Houston Airport System
Infrastructure Industry Day

April 27, 2017
Agenda

- 9:00 Introductory Comments & Office of Business Opportunity Overview
- 9:05 Welcoming Remarks
- 9:15 ITRP Overview
- 9:30 Infrastructure CIP FY 2018-22
  » Pavements & Grounds
  » FAR 139 Pavements
  » Facilities
  » Utilities
  » Signage & Wayfinding
  » Transportation & Parking Structures
  » Residential Noise Insulation Program
- 10:15 Building Standards Overview
- 10:30 Question & Answer Opportunity
- 11:00 Adjourn
Office of Business Opportunity

Jason McLemore
Deputy Assistant Director
Office of Business Opportunity
Jason.McLemore@houstontx.gov
Introductory Comments

• Industry Day – Housekeeping Matters
  – Registration
  – Facility Accommodations, Emergency Exits
  – Cell Phone Etiquette
  – Question & Answer Opportunity Will Follow Presentations
    • One Question Per Person
    • Introduce Yourself And Your Company
    • Follow-up Verbal Questions With Written Questions Via E-Mail
  – Please Network And Exchange Business Cards
Office of Business Opportunity

Overview

• Provide Contracting Opportunity Information To M/W/S/P/DBEs

• Serve As An Advocate For M/W/S/P/DBEs And Support Policies And Activities To Maximize Their Participation In Airport Contracts

• Assist Prime Contractors With Identifying Certified M/W/S/P/DBEs To Participate On Contracts As Sub-Contractors And Concessionaires

• Educate M/W/S/P/DBEs On How To Access HAS Contracting Opportunities
Office of Business Opportunity

Overview

• Monitor M/W/S/P/DBEs Utilization On Contracts With Participation Goals

• Ensure That Wage Standards Are Met On All Construction Projects With Federal And City Funding

• Host Small Business And Minority Forums For Networking

• Provide Information And Referral Services To M/W/S/P/DBEs
Welcoming Remarks

Bob Barker
Chief Development Officer
Infrastructure Division
Rober.Barker2@houstontx.gov
ITRP Overview
Current/Upcoming Project Information

Steven Andersen
IAH Terminal Redevelopment Program
Executive Program Manager
Steven.Andersen@houstontx.gov
ITRP Organization Model

Contractual Relationship

Houston Airport System

Executive Program Manager (EPM)

Manager of Design
Manager of Construction
Manager of Controls
Manager of Projects
Manager of Projects (Infrastructure)

Program Management Support Services (PMSS) Firms

Designers
Contractors
Specialist Services
ITRP Scope Overview – Individual Projects

United New Terminal C North

MLIT - Terminal, Airside, Landside Reconfiguration, Apron & Taxi-lane

PMO Building

Landside Enabling Utilities

Federal Inspection Services

East Aircraft Parking Hardstand (Project Eliminated)

Landside Roadway Rehabilitation
## ITRP Procurement Update

<table>
<thead>
<tr>
<th>PROCUREMENT ACTION</th>
<th>PROCUREMENT METHOD</th>
<th>PROCUREMENT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Management Office (PMO)</td>
<td>Design-Build (RFQ Two Step Process)</td>
<td>Contract awarded 11/16/16</td>
</tr>
<tr>
<td>MLIT Design Services</td>
<td>Architect Engineer (AE) Design Services (RFQ)</td>
<td>Contract awarded 11/30/16</td>
</tr>
<tr>
<td>MLIT Construction Manager at Risk</td>
<td>Construction Manager at Risk (CMAR)</td>
<td>Contract award recommendation pending.</td>
</tr>
<tr>
<td>East Aircraft Parking Hardstand</td>
<td>Design-Build (RFQ Two Step Process)</td>
<td>Procurement canceled, aircraft parking accommodated in MLIT Apron &amp; Taxi-lane.</td>
</tr>
<tr>
<td>Owner’s Controlled Insurance Program (OCIP)</td>
<td>Request for Proposals (RFP)</td>
<td>Contract award recommendation pending.</td>
</tr>
<tr>
<td>FIS Design Services</td>
<td>Architect Engineer (AE) Design Services (RFQ)</td>
<td>Statements of Qualification currently under review.</td>
</tr>
<tr>
<td>FIS Construction Manager at Risk</td>
<td>Construction Manager at Risk (CMAR)</td>
<td>Statements of Qualification currently under review.</td>
</tr>
<tr>
<td>IAH Energy Initiatives</td>
<td>Request for Qualifications (RFQ)</td>
<td>RFQ specifications and scope of services under development.</td>
</tr>
<tr>
<td>Apron &amp; Taxilanes</td>
<td>Request for Qualifications (RFQ)</td>
<td>RFQ specifications and scope of services under development.</td>
</tr>
</tbody>
</table>
Infrastructure CIP FY 2018-22
Current/Upcoming Project Information

Devon Tiner
Assistant Director
Asset Engineering
Devon.Tiner@houstontx.gov
Infrastructure CIP FY 2018-22

George Bush Intercontinental Airport
Infrastructure CIP FY 2018-22

George Bush Intercontinental Airport

FY 2018
FY 2020
FY 2022
FY 2019
FY 2021
Infrastructure CIP FY 2018-22

PN669 ARFF Sta. 81 Expansion & Rehab

William P. Hobby Airport

- FY 2018
- FY 2019
- FY 2020
- FY 2022
- FY 2021
## Infrastructure CIP FY 2018-22

### FY 2018

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Title</th>
<th>Opportunity</th>
<th>CIP Budget*</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAH PN646A</td>
<td>Reconstruct Taxiways RA, SA &amp; SB</td>
<td>Design Services</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>IAH PN673</td>
<td>Terminal A Modernization Program</td>
<td>Design &amp; CMAR Services</td>
<td>$75,000,000</td>
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<tr>
<td>IAH PN740</td>
<td>Fleet Maintenance Building</td>
<td>Design-Build</td>
<td>$4,500,000</td>
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<tr>
<td>IAH PN686</td>
<td>Storm Water Pollution Control System</td>
<td>Construction Bid</td>
<td>$5,700,000</td>
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<tr>
<td>IAH PN699</td>
<td>Sanitary Sewer Improvements</td>
<td>Competitive Sealed Proposal</td>
<td>$9,200,000</td>
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<tr>
<td>IAH PN546</td>
<td>Upgrade Automated People Mover Facilities</td>
<td>Design-Build</td>
<td>$29,000,000</td>
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<td>IAH PN901</td>
<td>Taxiway WA/WB Reconstruction</td>
<td>Competitive Sealed Proposal</td>
<td>$110,000,000</td>
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<tr>
<td>IAH PN676</td>
<td>Residential Noise Mitigation Program</td>
<td>Construction Bid</td>
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<td>IAH PN746</td>
<td>Demolition of ATCT Support Buildings</td>
<td>Construction Bid</td>
<td>$3,000,000</td>
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<tr>
<td>HOU PN770</td>
<td>Non-Standard FAA Taxiways</td>
<td>Design Services</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>EFD PN707**</td>
<td>Taxiway L at EFD</td>
<td>Design Services</td>
<td>$4,000,000</td>
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<tr>
<td>EFD PN779</td>
<td>Spaceport Infrastructure</td>
<td>Design-Build</td>
<td>$18,000,000</td>
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<tr>
<td>HAS</td>
<td>Design On-Call Services</td>
<td>Request for Qualifications</td>
<td>TBD</td>
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</table>

| Total       |                                                           |                                      | $266,800,000 |

### Notes:

*CIP Budget numbers are program level which is inclusive of design, construction, contingency and soft costs and do not represent opportunity value.

**Project currently in the quiet period for solicitation. Advertised in the Houston Business Journal on 4/21/2017, and posted to the fly2houston.com website on 4/25/2017. Please go to those for more info.
## Infrastructure CIP FY 2018-22

### FY 2019

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<tr>
<td>IAH PN668</td>
<td>Rehabilitate &amp; Expand ARFF Station 92</td>
<td>Design Services</td>
<td>$1,900,000</td>
</tr>
<tr>
<td>IAH PN618A</td>
<td>Tunnel Drainage Improvements</td>
<td>Construction Bid</td>
<td>$10,000,000</td>
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<tr>
<td>HOU PN770</td>
<td>Non-Standard FAA Taxiways</td>
<td>Construction Bid</td>
<td>$13,500,000</td>
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<tr>
<td>HOU PN692</td>
<td>Satellite Utilities Plant Upgrades</td>
<td>Design Services</td>
<td>$1,700,000</td>
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<tr>
<td>EFD PN707</td>
<td>Construct Taxiway L</td>
<td>Construction Bid</td>
<td>$41,000,000</td>
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<td>IAH PN565</td>
<td>Landside Roadway Rehabilitation</td>
<td>CMAR Services</td>
<td>$50,000,000</td>
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<td><strong>Total</strong></td>
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<td><strong>$118,100,000</strong></td>
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<td>Construction Bid</td>
<td>$65,000,000</td>
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<tr>
<td>IAH PN668</td>
<td>Rehabilitate &amp; Expand ARFF Station 92</td>
<td>Design-Build</td>
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<tr>
<td>IAH PN604A</td>
<td>Inter-Terminal Train</td>
<td>Design Services</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>HOU PN692</td>
<td>Satellite Utilities Plant Upgrades</td>
<td>Construction Bid</td>
<td>$8,200,000</td>
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<tr>
<td>HOU PN703</td>
<td>Passenger Drop Off Canopy</td>
<td>Construction Bid</td>
<td>$4,700,000</td>
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<tr>
<td>HAS PN794</td>
<td>Garage Wayfinding</td>
<td>Construction Bid</td>
<td>$2,500,000</td>
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<td></td>
<td><strong>Total</strong></td>
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<td><strong>$107,500,000</strong></td>
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**FY 2020**

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<tbody>
<tr>
<td>HOU PN589</td>
<td>Rehabilitate &amp; Expand ARFF Station 81</td>
<td>Construction Bid</td>
<td>$1,925,000</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
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<td><strong>$1,925,000</strong></td>
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**FY 2021**

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<tr>
<td>IAH PN604A</td>
<td>Inter-Terminal Train</td>
<td>Construction Bid</td>
<td>$20,000,000</td>
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<tr>
<td>HOU PN692</td>
<td>Satellite Utilities Plant Upgrades</td>
<td>Construction Bid</td>
<td>$8,700,000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$28,700,000</strong></td>
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**Notes:**
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Infrastructure: Design

Design On-Call

• New contract with multiple firms for architecture and engineering services for airport facilities. Potential projects include:
  • APM modifications
  • ARFF Station Modification & Expansion
  • ITT Improvements
  • Wayfinding & Signage Improvements
  • Airside and Landside Pavement Rehabilitation
  • Drainage Rehabilitation
• Existing contract status:
  • Origination date: 9/19/2012
  • Total Contract to date: $44,600,000
  • Expiration date 9/26/2017
• CIP budget: TBD
• Opportunity: RFQ for Design
• Status: Advertisement in May 2017
Pavements & Grounds
Current/Upcoming Project Information

Bill Gaw
Asset Engineer
Pavements & Grounds
Bill.Gaw@houstontx.gov
Project No. 686 Storm Water Pollution Control System

- Replace current systems with new storm water pollution control system throughout airfield

- CIP Budget: $5,700,000 FY2018

- Opportunity: Construction Bid

- Status: In Design with On-Call Consultant.
Project No. 779  Spaceport Infrastructure at EFD

- Provide roadways and utilities for future tenants (Phase 1)
- CIP Budget: 18,000,000 FY 2018
- Opportunity: Design-Build
- Status: Bridging documents being prepared by On-Call Design Consultant for inclusion in Design-Build solicitation package.
- Anticipated advertisement in June 2017.
FAR-139 Airfield Pavement
Current/Upcoming Project Information

Dev Pokhrel, P.E.
Asset Engineer
Airfield Pavement
Dev.Pokhrel@houstontx.gov
Infrastructure: FAR 139 Pavements

Airfield Pavement Opportunities: Design/Construction

Project Key Elements:

- Team Building-Pavement Design
- Evaluation of Existing Pavement/ subgrade
- Geotechnical, Survey, SUE
- Underdrainage Issues
- QA/QC
- Operational Safety- Security; SMS/CSPP-steps/process
- Project Phasing/Scheduling; Design to Budget
Infrastructure: FAR 139 Pavements

Critical Phasing/ Scheduling & Operational Impact

Overall Projects-IAH

- P675-TWY NA
- P797-Urgent Repairs TWY RA
- P460C-Misc Repairs
- P901-WA/WB
- P646 A -TWY SA
- P646 B -TWY RA/RB,SB

460C-IAH
Infrastructure: FAR 139 Pavements

Project No. 901
Taxiway WA/WB
2017/2018

- Full Depth Reconstruction
- WA-TDG 7
- WB TDG 6
- Both Concrete Pavement
- Phasing/Scheduling-Critical
- Opportunity: Competitive Sealed Proposal
- Status – Expected to advertise in late Spring 2017
Project No. 646
TWY RA/RB/SB
FY: 2018/2019

RA
- 4500 ft. long approx.
- Conc. rehab
- Underdrainage
  Pumping issues
- Shoulder upgrade

RB
- Miscellaneous
  Pavement Repairs

SB
- Existing Pavement
  AC
- Needs Mill and
  Overlay
- Full length

Design Advertise - August 2017 (FY 2018)
Construction – FY 2020  →  NTP July 2019
Project No. 646A
Taxiway SA
FY: 2019/2020

SA
- Existing pavement – AC
- 8500 ft. long approx.
- Full Depth Concrete Reconstruction
- ADG-V
- Cross Taxiways
- Shoulder upgrade
- TWY Lighting (LED), Painting-Marking

Design Advertise- July 2019
Construction –FY 2021 Advertise September 2020
Infrastructure: FAR 139 Pavements

Upcoming Projects - HOU

Project No. 460C
Misc Airfield Pavement Repairs- 2017/2018
• On call Design at 65%
• Construction - 2018/2019

Project No. 770
HOU TWY Hot Spot- not meeting FAA Standards
• RFQ –July/August 2017
• Construction 2018/2019
Infrastructure: Facilities
Current/Upcoming Project- Information

Guillermo Cabrera
Asset Engineer
Facilities
Guillermo.Cabrera@houstontx.gov
Project No. 673
IAH Terminal A Modernization

- The project will include the following:
  1. Exterior Waterproofing
  2. Restroom Renovations
  3. Check-in and Hold-rooms counter replacements
  4. MEP/IT Upgrades
  5. Ticket Lobby Architectural Enhancements

- CIP Budget: FY 2018 - $75,000,000
- Opportunity: Design & CMAR Services
- Status: Project Definition Document in progress
Project No. 740
IAH Fleet Maintenance Building

- A new Vehicle Maintenance Facility for IAH
- CIP budget: FY 2018 - $4,500,000
- Opportunity: Design-Build
- Status: Bridging Documents Completed
Infrastructure: Facilities

Project No. 668
IAH ARFF 92 Rehabilitation and Expansion

• Reconfigure the Interior to suit current needs and update structure, equipment and systems as required.
• CIP budget:
  • FY 2019 $1,900,000
  • FY 2020 $22,100,000 (Const.)
• Opportunity: Design Services
• Status: Program Design
Document in process
Infrastructure: Facilities

Project No. 618A
IAH Tunnel Drainage Improvements

• Rehabilitation of the Subway tunnel to repair structural and leak location defects.
  • CIP Budget: FY 2019 $10,000,000
  • Opportunity: Construction Bid
  • Status: Assessment and Recommendations Report Completed
Project No. 589
HOU ARFF 81 Rehabilitation and Expansion

- Reconfigure the Interior to suit current needs and update structure, equipment and systems as required.
- CIP Budget: FY 2021 $1,900,000
- Opportunity: Construction Bid
- Status: Program Design Document pending
Project No. 746
IAH Demolition of Old TRACON Facility Support Buildings

- Demolition of all the support buildings surrounding the old ATCT and backfilling the site
- Budget: $3,000,000
- Opportunity: Construction Bid
- Status: Design Documents in Process
Infrastructure: Utilities
Current/Upcoming Project Information

Eren Selcen
Asset Engineer
Utilities
Eren.Selcen@houstontx.gov
Infrastructure: Utilities

PN 546- IAH Automated People Mover Facilities Upgrade and Control Center Relocation Project

- CIP Budget: $29,000,000
- Opportunity: Construction
- Project is approved. Pending Design Documents for Construction scheduled for FY2018.
Infrastructure: Utilities

PN 692- HOU Satellite Utilities Plant Project

- CIP Budget: $18,600,000
- Opportunity: Design & Construction
- Status: HAS planned to incrementally Construct A New SUP in A New Location
- SUP is constructed. Incremental Plan To Replace The Existing Space-Constrained CUP As Chillers Reach End Of Useful Service Life.
- Phased development cooling and heating systems of HOU SUP FY2018-22
Infrastructure: Utilities

PN 604A- IAH Inter Terminal Subway Train Upgrade Project

- CIP Budget: $25,000,000
- Opportunity: Design/Construction
- Status: Pending Planning Documents. To re-life or replace Subway Train System in FY 2020-22.
Project No. 699 Sanitary Sewer Improvement

- Rehabilitation of Sanitary Sewer from Terminal A to Chanute Road Lift Station
- CIP Budget: $9,200,000 – FY 2018
- Opportunity: Competitive Sealed Proposal
- Status: Procurement in FY 2018
Infrastructure: Wayfinding & Signage
Current/Upcoming Project Information

Lorna Clark
Asset Engineer
Wayfinding & Signage
Lorna.Clark@houstontx.gov
Wayfinding Signage for Terminals A, B, and C

• Fabrication & Installation of Wayfinding Signage in Terminals A, B and C.
• Fabrication and Installation of Interim Signs – High Density Extruded Polystyrene with Vinyl Graphics
• Fabrication and Installation of Aluminum Signs with Vinyl Graphics
• CIP Budget: $1,500,000 in FY 2018
• Opportunity: Construction Bid
• Status: Design is slated for the remainder of this year under the HAS On-Call Design contracts
• Start Construction early 2018
Wayfinding Signage for Terminals A/B, C, & D/E Garages

- Fabrication and Installation of Wayfinding Signage in Terminals A/B, C & D/E Garages
- Fabrication and Installation of Aluminum Signs with Vinyl Graphics
- Rebranding and eliminating the 3-Color identifiers of Terminal C Garages
- CIP Budget: $2,500,000 in FY 2019
- Opportunity: Construction Bid
- Status: Design is slated for next year under the HAS On-Call Design contracts
- Start Construction 2019
Infrastructure: Parking & Transportation Structures
Current/Upcoming Project Information

Shatha Lingle
Asset Engineer
Parking & Transportation Structures
Shatha.Lingle@houstontx.gov
Infrastructure: Parking & Transportation Structures

Project No. 703 HOU
Passenger Drop Off Canopy

• Construct canopy between Red Garage and Terminal Building
• CIP Budget: $4,700,000
• Opportunity: Construction Bid
• Status: Construction is scheduled for FY 2020
Infrastructure: Environmental Current/Upcoming Project Information

Carlos Ortiz
Division Manager
Environmental
Carlos.Ortiz@houstontx.gov
Project No. 676A
Residential Noise Insulation Program

- Construction program to install new windows, doors, and insulation for reduction of aircraft noise in 27 single family homes
- CIP Budget: $1,900,000
- Opportunity: Construction Bid
- Status: Advertise for bids in May

North Hollow Subdivision
Infrastructure: Environmental
Project No. 676A
Residential Noise Insulation Program

Sound Insulation Potential Treatments

- Replace Windows
- Replace Exterior Prime Doors
- Add / Replace Exterior Storm Doors
- Add Attic Insulation
- Caulk/Seal Penetrations
- Ventilation System Improvements
- Electrical System Improvements
Infrastructure: Building Standards
Overview

Ivory “Bo” Davis
Interim Assistant Director
Building Standards
Ivory.Davis@houstontx.gov
The Building Standards Group, or BSG, is an “in-house” code review and inspection program.

Created specifically to provide code plan review and inspection support for construction taking place on any of the Houston Airport System (HAS) premises.

Agreement with the City of Houston Public Works Department
- HAS was given the authority to create and staff this new group in order to help expedite the code review, permit issuance and inspection for all construction on airport premises.

HAS BSG has its own unique permit submittal process, that is completely separate from that used by the City of Houston Permitting Center.

Application must be made directly to the BSG for any construction taking place at George Bush Intercontinental, Hobby or Ellington airports.

Once a permit application has been reviewed and approved, BSG will issue a construction permit for that project.
HAS Permitting

• A permit is required for all new construction, as well as remodel, repair, additions or other alterations to existing structures.
  – This includes work associated with utilities, infrastructure, flatwork, or signage projects.
• An HAS BSG Application for Construction Permit, along with electronic (pdf) copies of the plans and all associated documents must be submitted to the BSG Permit Coordinator at BSG-Permitsubmittal@houstontx.gov.
• Any alterations to a building that effect or modify the exiting or egress from the facility, such as access control or relocation of doors, as well as any changes to the fire alarm or fire suppression system must be permitted.
• A Certificate of Occupancy (CO) is required prior to occupying any space within a building. The City of Houston Public Works & Engineering (PWE) Code Compliance section will continue to issue all Certificates of Occupancy.
Infrastructure: Building Standards

Process Flow – Permit Review

1. APPLICANT submits Application & Plans to BSG.
3. Comments sent to Applicant for Correction (if necessary).
4. Corrections sent to BSG & Verified.
5. Review Comments Compiled.
6. Confirm HAS, TDLR, FAA and other approvals.
7. Fee Payment Confirmed and Permit Issued.

Process Flow Diagram: Application & Plans submission, review, corrections, approval, and payment.
Permit Fee Payment

* Construction Permit will not be issued until a confirmation of permit fee payment is received from PWE
Question & Answer Opportunity