Advisory Committee: Minutes of Regular Meeting – August 25, 2015

IN ATTENDANCE:
Gilbert A. Herrera, Chair – **Present**
Jeri Brooks – **Present**
Frances Castaneda Dyess – **Present**
Kathryn Easterly – **Present**
Scott Elmer – **Present**
Vernita Harris – **Present**
Bert Keller – **Present**
Jeff Ross – Absent, with notice
Edward Taravella – Absent, with notice
Council Member Oliver Pennington, Ex-Officio – Absent

1. **Call to Order / Welcome**

Chairman Gilbert Herrera called the meeting of the ReBuild Houston Advisory Committee (RHAC) to order at 10:44 a.m. and thanked all in attendance.

2. **Approval of the Minutes**

Motion to approve the June 23, 2015 meeting minutes was made by Mr. Bert Keller and seconded by Ms. Kathy Easterly. Motion carried.

3. **Workshop on Street Maintenance**
   "Pavement Management – Past, Present and Future"

Mr. Dale Rudick (Director of Public Works and Engineering) introduced Mr. Eric Dargan (Deputy Director of the PWE Street and Drainage Division). Mr. Dargan began his presentation with an overview of pavement management. He stated that pavement management is the process of planning the maintenance and repair of a network of roadways in order to optimize pavement conditions over the entire network with the funds available; essentially, understanding the total inventory of streets in the City. He also stated that the Division's objectives were to communicate a qualitative indicator of overall condition; to determine function and structural conditions; to prioritize and program road projects; to quantify pavement system's funding needs; and lastly, to identify performance indicators for pavement rehabilitation and maintenance projects. Mr. Dargan stated that by collecting such extensive data, PWE is able to deduce what can be done each fiscal year.

Mr. Dargan shared that in the past, PWE utilized a much more subjective means for infrastructure maintenance management which was to send out individuals to physically assess streets. There were several challenges for this sort of management system including its high level of subjectivity; limited human resources; score consistency; concerns for PWE team member safety; and it was a very time-consuming method of evaluation.

The current method of infrastructure maintenance management relies on the Street Surface Assessment Vehicle (SSAV). The SSAV enables PWE to conduct a much more objective assessment with a more consistent PCR score. This process tool, which takes approximately one year to assess city streets, ultimately provided PWE with an objective database of information to aid in identifying the worst first and, in turn, identify where limited funds should be spent. Mr. Dargan noted that the more spending that goes into maintenance and preventative treatments (such as filling potholes or overlays) over time, less spending becomes necessary for full reconstruction projects.

With regard to the future, Mr. Dargan stated that PWE has done extensive research on the cost of purchasing a new SSAV; however, it was determined to be more cost-effective to enter into a service contract with Data Transfer Solutions (DTS) due to quickly changing technologies. DTS has the most current technology for such vehicles and can also provide data collection (including more lane passes and asset tagging) and analysis (including field verification) at a lower cost. Mr. Dargan stated that the DTS vehicle is currently doing a run of the city. It is expected to have completed all major thoroughfares by November 2015 and all local streets by May-June 2016.

Chairman Herrera inquired about the cost to maintain the 16,000 lane-miles per year. Mr. Rudick shared with the group that an estimate from several years ago, indicated it would take approximately $650 million a year to keep up with the degrading streets and drainage systems consistent with anticipated service life of infrastructure. He also stated that, for many decades we have been underfunding street and drainage throughout the city.

Mr. Rudick stated that in FY 2014, for the first time since before 2002, the Street and Drainage Division received a budget increase by the Mayor and City Council of approximately $10.8 million as a direct result of ReBuild Houston funding. Mr. Dargan added that the Division budget was $40 million in 2002 and remained so through Fiscal Year 2014. He shared that now, when looking back through over those years, we witnessed a reduction in productivity, due to the ever rising cost of construction materials without an increased budget.

Mr. Dargan noted that at present, there are 1,175 pothole work orders in the 3-1-1 system down from 3,822 in February. These work orders consist of asphalt skin patches, partial depth asphalt pavement repair, full depth asphalt pavement repair and concrete panel replacements. Mr. Dargan stated that PWE is now seeking to provide more semi-permanent repairs that will last longer. The goal is to bring this total number of work orders to fewer than 1,000. All of these work order authorizations have been

for potholes larger than a pizza box. For those potholes smaller than a pizza box, the department fills approximately 50,000 per year using the single person pothole patch trucks.

Chairman Herrera asked for Mr. Dargan to provide an overview the overlay program process. Mr. Dargan stated that the process is as follows: data is gathered; then PWE reviews the data and goes out to do visual inspections of the areas/streets in an effort to further evaluate conditions; finally, PWE will identify the neighborhood(s) of greatest need. Mr. Dargan stated that PWE seeks to identify neighborhoods and not just individual streets due to it being the most financially prudent way to mobilize for a job. He then informed the Committee that overlay programming is planned for a year in advance and that PWE averages approximately 150 lane-miles of overlay a year. Mr. Dargan noted that PWE stopped using contract labor for the overlay program because PWE found that internal crews delivered a better quality product. Ms. Easterly stated that she and the University Super Neighborhood community have also noticed the difference and thanked Mr. Dargan and the PWE teams for making the decision to only use PWE crews. Mr. Dargan stated that PWE is constantly looking to improve efficiency and communication.

4. **PWE/ReBuild Houston 101 Tour Overview**

Mr. Rob Lazaro provided the Committee with an overview of the July 28 PWE 101 Tour and shared photos from the ReBuild Houston website (www.rebuildhouston.org). Ms. Frances Castaneda Dyess stated that prior to this event, she was unaware of an intern program that PWE participates in which introduces high school students to potential job opportunities within the Department. Mr. Herrera commented that the Baker St. Local Drainage Project is just one example of the many interesting projects being completed under ReBuild Houston that require coordination across multiple agencies.

5. **Executive Report**

Mr. Rudick informed the Committee that community meetings are scheduled for September throughout the city. He also stated that there still an opening for a workshop topic for the November meeting. No changes were requested.

Mr. Rudick provided an overview of the Drainage Utility Collections/Expenditures report and asked members to note that currently, $225.6 million is committed to projects. If the ReBuild Houston program was disbanded for any reason, the City of Houston would still be contractually obligated to fulfill these commitments.

6. **Old Business/New Business -** None

7. **Public Comments**

Ms. Virginia Gregory came to speak on behalf of the Spring Branch Civic Association and Super Neighborhood regarding structural flooding issues within her community.

8. **Adjourn:** Meeting adjourned at 12:08 p.m.

Attachments:

- Pavement Management: Past, Present, Future PowerPoint (August 25, 2015)
- Drainage Utility Collections/Expenditures – Inception to Date (as of July 31, 2015)

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ReBuild Houston Advisory Committee

PAVEMENT MANAGEMENT

PAST, PRESENT, FUTURE

AUGUST 25, 2015

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PAVEMENT MANAGEMENT

Process of planning the maintenance & repair of a network of roadways in order to optimize pavement conditions over the entire network with the funds available.

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THE PROCESS

- Pavement Network Defined
- Inspection, Data Gathering
- Condition Assessment
- Condition Prediction
- Work Planning

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THE OBJECTIVES

- Communicate a qualitative indicator of overall condition.
- Determine functional & structural conditions for purposes of routine monitoring/maintenance or planned corrective treatment.

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- Prioritize and program road projects.
- Quantify pavement system’s funding needs.
- Performance indicators for pavement rehabilitation & maintenance projects.

American Society for Testing and Materials (ASTM) Standards

- Rutting
- Raveling
- Alligator Cracking
- Transverse Cracking
- Longitudinal Cracking
- Joint Seal Present
- Patching
- Flushing
- Surface Deterioration
- Faulting
- Slab cracking*
- Slab Replacements*
- Ride Condition

(* concrete only)

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City of Houston - PAST

Infrastructure Maintenance Management Program (IMMP) - Manual system based on street distress identification and subjective quantification of severity level.

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Challenges of IMMP

- Subjectivity
- Available resources
- Time consuming
- Score consistency
- Safety

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PRESENT

Street Surface Assessment Vehicle (SSAV)

- Assessment program relies on machines & specific software to create an objective & more consistent PCR score.

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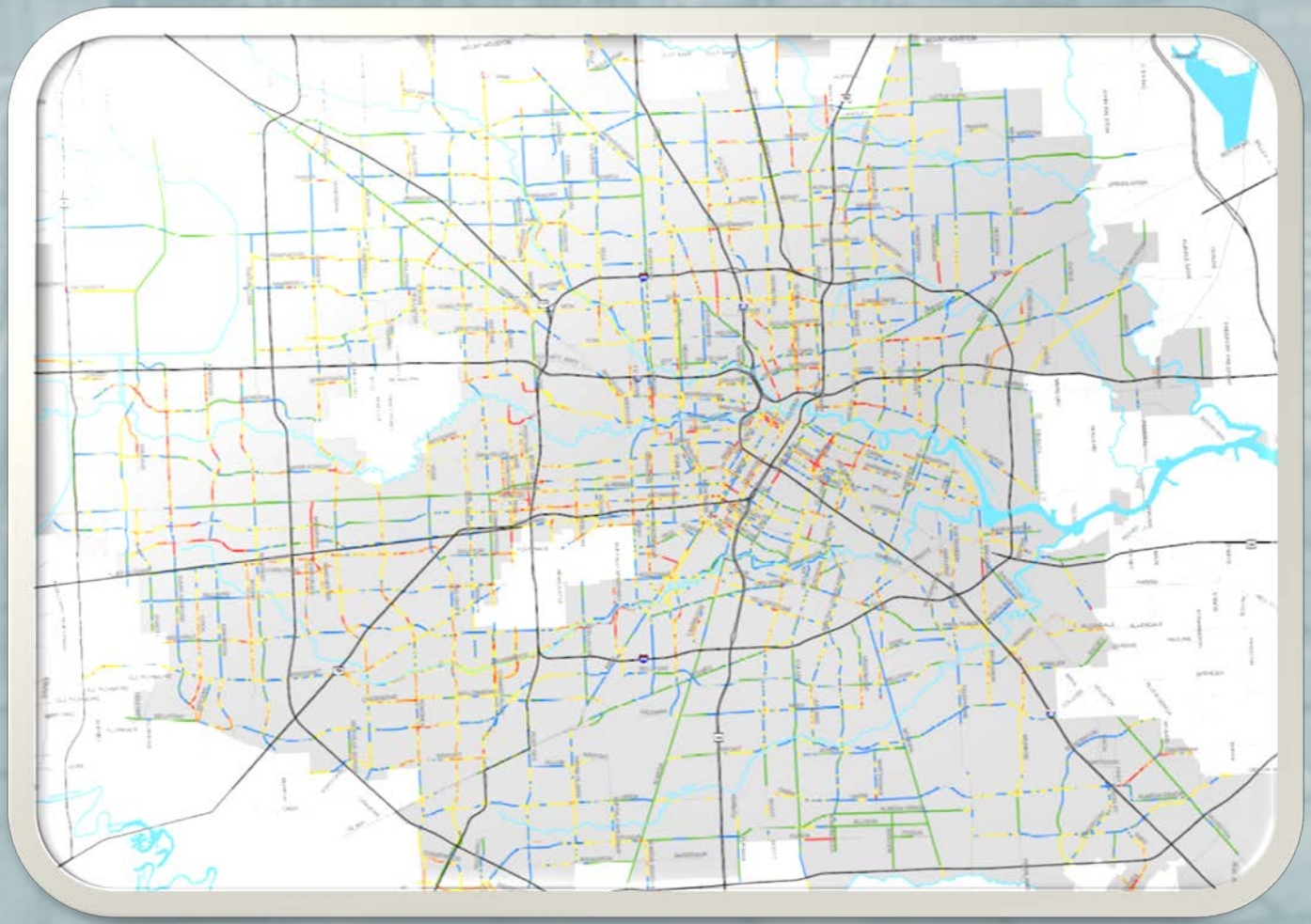
CITYWIDE ASSESSMENT



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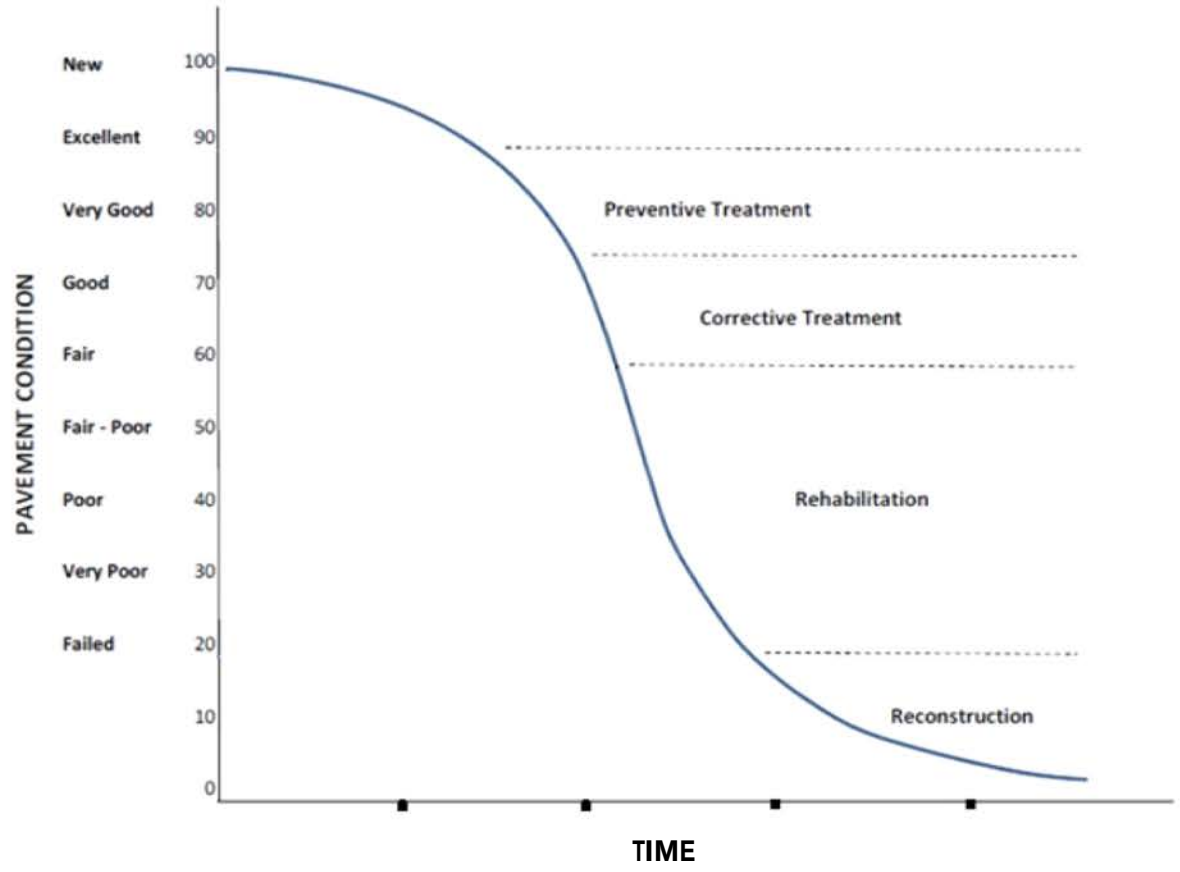
PCR (Pavement Condition Rating) – Starts at 100 and deducts for 2 index components:

- PCI (condition index) deduction
  - Rutting deduction – up to 15 points
  - Cracking deduction – up to 25 points
- IRI (roughness index) deduction – up to 30 points.

PCR = 100 – Condition – Roughness

(PCI) (IRI)



Source: American Association of State Highway and Transportation Officials (AASHTO)

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PCR PROVIDES A COMMON LANGUAGE USED TO:

- Guide & improve maintenance programs
- Assist development & plan for capital projects for streets

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FUTURE

- Changing Technologies
  - Data refinements
  - Reduction of limitations
- Greater understanding of pavement condition trends
- Gage long term performance
  - Against other jurisdictions
  - Against ourselves

CURRENT STATUS OF STREET ASSESSMENT VAN (SSAV)

- Crackscope no longer operational/repairable
- Profiler –Manufacturer issued End-of-Life Notice
- Profiler computer system (MDR-Mobile Data Recorder) based on Windows XP which is no longer supported & requires replacement
- Video Camera no longer supported & has low resolution compared to current technology
- Not recommended to invest $500k for new Crackscope technology

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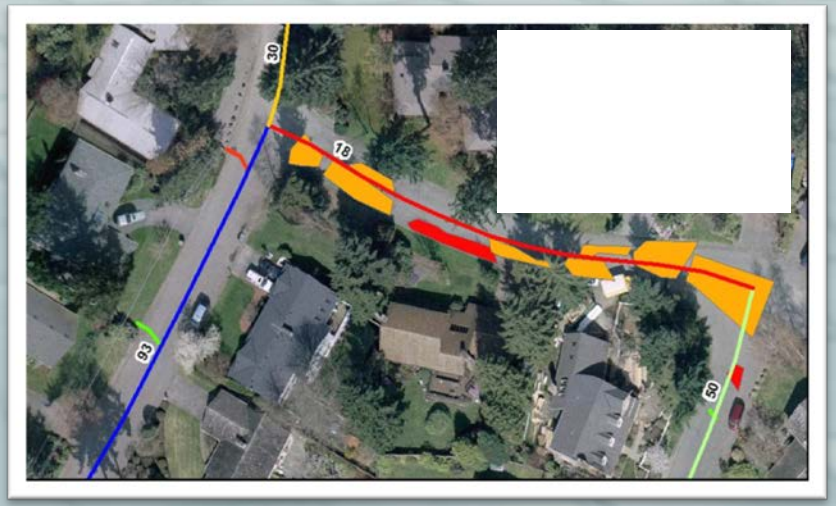
- NEW CONTRACT - Data Transfer Solutions (DTS) for data gathering



DTS deliverables

- ✓**Data Collection**
  - ✓ **More Lane Passes**
  - ✓ **Asset Tagging**
- ✓**Field Verification -** conducted to validate results
- ✓**Anomalies -** investigated and corrected
- ✓**Final Deliverables are mapped**

DTS Clients

IN TEXAS:

- Arlington, TX
- Bexar County, TX
- San Antonio, TX
- Fredericksburg, TX
- Duncanville, TX
- New Braunfels, TX
- Bastrop County, TX

OUTSIDE of TEXAS:

- Albuquerque, NM
- Jefferson County, CO
- Charleston County, SC
- West Palm Beach, FL
- Charlotte, NC
- Des Moines, IA
- El Campo, TX
- Lewisville, TX
- Brownsville, TX
- Little Elm, TX
- Sherman, TX
- Colleyville, TX
- Williamson County, TX

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SAME PCR ?

- YES, but with more detail
  - ✓ All ASTM distresses used in old IMMP are back & collected objectively with latest technology
  - ✓ Asphalt & Concrete distresses for pavement

PCR = PCI (Condition) + IRI (Roughness)

Alligator, Block & Longitudinal/Transverse Cracking; Raveling, Rutting, etc.

Smoothness of ride

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NEW ADDITION – Pavement Management Information System (PMIS) Software

- ✓Inventory of pavement condition (good, fair & poor)
- ✓Schedule maintenance of good roads to keep them in good condition.
- ✓Schedule repairs of poor and fair pavements as funding allows

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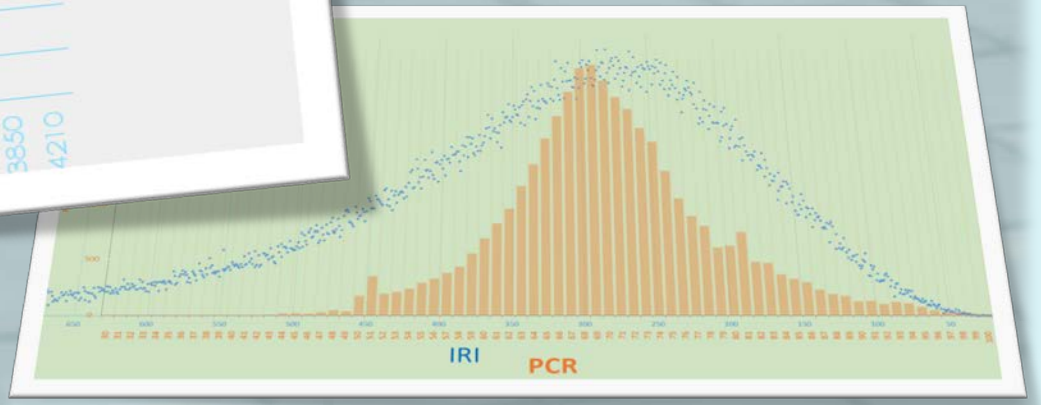
Future

Greater understanding of pavement condition and trends



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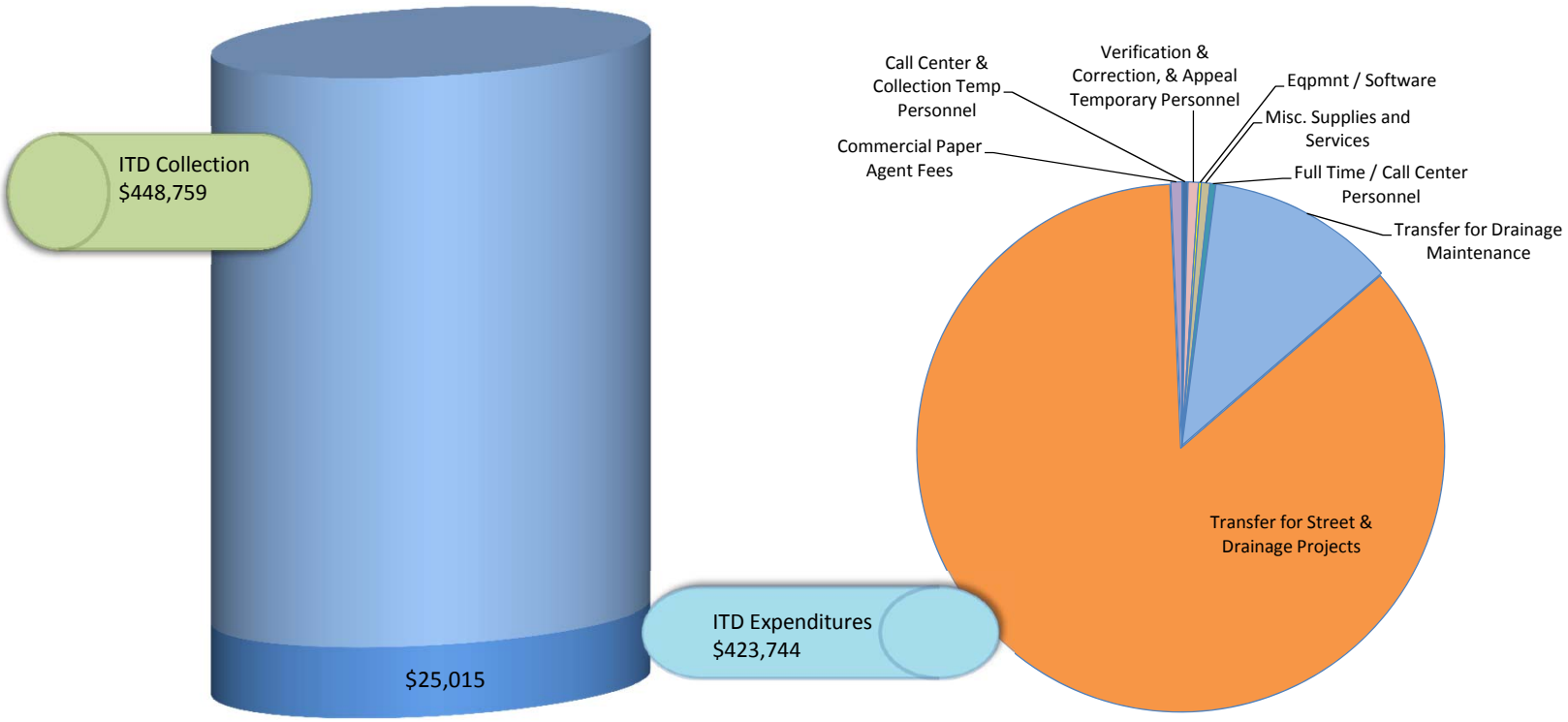
Drainage Utility
Inception to Date (ITD) Collections / Expenditures
($ in Thousands)
(As of July 31, 2015)



Note: Currently committed project costs total $225.6 Million.