



WATER PURIFICATION PLANT EXPANSION

NEWPP Expansion Project Update

TTI Committee Briefing
December 11, 2017



Central Harris County
Regional Water Authority

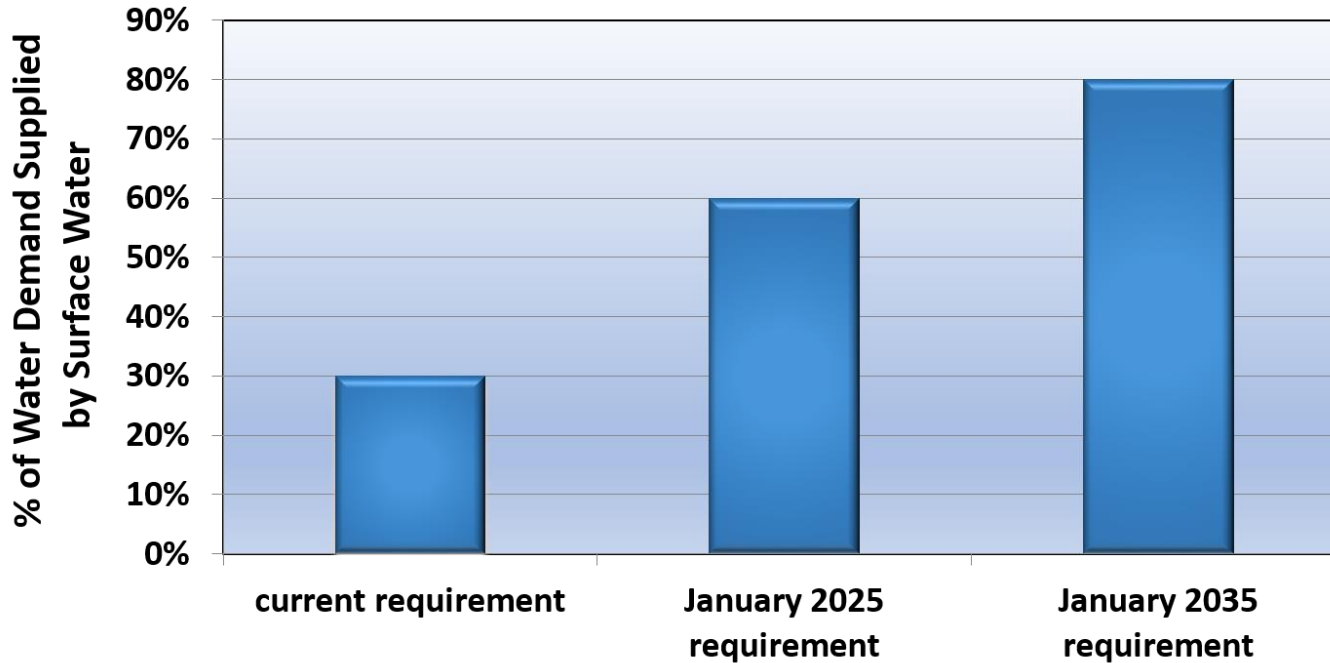


NEWPP EXPANSION

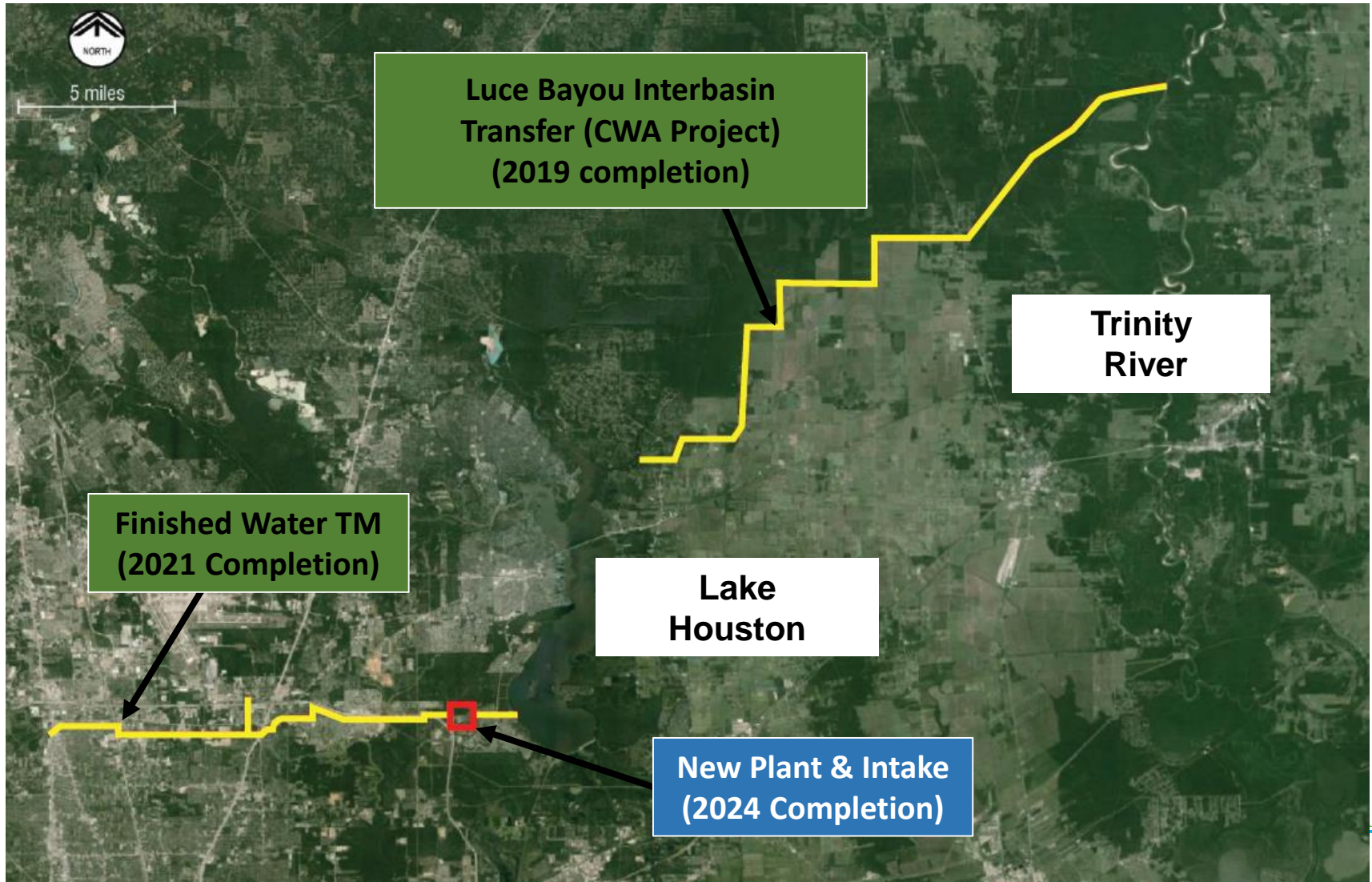
- Project Background & Status
- Amendment Process
- Construction Services
- Early Work Packages (EWPs)
- MWBE Update
- Council Actions

Project Background & Current Status

NEWPP Expansion necessary for growth & subsidence regulations



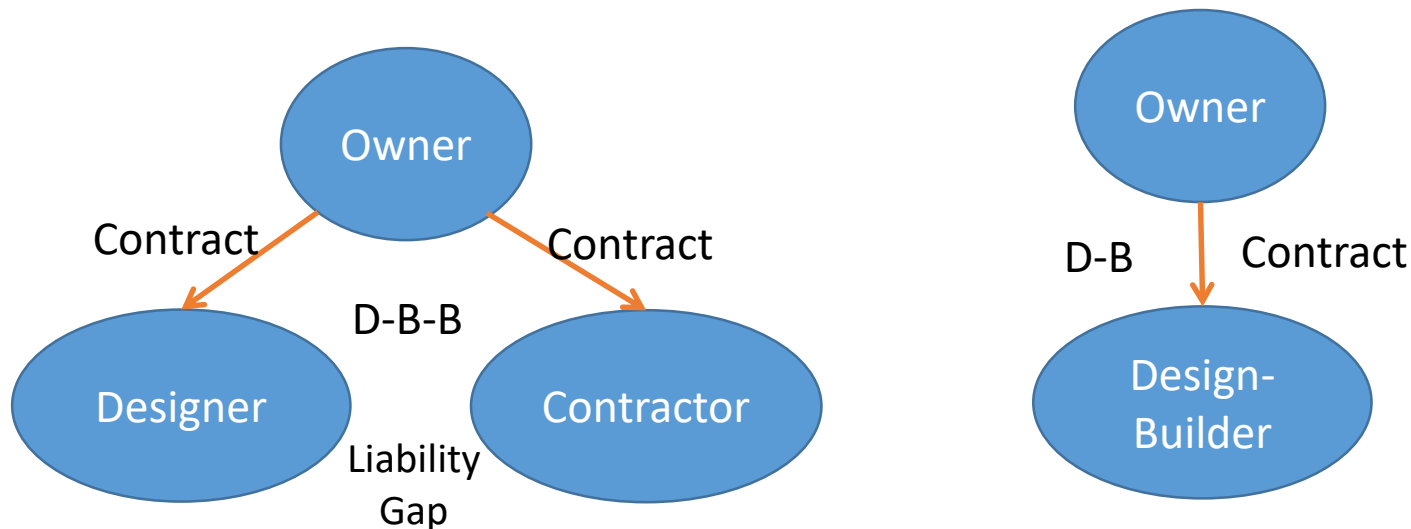
NEWPP Expansion is one piece of a regional water delivery plan



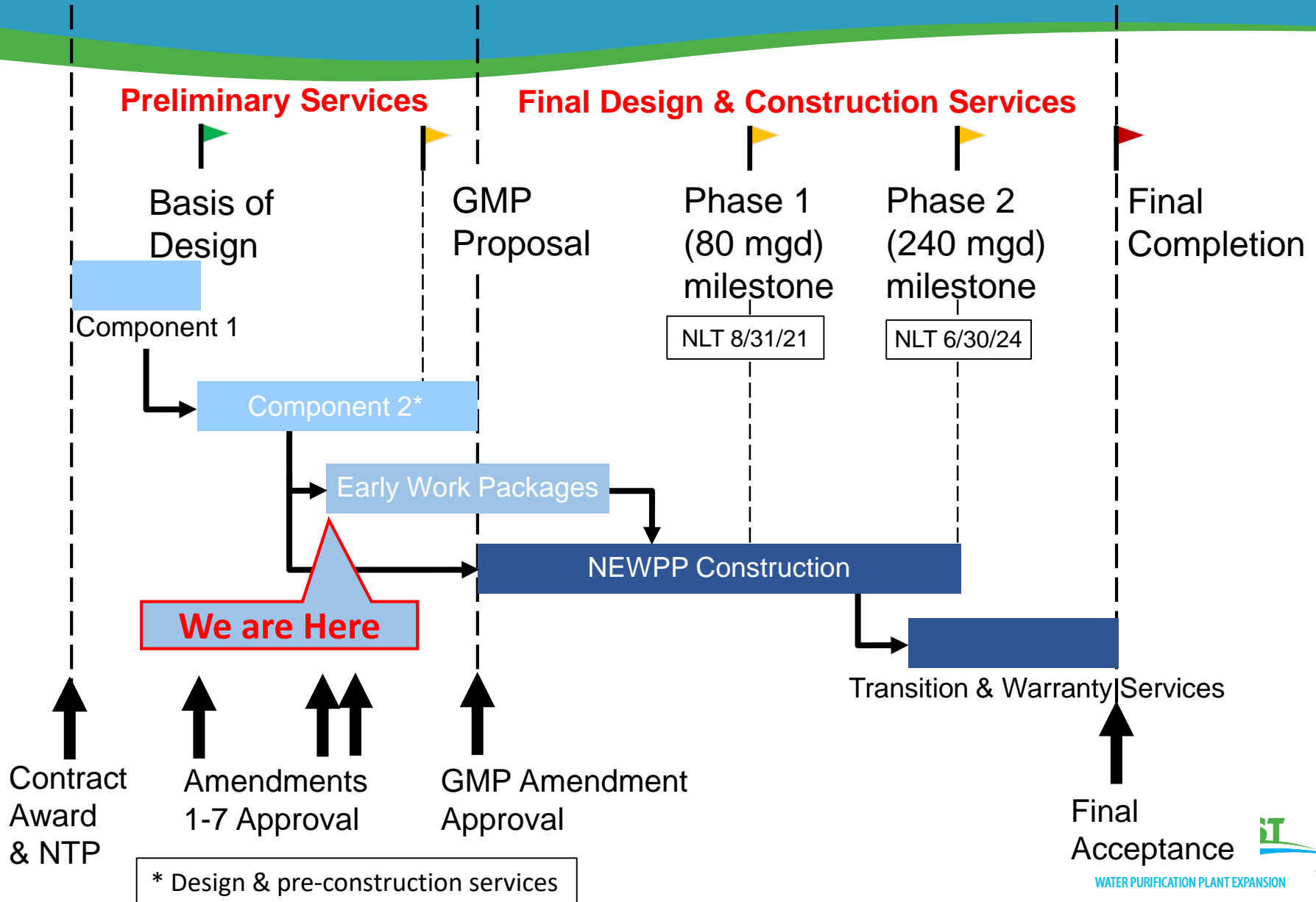
NEWPP being delivered using progressive design-build

Delivery method selected for:

- Schedule certainty
- Cost certainty
- Ability to have input on design & ensure quality
- Ability to avoid liability gap between designer and builder



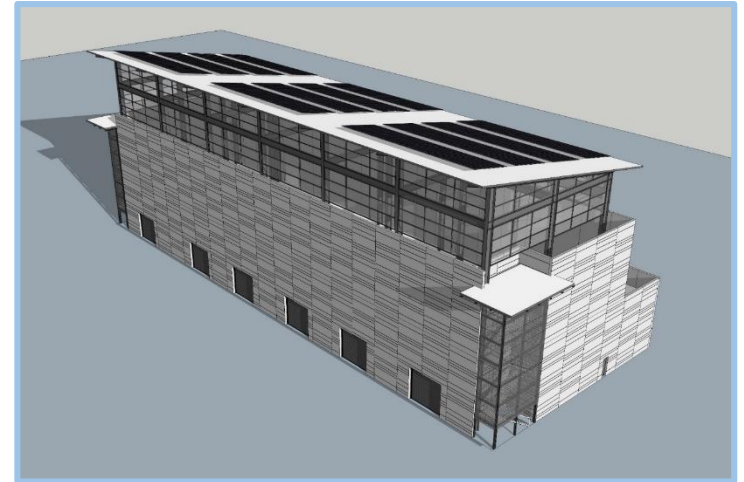
Project is midway through the Preliminary Services phase



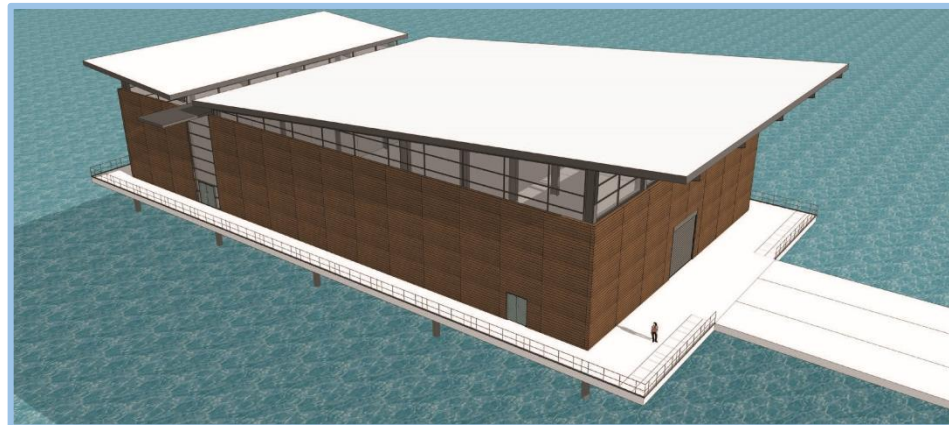
Design of 320 MGD expansion is nearing 30% completion milestone



Design of major facilities is in progress



Dewatering Building



Intake Pump Station

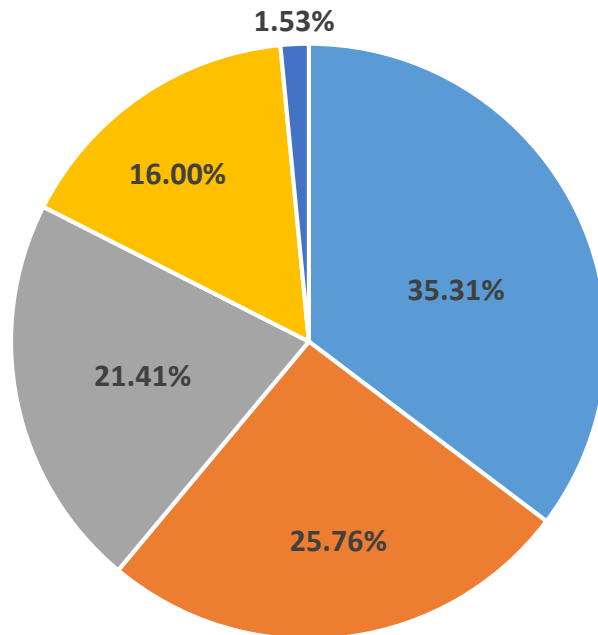
Community awareness and outreach is ongoing

- Website established – greaterhoustonwater.com
- Hotline established – (281) 520-3777
- Two public meetings held:
 - October 25, 2017
 - November 15, 2017
- Over 75 contractor outreach events between February & November of 2017, including:
 - National Association of Minority Contractors
 - PWE Contracts in 5
 - Greater Houston Black Chamber of Commerce
 - Greater Houston Business Procurement Forum
 - Women Contractor's Association
 - Houston Contractor's Association

Process for Amending the DB Agreement

Houston is delivering project on behalf of four Authority partners

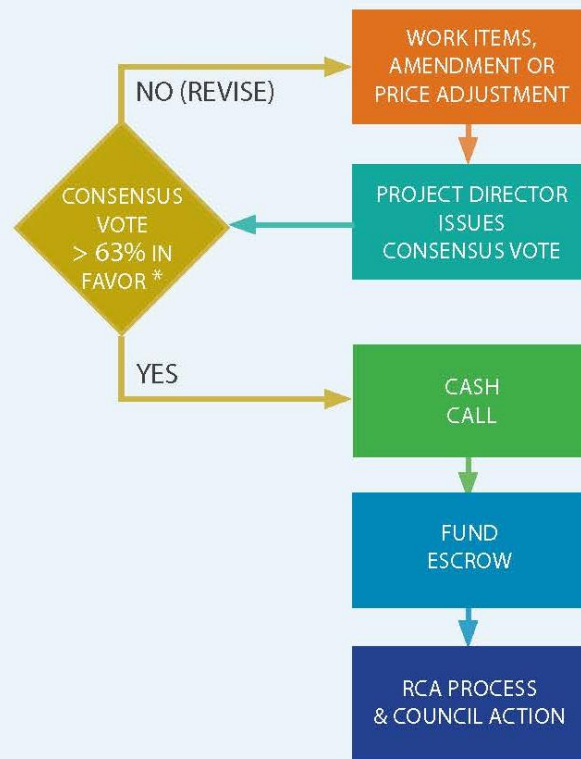
Cost Share



- North Harris County Regional Water Authority
- West Harris County Regional Water Authority
- North Fort Bend Water Authority
- City of Houston
- Central Harris County Regional Water Authority

Authority & City consensus required to approve amendments

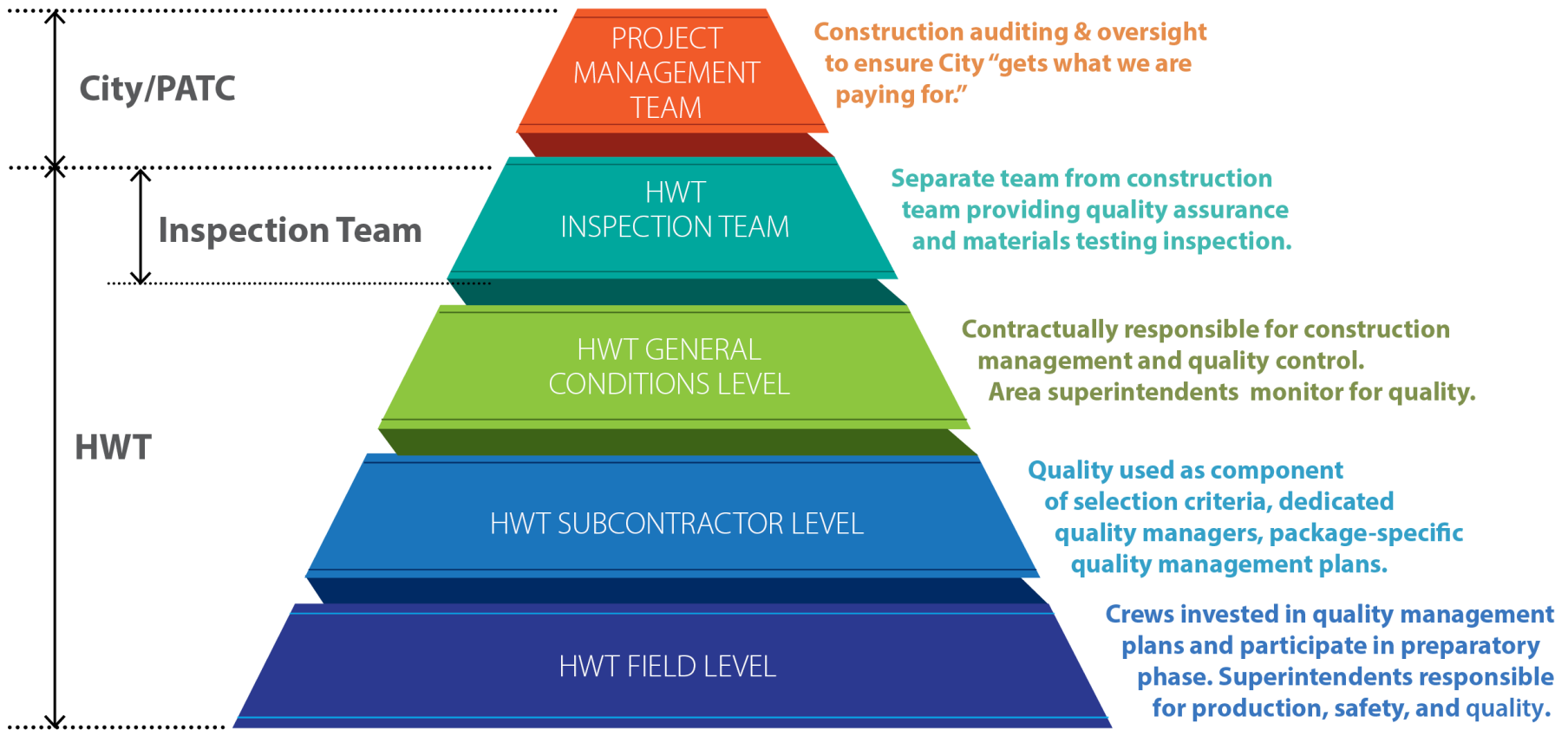
Article VI of the Second Supplement Contracts between each Authority and the City requires Authority consensus for approval of all contract amendments. A weighted vote that exceeds 63% must be achieved to approve an item.



* Weighted consensus based on the following cost share percentages:
NHCRWA - 35.3%, WHCRWA - 25.8%, NFBWA - 21.4%, Houston - 16%, CHCRWA - 1.5%

Construction Services

Bottom-up approach used to enhance project quality



Construction services includes two separate components

Auditing & Oversight (performed by City/PATC)	Construction Management & Inspection (CM&I) (performed by HWT)
<p>Texas Code 2269.356 requires independent:</p> <ul style="list-style-type: none"> • inspection services • construction materials engineering and testing • verification testing services 	<p>HWT is contractually responsible to both design and construct the NEWPP Expansion. As such, they must be in complete control of all design and construction functions, including CM&I.</p>
<p>Services include auditing & field engineering</p>	<p>DB Agreement requires HWT to:</p> <ul style="list-style-type: none"> • Certify that components conform to the Contract Standards without exception. • Supervise, direct, and inspect the Work. • Provide full-time construction management and construction inspectors. • Guarantee performance at the completion of construction, which require that they manage all aspects of the design, construction, and start-up.
<p>Meets requirements of Design-Build (DB) Agreement</p>	
<p>Approach approved by Authorities</p>	
<p>Approach presented to TTI on May 8, 2017 & approved by Council on June 20, 2017 for EWPs</p>	

Early Work Packages (EWP)

Early Work Packages (EWPs)



*TTI Committee previously briefed on May 8, 2017 regarding EWPs

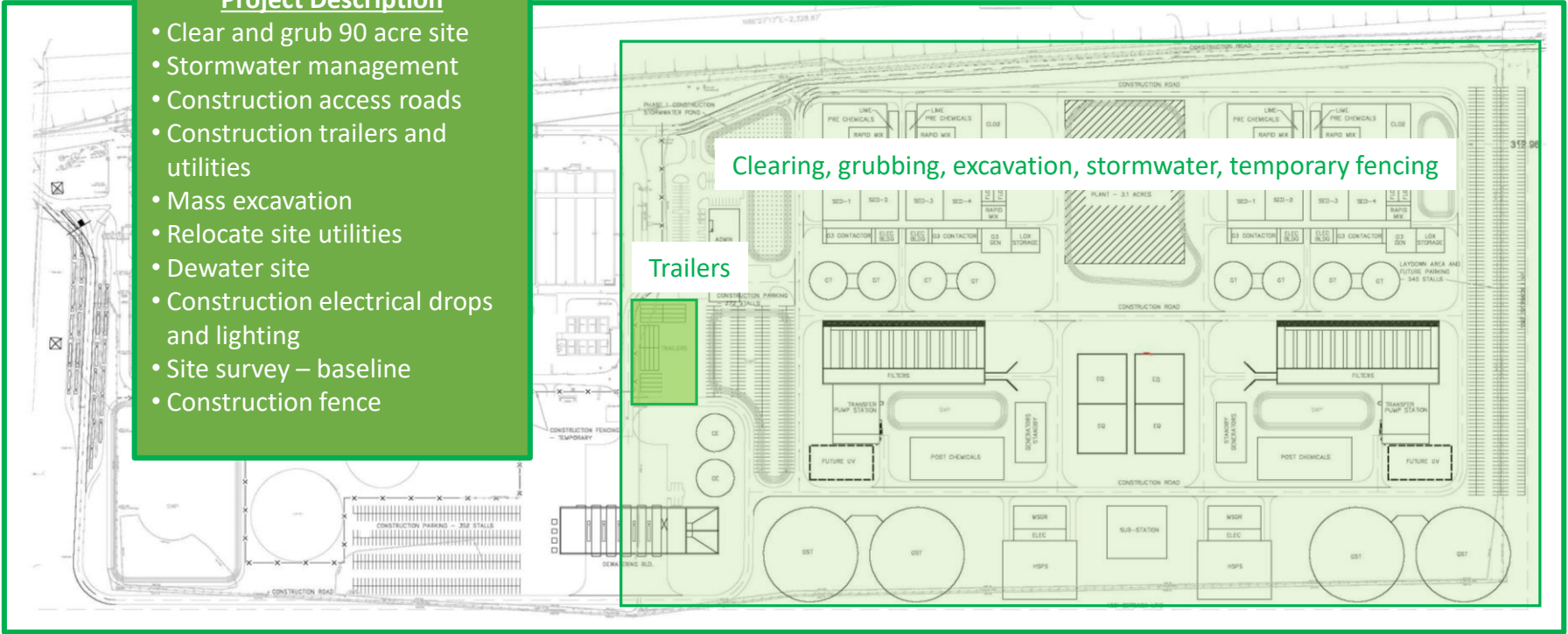
Early Work Package 1 – Site Prep

Project Description

- Clear and grub 90 acre site
- Stormwater management
- Construction access roads
- Construction trailers and utilities
- Mass excavation
- Relocate site utilities
- Dewater site
- Construction electrical drops and lighting
- Site survey – baseline
- Construction fence

Clearing, grubbing, excavation, stormwater, temporary fencing

Trailers



	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	
GMP/Amendment Negotiations		◆					Council Action/NTP												
RCA/Council Process		◆					Final Completion												
Construction		◆																	

Early Work Package 4 – Raw Water Transmission Mains

Project Description

- Install two 108" pipelines
- Tunnel under West Lake Houston Parkway
- Install electrical ductbank to Intake Pump Station
- Install chemical piping to Intake Pump Station
- Cathodic Protection

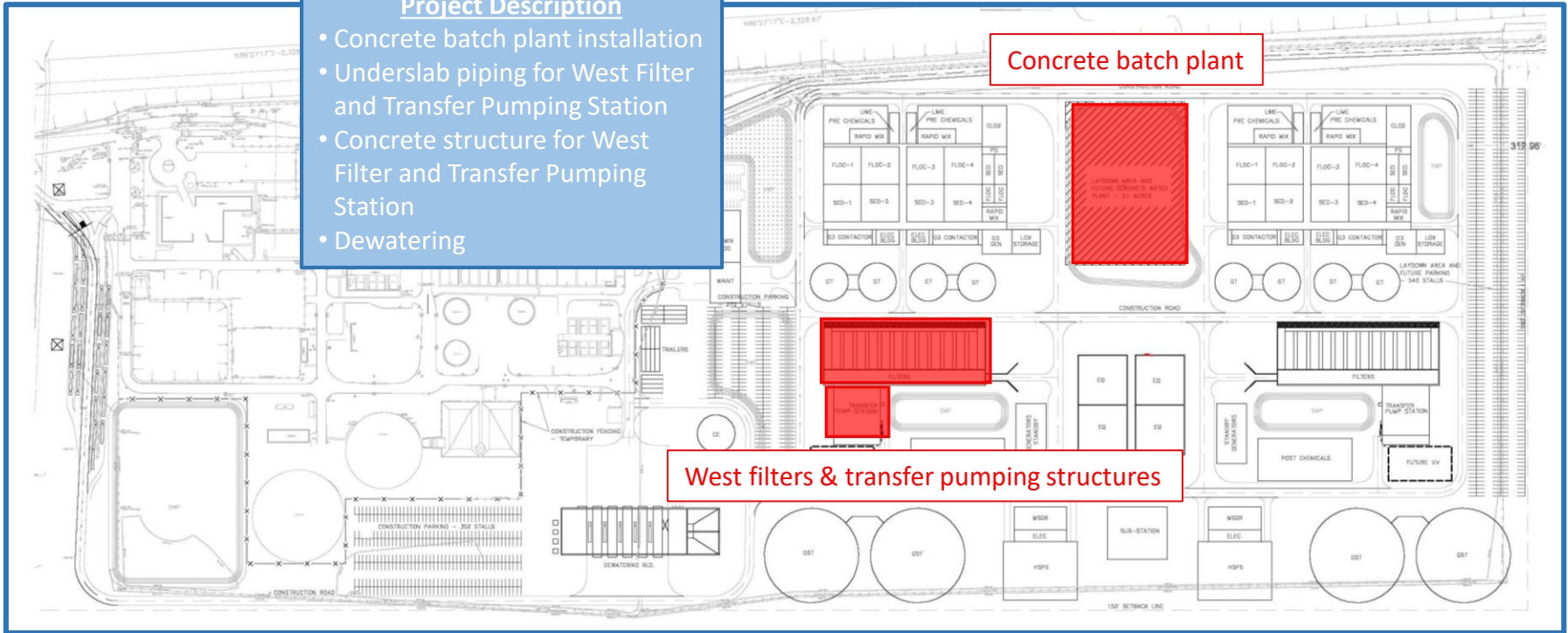


	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18								
GMP/Amendment Negotiations				◆	Council Action/NTP																					
RCA/Council Process							◆	GMP Submitted																		
Construction																				◆						
																					Final Completion					

Early Work Package 2 – West Filters & Concrete Batch Plant

Project Description

- Concrete batch plant installation
- Underslab piping for West Filter and Transfer Pumping Station
- Concrete structure for West Filter and Transfer Pumping Station
- Dewatering



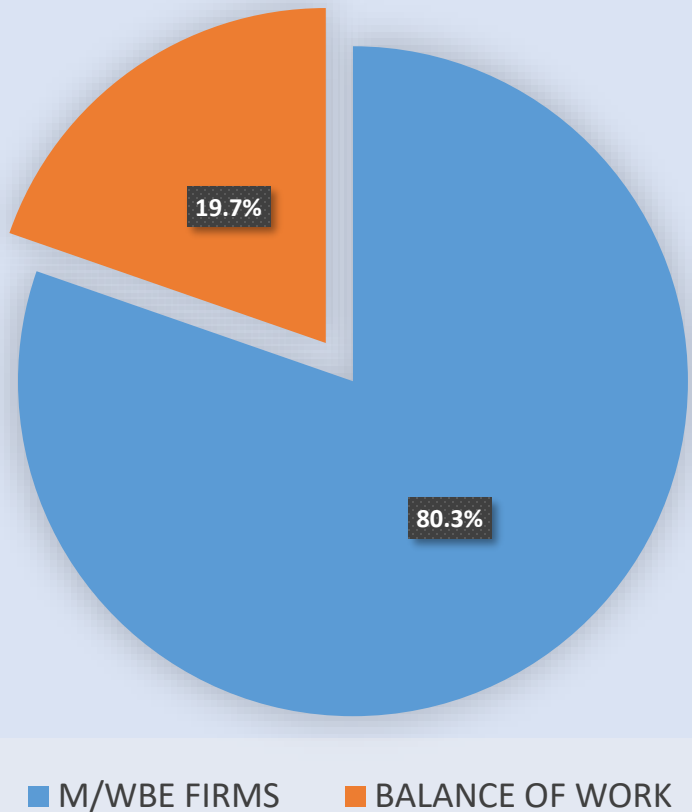
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RCA/Council Process								◆															
Construction																							

Final Completion
(est. mid 2019)

Subconsultant & Subcontractor Participation Update

MWBE Participation for EWP # 1

Estimated M/WBE Participation for EWP 1*
(\$13.8M of \$17.18M direct construction cost)

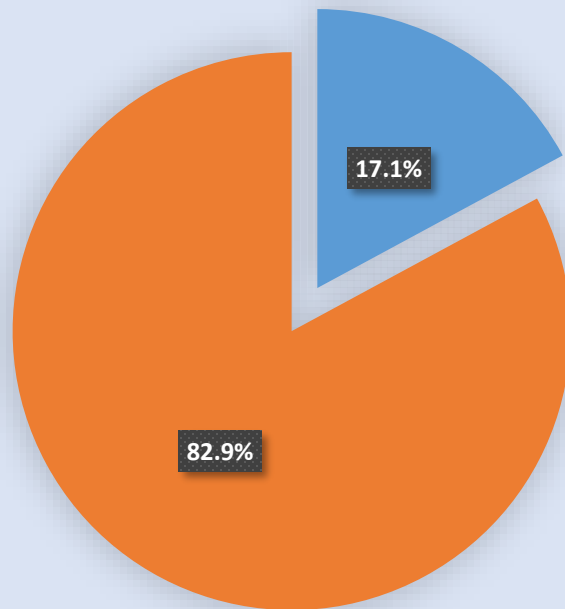


MWBE Firms include Landtech, Fence Master, Construction Diversity Group, Lazer, and Emerald

*Estimated value based on latest GMP direct construction cost. Values to be committed once GMP Amendment executed.

MWBE Participation for EWP # 4

Estimated M/WBE Participation for EWP 4*
(\$5.5M of \$32.2M direct construction cost)



■ M/WBE FIRMS ■ BALANCE OF WORK

MWBE Firms include Republic Traffic Safety, J Simmons, Fierro Group, Z Logistics, M&D Foundation, AGS Consultants, All Steel.

*Estimated value based on latest GMP direct construction cost. Values to be committed once GMP Amendment executed.

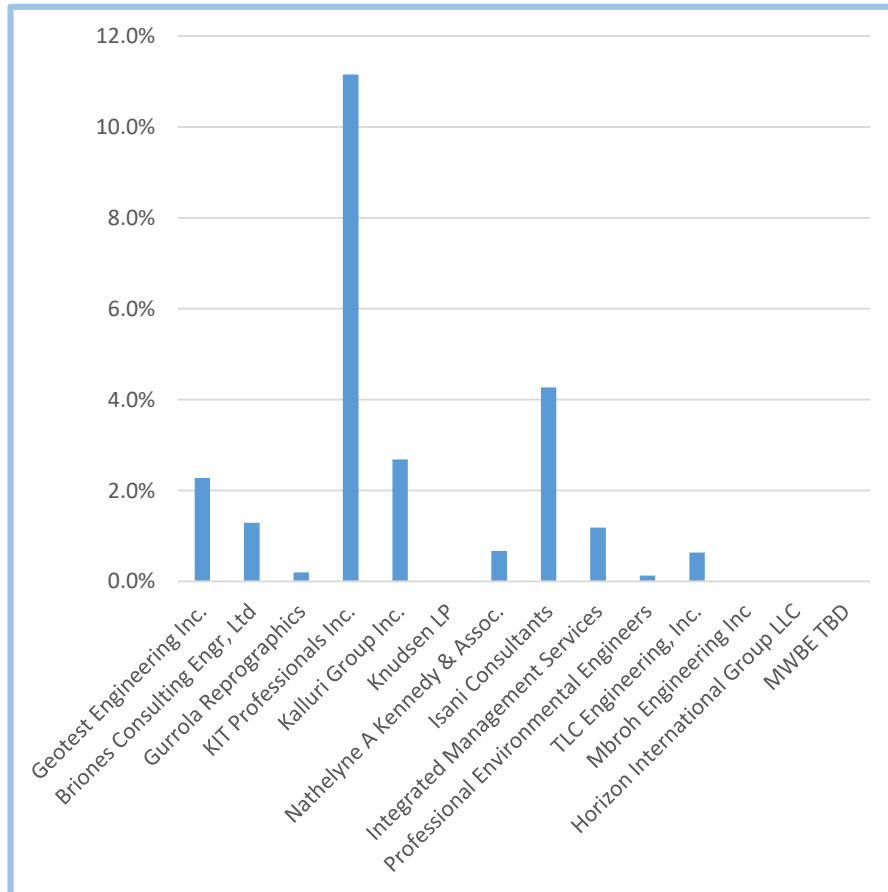
Authorizations to Date

Approval For	Appropriated to Date (\$)	Authorized to Date (\$)	Invoiced as of October 2017
HWT	\$ 82,300,000	\$ 68,434,000	\$ 30,307,950
PATC	\$ 33,917,174	\$ 26,394,869	\$ 15,183, 905

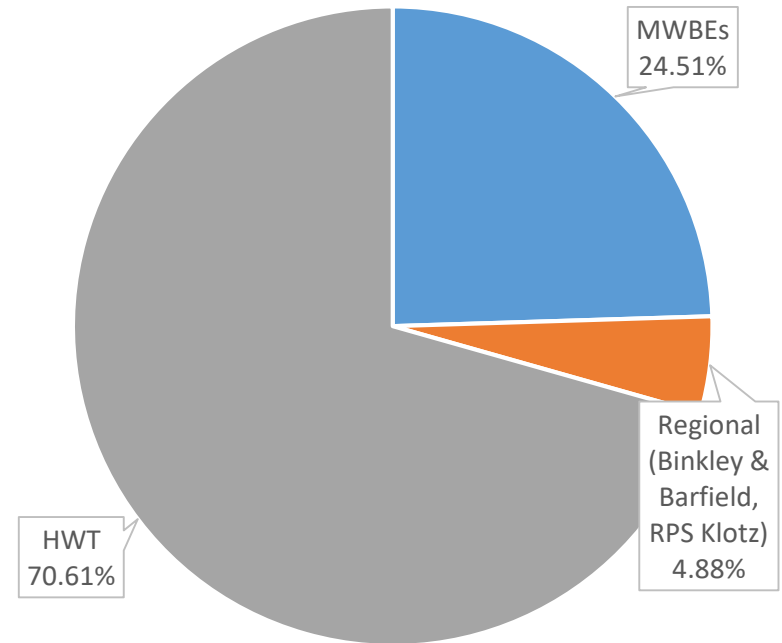
Subconsultant participation - HWT

Based on Approved Invoices through October 2017

Percentages paid to subconsultant partners through October



Percentages by category through October



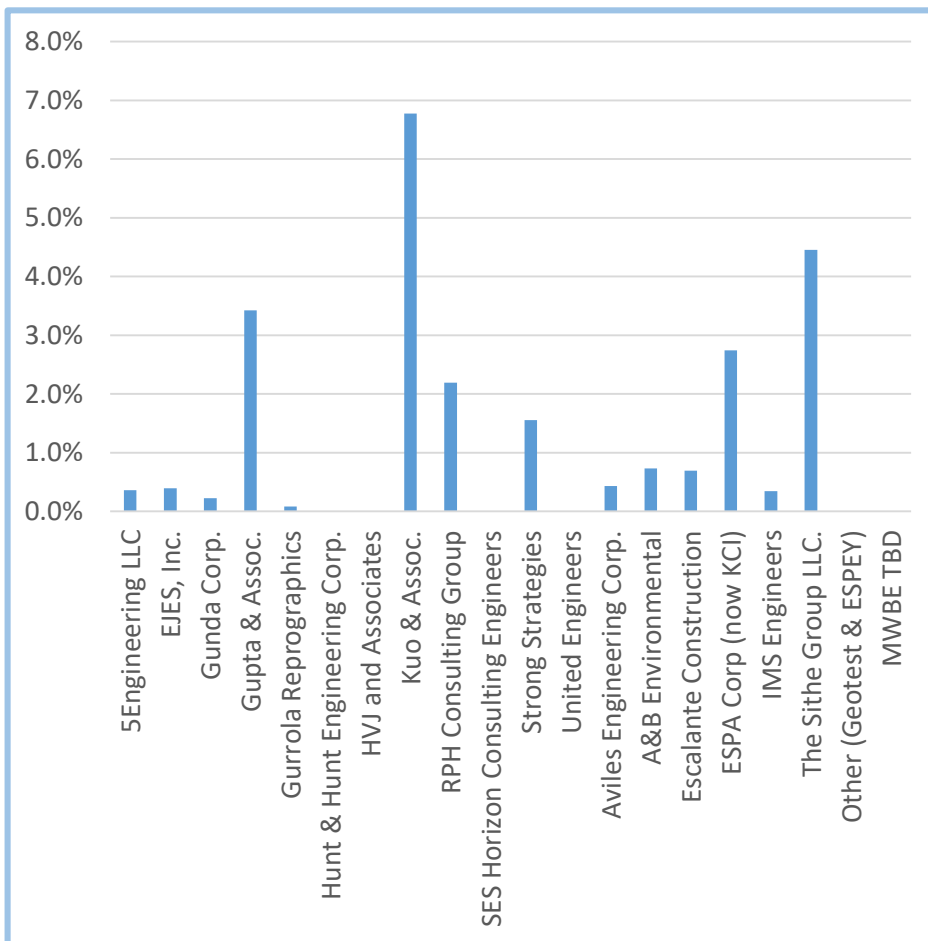
CM&I – cost range 4% -7%

TLC Engineering & Geotest are part of CM & I

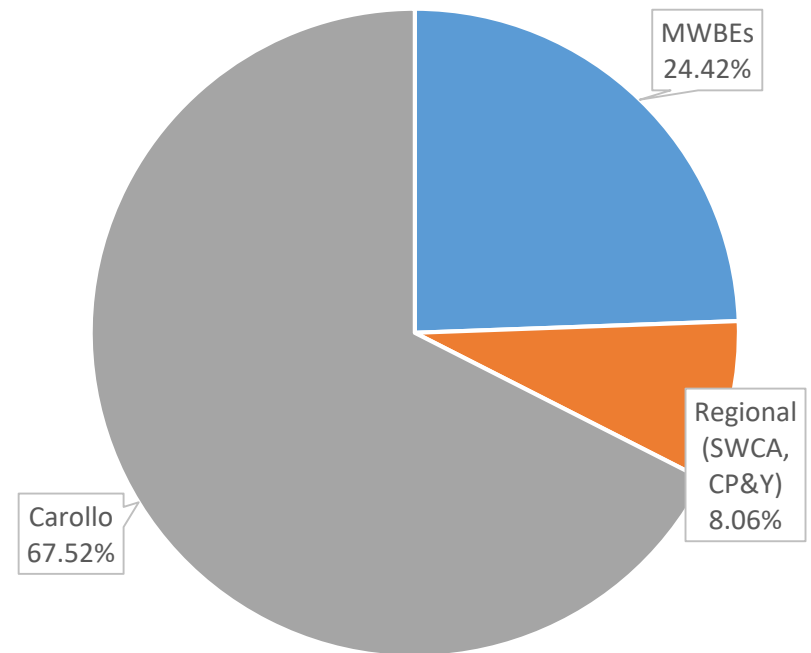
Subconsultant participation - PATC

Based on Approved Invoices through October 2017

Percentages paid to subconsultant partners through October



Percentages by category through October



Construction Auditing - cost range
1% - 2%; RPH, EJES, and HVJ are part
of audit team

Requests for Council Action

Upcoming Requests for Council Action

Request for Council Action	Approximate Date	Amount (\$)
Approve Amendment 4 – EWP #1	Mid-Dec 2017 ¹	\$37.3M GMP
Approve Amendment 5 – EWP #4	Mid-Jan 2018 ²	≈ \$57M
Approve Amendment 6 – EWP #2	Late-Feb 2018	≈ \$60M
Approve Amendment 7 – EWP #5	Spring 2018	TBD
Approve GMP Amendment	Fall 2018	TBD
Approve PATC W.O. #10 Amendment	Dec 2018	TBD

1 December action needed to avoid cost and schedule impacts to project.
 2 January action needed to avoid cost and schedule impacts to project.