042.
  - In Fiscal 2022, two thirds of one percent (.66%) of General Fund revenue (less Grants and Industrial District Revenue) will be contributed to Fund 1042.
  - In Fiscal 2023, one percent (1%) of General Fund Revenue (less Grants and Industrial District Revenue) will be contributed to Fund 1042.
- b. Outreach to internal and external utilities to make sure they are in the loop
- Coordination with all utilities is standard operating procedure for both Bond projects and the SPMP.
  - This coordination takes place both in the design phase and the construction phase.

City Council will direct staff to prepare the following:

1. Detailed spending plan for existing street maintenance program:  
**NOT RECOMMENDED FOR AD HOC COMMITTEE: CURRENTLY PERFORMED BY STAFF.**  
The SPMP, begun in January 2014, performs planned maintenance on streets in good condition. The procurement mechanism for this program is an Indefinite Delivery Indefinite Quantity (IDIQ) contract. IDIQ contracts are used to maximize flexibility for both the City and the contractor(s) in that a contract for work of a specific nature is executed, without defined schedules and quantities. IDIQ contracts work well for preventative maintenance in that site conditions and weather constraints can have a significant impact on the actual execution of the project. As well, IDIQ contracts minimize administrative and engineering costs. As a refinement to the SPMP, the City is now tracking costs on a street by street basis.
  - a. Next year's budget for street maintenance is approximately \$11 million
    - \$11 Million is the budgeted Street Maintenance Fee revenue.
  - b. For any work associated with the amount of funds described immediately above, identification of logical street segments that need to be serviced as a single project, each one being a "Project Unit"
    - As per City Ordinance, the annual SPMP Work Plan is developed and brought to Council for approval.
    - The SPMP is being revised to track costs by street.
  - c. Assessment of current condition surface. Assessment of underground utility condition and requirements
    - Street selection for the SPMP is based on six Council approved Guiding Principles, of which PCI score is one element.
    - Utilities departments review and assess the candidate SPMP streets prior to finalization of the work plan.
    - Streets identified as having utility concerns are not included in the work plan.
  - d. Detailed, written lifecycle plan for each Project Unit
    - The City has adopted a 7-14-21-30 lifecycle program.
    - There is currently a lack of sufficient funding to properly implement this lifecycle based program.
  - e. Budget for execution of each Project Unit including estimate of all hard costs, soft costs and overhead and designation as insider or outsider payments
    - The SPMP uses an IDIQ procurement strategy for flexibility and cost management.
    - Budgeting and planning is on a "Delivery Order" basis, not a street-by-street basis.

- The SPMP program is budgeted within its own org (12415) and all hard and soft costs as well as overhead are identified within the budget.
  - f. Timing / ordering of project within queue
    - Timing and/or ordering of work within a Delivery Order is at the contractor's discretion.
    - Delivery Orders are formulated to make best use of time and materials.
    - Streets within a Delivery Order are identified by proximity and square yardage to ensure a proportionate distribution of work across the Delivery Orders and within the budget.
  - g. Proposed contracting plan
    - Street Operations currently works with Engineering Services regarding contracting for services for the SPMP.
    - The contracting plan is based on City needs.
    - A/E contracting for work plan / delivery order development is performed annually.
    - Rebid of construction services is determined based on current contract terms, market opportunities, and contractor performance.
2. Detailed spending plan for future street reconstruction:
- RECOMMENDED FOR AD HOC COMMITTEE.** We believe Mr. Taubman is referencing a Residential Street Reconstruction program in this item. Staff has not yet developed this program. Development of the program and street selection criteria is well within the purview of the Ad Hoc Committee. Taking a neighborhood perspective may be necessary in order to address drainage issues across drainage basins. This program development is question number B.4 of the Draft Resolution.
- a. Assume a newly created \$10 to \$15 million fund for one year of street reconstruction
  - b. For any work associated with the amount of funds described immediately above, identification of logical street segments that need to be serviced as a single project, each one being a "Project Unit"
    - This can be addressed by the Committee.
  - c. Detailed, written reconstruction plan for each Project Unit
    - Development of a detailed, written reconstruction plan for each street segment will require the expenditure of funds in advance of the availability of reconstruction funds.
    - A reconstruction plan will require testing, design, utility condition assessment, etc.
    - Given current staffing conditions, this work would need to be contracted out.
    - Funding sources would have to be identified in order to accomplish this task before construction contracts can be let.
  - d. Budget for reconstruction of each Project Unit including estimate of all hard costs, soft costs and overhead and designation as insider or outsider payments
    - Development of a detailed, written reconstruction plan for each street would routinely include development of a budget which covers all of the above items.
    - It is not cost effective to perform the detailed planning and design above until a funding level and source has been clearly identified and assigned.
  - e. Proposed contracting plan
    - This can be addressed by the Committee.
  - f. Future maintenance requirements for newly reconstructed streets
    - This can be addressed by the Committee.