Upcoming Requests for Council Action

Transportation, Technology & Infrastructure Committee
June 24, 2019
<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>when</td>
</tr>
<tr>
<td>------------</td>
</tr>
</tbody>
</table>
| June 2019  | **Water Supply Contract**  
1st Amendment to 2nd Supplement of Water Supply Contract  
(4 separate contracts) | North Harris County Regional Water Authority  
West Harris County Regional Water Authority  
Central Harris County Regional Water Authority  
North Fort Bend Water Authority |
| July 2019  | **Independent Engineering Services**  
7th Additional Appropriation to Professional Engineering Services Contract  
for Project Advisor / Technical Consultant | Carollo Engineers, Inc. |
| July 2019  | **Guaranteed Maximum Price**  
8th Amendment to Design-Build Services Contract | Houston Waterworks Team |
MAXIMUM GROUNDWATER USE

This requirement pertains to the Area 3 of the Harris Galveston Subsidence District and Area A of the Fort Bend Subsidence District.
INTEGRATED SOLUTION

Coastal Water Authority
Luce Bayou Interbasin Transfer
2020

City, North & Central Harris
County Regional Water
Authorities
Transmission Main
2022

NEWPP & Intake Expansion
2025

West Harris Regional & North
Fort Bend Water Authorities
Transmission Main
2023

LEGEND
projects with city participation
project by others
VOTING PROCESS

- Amendment or price adjustment
- Project director issues vote

Consensus vote > 63% in favor

- No
- Yes

Cash call
- Fund escrow
- RCA process & council action

A weighted vote that exceeds 63% must be achieved to approve each item. Votes are weighted by each participant’s capacity share.
## CONTRACT PROGRESSION

<table>
<thead>
<tr>
<th>amendments</th>
<th>original contract</th>
<th>1st supplement</th>
<th>2nd supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>purpose</td>
<td>City / authority capacity reservations</td>
<td>Luce Bayou Inter-Basin Transfer Project</td>
<td>NEWPP Expansion Project Cost and Capacity Share</td>
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<tr>
<td></td>
<td>transmission system</td>
<td>Amendment to 1st Supplement - 2013 Incorporate Texas Water Development Board Loan</td>
<td>Amendment to 2nd Supplement – July 2019 Establish Procedures for Operations and Distribution</td>
</tr>
<tr>
<td>date</td>
<td>2002-2008</td>
<td>2009</td>
<td>2015</td>
</tr>
</tbody>
</table>
procedures for operations & distribution systems

- excess water usage
- leasing water between participants
- facility management committee
- capital renewal fund
- metering
### REQUESTS FOR COUNCIL ACTION

<table>
<thead>
<tr>
<th>when</th>
<th>what</th>
<th>who</th>
</tr>
</thead>
</table>
| June 2019| **Water Supply Contract** 1<sup>st</sup> Amendment to 2<sup>nd</sup> Supplement of Water Supply Contract (4 separate contracts | North Harris County Regional Water Authority  
West Harris County Regional Water Authority  
Central Harris County Regional Water Authority  
North Fort Bend Water Authority |

(4 separate contracts | no funding required)                     |
DESIGN-BUILD REQUIREMENTS

Per State Law: engineering services MUST be provided independent of the design-build firm

TEXAS ADMINISTRATIVE CODE 2269
Sec. 2249.356. USE OF OTHER PROFESSIONAL SERVICES. (a) The governmental entity shall provide or contract for independently of the design-build firm, the following services as necessary for the acceptance of the civil works project by the entity:

(1) inspection services;
(2) construction materials engineering and testing; and
(3) verification testing services

Carollo Engineers, Inc.
is the Project Advisor/Technical Consultant (PATC) that provides Independent Engineering Services

Independent Engineering Services = PATC
KEY PROVISIONS

Project Advisor / Technical Consultant (PATC) services through 2025

- technical oversight
- project management advisory services
- public engagement
- quality assurance
- construction auditing
- start-up, commissioning & operations / maintenance support
## REQUEST FOR COUNCIL ACTION

<table>
<thead>
<tr>
<th>when</th>
<th>what</th>
<th>contract amount</th>
<th>management reserve</th>
<th>city salary recovery</th>
<th>appropriation</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2019</td>
<td><strong>Independent Engineering Services</strong>&lt;br&gt;7th Additional Appropriation to Professional Engineering Services Contract for Project Advisor / Technical Consultant</td>
<td>$68.0M</td>
<td>$2.0M</td>
<td>$2.0M</td>
<td>$72.0M</td>
</tr>
</tbody>
</table>
## SUMMARY

<table>
<thead>
<tr>
<th>approval action</th>
<th>contract amount</th>
<th>management reserve</th>
<th>city salary recovery</th>
<th>appropriation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>previous contract &amp; amendments 1-6</td>
<td>$31.5M</td>
<td>$0</td>
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<td>$34.3M</td>
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<td>current Project Advisor/Technical Consultant</td>
<td>$68.0M</td>
<td>$2.0M</td>
<td>$2.0M</td>
<td>$72.0M</td>
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<tr>
<td>total</td>
<td>$99.5M</td>
<td>$2.0M</td>
<td>$4.8M</td>
<td>$106.3M</td>
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</tbody>
</table>

1. appropriation includes management reserve & city salary recovery
## COST SHARING

<table>
<thead>
<tr>
<th>approval action</th>
<th>appropriation 1</th>
<th>City of Houston (16% + oversized) 2</th>
<th>water authorities (84%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>previous</td>
<td>$34.3M</td>
<td>$5.5M</td>
<td>$28.8M</td>
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<tr>
<td>contract &amp; amendments 1-6</td>
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<td></td>
</tr>
<tr>
<td>current</td>
<td>$72.0M</td>
<td>$11.5M</td>
<td>$60.5M</td>
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<tr>
<td>7th Additional Appropriation to Professional Engineering Services Contract for Project Advisor / Technical Consultant</td>
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<td></td>
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</tr>
<tr>
<td>future</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>no additional appropriations</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>total</td>
<td>$106.3M</td>
<td>$17.0M</td>
<td>$89.3M</td>
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</tbody>
</table>

1. appropriation includes management reserve & city salary recovery
2. city is funding 100% of oversized facilities that will allow for future beneficial use of entirety of water rights in San Jacinto & Trinity River
COMMITMENT TO MWBEs

PROJECT GOAL
24% participation of $99.5M

*the paid to date dollars vary from the Houston Office of Business Opportunity website: PATC - $19.8M, MWBE - $7.4M
GUARANTEED MAXIMUM PRICE
NORTHEAST WATER PURIFICATION PLANT

Treatment Facilities

* new facilities shown are renderings of the completed project
KEY PROVISIONS

- plant expansion construction
- permitting
- construction supervision
- material testing / quality control
- inspection
- integration
- plant start-up
- final acceptance
## PRICE BREAKDOWN

<table>
<thead>
<tr>
<th>task</th>
<th>amount</th>
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<tbody>
<tr>
<td>design*</td>
<td>$174,225,383</td>
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<tr>
<td>construction*</td>
<td>$1,120,085,461</td>
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<tr>
<td>construction management*</td>
<td>$108,685,635</td>
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<tr>
<td>inspection / testing*</td>
<td>$49,193,630</td>
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<td>major equipment</td>
<td>$83,843,499</td>
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<tr>
<td>design-build fee / contingency</td>
<td>$180,049,719</td>
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<tr>
<td>performance bonds / payment bonds</td>
<td>$49,449,507</td>
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<tr>
<td><strong>guaranteed max price total</strong></td>
<td><strong>$1,765,532,834</strong></td>
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</table>

*eligible for MWSBE participation ($1.452B)
### Project Appropriations

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Contract &amp; Amendment Amount</strong></td>
<td>$2.8M</td>
<td>$13.0M</td>
<td>$3.0M</td>
<td>$66.3M</td>
<td>$37.3M</td>
<td>$57.5M</td>
<td>$43.8M</td>
<td>$226.0M</td>
<td>$900.0M</td>
<td>$132.1M</td>
<td>$283.7M</td>
<td>$1,765.5M</td>
</tr>
<tr>
<td><strong>City Salary Recovery &amp; Management Reserve</strong></td>
<td>$0.4M</td>
<td>$2.0M</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0.5M</td>
<td>$1.7M</td>
<td>$4.5M</td>
<td>$25.8M</td>
<td>$18.8M</td>
<td>$117.4M</td>
<td>$171.1M</td>
</tr>
</tbody>
</table>

### Bar Chart

- **Previous Appropriations (Contract & Amendments 1 – 7)**
- **Current**
- **Future**

- The chart visualizes the appropriations with a color-coded legend indicating the years and amounts.
### CURRENT REQUEST FOR COUNCIL ACTION

<table>
<thead>
<tr>
<th>when</th>
<th>what</th>
<th>contract amount</th>
<th>management reserve</th>
<th>city salary recovery</th>
<th>appropriation</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2019</td>
<td>Guaranteed Maximum Price 8&lt;sup&gt;th&lt;/sup&gt; Amendment to Design-Build Services Contract</td>
<td>$900.0M</td>
<td>$23.3M</td>
<td>$2.5M</td>
<td>$925.8M</td>
</tr>
<tr>
<td>approval action</td>
<td>contract amount</td>
<td>management reserve</td>
<td>city salary recovery</td>
<td>appropriation ¹</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-----------------</td>
<td>--------------------</td>
<td>----------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>previous contract &amp; amendments 1-7</td>
<td>$449.7M</td>
<td>$6.7M</td>
<td>$2.4M</td>
<td>$458.8M</td>
<td></td>
</tr>
<tr>
<td>current 8th Amendment to the Design-Build Services Contract</td>
<td>$900.0M</td>
<td>$23.3M</td>
<td>$2.5M</td>
<td>$925.8M</td>
<td></td>
</tr>
<tr>
<td>future appropriation – 2020</td>
<td>$132.1M</td>
<td>$16.3M</td>
<td>$2.6M</td>
<td>$150.9M</td>
<td></td>
</tr>
<tr>
<td>future appropriation – 2021</td>
<td>$283.7M</td>
<td>$114.8M</td>
<td>$2.6M</td>
<td>$401.1M</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>$1,765.5M</td>
<td>$161.1M</td>
<td>$10.0M</td>
<td>$1,936.6M</td>
<td></td>
</tr>
</tbody>
</table>

¹ appropriation includes management reserve & city salary recovery

GUARANTEED MAXIMUM PRICE
## COST SHARING

<table>
<thead>
<tr>
<th>approval action</th>
<th>appropriation 1</th>
<th>City of Houston (16% + oversized) 2</th>
<th>water authorities (84%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>previous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contract &amp; amendments 1-7</td>
<td>$458.8M</td>
<td>$99.3M</td>
<td>$359.5M</td>
</tr>
<tr>
<td>current</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Amendment to the Design-Build Services Contract</td>
<td>$925.8M</td>
<td>$253.0M</td>
<td>$672.8M</td>
</tr>
<tr>
<td>future</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>appropriation – 2020</td>
<td>$150.9M</td>
<td>$2.6M</td>
<td>$148.3M</td>
</tr>
<tr>
<td>appropriation –2021</td>
<td>$401.1M</td>
<td>$81.4M</td>
<td>$319.8M</td>
</tr>
<tr>
<td>total</td>
<td>$1,936.6M</td>
<td>$436.3M</td>
<td>$1,500.3M</td>
</tr>
</tbody>
</table>

1. appropriation includes management reserve & city salary recovery
2. city is funding 100% of oversized facilities ($75.5M) that will allow for future beneficial use of entirety of water rights in San Jacinto & Trinity River

---

1 appropriation includes management reserve & city salary recovery
2 city is funding 100% of oversized facilities ($75.5M) that will allow for future beneficial use of entirety of water rights in San Jacinto & Trinity River
COMMITMENT TO MWSBEs

PROJECT GOAL
13.5% participation of GMP $1.766B

Houston Waterworks Team (HWT) balance
HWT paid to date*
MWSBE proposed commitment
MWSBE paid to date*

*the paid to date dollars vary from the Houston Office of Business Opportunity website: HWT $131.5M, MWSBE - $34.2M
NEXT STEPS
SCHEDULE

preliminary services

component 1

design / preconstruction

ever work packages

final design and construction services

100% design milestone

phase 1 (80 mgd) milestone
Dec 2022

phase 2 (240 mgd) milestone
Jun 2025

final acceptance milestone
Sep 2025

construction

transition services

Prior Appropriations
$458.8M

2019 RCA
$925.8M

2020 RCA
$151M

2021 RCA
$401.2M

Total Appropriations
$1.94B
## COUNCIL ACTION

<table>
<thead>
<tr>
<th>approval action</th>
<th>appropriation</th>
<th>City of Houston (16% + oversized)</th>
<th>water authorities (84%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>current</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Amendment to the 2&lt;sup&gt;nd&lt;/sup&gt; Supplement of Water Supply Contract (4 separate contracts)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>7&lt;sup&gt;th&lt;/sup&gt; Additional Appropriation to Professional Engineering Services Contract for Project Advisor / Technical Consultant</td>
<td>$72.0M</td>
<td>$11.5M</td>
<td>$60.5M</td>
</tr>
<tr>
<td>8&lt;sup&gt;th&lt;/sup&gt; Amendment to Design-Build Services Contract</td>
<td>$925.8M</td>
<td>$253.0M</td>
<td>$672.8M</td>
</tr>
<tr>
<td><strong>future</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design-Build – 2020 appropriation</td>
<td>$150.9M</td>
<td>$2.6M</td>
<td>$148.3M</td>
</tr>
<tr>
<td>Design-Build – 2021 appropriation</td>
<td>$401.1M</td>
<td>$81.4M</td>
<td>$319.8M</td>
</tr>
</tbody>
</table>

1. Appropriation includes management reserve & city salary recovery.
2. City is funding 100% of oversized facilities that will allow for future beneficial use of entirety of water rights in San Jacinto & Trinity River.
   City’s share of 16% of GMP in the 1<sup>st</sup> appropriation to indicate good faith.
future accept work

- early work package 1
- early work package 2A
- early work package 4
- early work package 6
- phase 1 milestone
- phase 2 milestone
- final
COMMITMENT TO MWSBEs

TOTAL PROJECT GOAL
$274.4M
1,000+ jobs created

project subs

82 non-MWSBE
66 MWSBE

$1,204 million

- $1,204
- $313.3
- $247.8
- $26.6
- $72.9

- Houston Waterworks Team (HWT)
- HWT MWSBE
- PATC
- PATC MWBE
- non-eligible

$247.8 million project subs
$26.6 million non-eligible
$72.9 million non-MWSBE
$247.8 million MWSBE
$313.3 million HWT MWSBE
$1,204 million total project goal
Upcoming Requests for Council Action

Transportation, Technology & Infrastructure Committee
June 24, 2019
appendix
**EARLY WORK PACKAGES**

- **EWP 1 – Site Preparation**
  - $37.3M*
  - Lazer, Emerald, Others

- **EWP 2A – Phase 1 Filter/Transfer Pump Station Structures**
  - $43.8M*
  - McCarthy Construction

- **EWP 4 – Raw Water Pipelines & Tunnel**
  - $57.5M*
  - Barnard Construction

- **EWP 6 – Intake Pump Station/Pretreatment/Allowances**
  - $230.1M*
  - McCarthy, Balfour Beatty, Equipment/Pipe Vendors

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*Guaranteed Maximum Price for HWT, not inclusive of reserve & administrative costs.*
Project Status
• 450 days of 598 contract completed
• $28.73M of $37.34M contract expended

MWSBE Participation
$13.8M Committed of $17.2M Direct Construction Cost

- Balance of Work - HWT: 20.3%
- MWSBE Balance Remaining: 19.6%
- MWSBE Paid to Date: 60.1%
EARLY WORK PACKAGE 2A STATUS

Project Status
• 335 days of 600 contract completed
• $18.13M of $43.81M contract expended

MWSBE Participation
$3.8M Committed of $35.5M Direct Construction Cost

- 7% Balance of Work - HWT
- 3.7% MWSBE Balance Remaining
- 89.3% MWSBE Paid to Date
EARLY WORK PACKAGE 4 STATUS

Project Status
• 384 days of 600 contract completed
• $29.98M of $57.48M contract expended

MWSBE Participation
$4.3M Committed of $32.2M Direct Construction Cost

- 6.4% Balance of Work - HWT
- 6.9% MWSBE Balance Remaining
- 86.7% MWSBE Paid to Date
Project Status
- 94 days of 1306 contract completed
- $19.30M of $214.48M contract expended

MWSBE Participation
$13.04M Committed of $90.45M Direct Construction Cost

Balance of Work – McCarthy/Balfour Beatty/Equipment Supplier
MWSBE Balance Remaining
MWSBE Paid to Date
INTEGRATED SOLUTION

Coastal Water Authority
Luce Bayou Interbasin Transfer
(2019-2020 Completion)

City, North and Central
Harris County Regional
Water Authorities
Transmission Main
(2024-2022 Completion)

NEWPP & Intake Expansion
(2024-2022, 2023 & 2025 Completion)

West Harris Regional and North
Fort Bend Water Authorities
Transmission Main
(2024-2023 Completion)

LEGEND
- Project with City Participation
- Project by Others
COMMITMENT TO MWSBEs

TOTAL PROJECT GOAL
$274.4M
1,000+ jobs created

project subs

82 non-MWSBE
66 MWSBE

- Houston Waterworks Team (HWT)
- HWT MWSBE
- PATC
- PATC MWBE
- non-eligible

64.6% of total project (HWT & PATC together)
SECOND SUPPLEMENT

Cost and Capacity Share*

- North Harris County Regional Water Authority: 35.3%
- West Harris County Regional Water Authority: 16.0%
- North Fort Bend Water Authority: 21.4%
- City of Houston: 1.5%
- Central Harris County Regional Water Authority: 25.8%

* Not including oversize facilities, which are 100% City funded.