HSC Expansion Study
**Federal Channel Navigation Study**

- 3x3x3 w/recon
- Waiver--$10M, 4 years
- “Mega-study”

**The Houston Ship Channel**

For this study effort, the ship channel has been divided into six segments:

- Bay Reach
- Bayport Channel
- Barbours Cut Channel
- Boggy Bayou to Sims Bayou
- Sims Bayou to I-610 Bridge
- I-610 Bridge to Turning Basin

**IMPROVE ALL REACHES:**
- Wider channels, including Bayport and BCT
- Bend easings
- Deeper drafts upstream
- Upper bay anchorage
Study Drivers
NFS Observations: “3x3x3”

• Start, momentum, scope/risk
• Cost share and WIK
• Corps resources and teaming
• “Mega-study” implications
• Competing for resources
• Study challenges—industry rush to improve
• Policy and congressional intent
• Overall assessment
Stakeholder Engagement And Delivery
6 Steps for Stakeholder Engagement

1. Solicit input early
2. Explain the process
3. Provide the content but not the conclusion
4. Include economic impact
5. Assess risks and be transparent about available resources
6. Doing greater good
Issues Regarding Delivery

1. Solicit input early: 
   408 permits

2. Explanations needed: 
   Real Estate processes

3. Provide content, not conclusion: 
   Placement area
   special use process development

4. Economic impact consideration: 
   401c process

5. Assess risks and be transparent about available resources: 
   Navigation Servitude use

6. Consideration of the “greater good”: 
   assessment of fees at “market rates
Houston Ship Channel
Houston’s Channels
Houston—the Busiest U.S. Channel

Houston: 22,000 ship moves
200,000 barge moves

Deep Draft Ship Calls

LA+LB: 3,860
NYNJ: 5,508
Houston Galv/Texas C.: 9,945
Industry expansion impacts the dredged material disposal process.

Construction today would generate an estimated 24 million cubic yards of new work dredged material—more than 8 years of maintenance material.
Confined Placement Areas for Dredge Material

- Intended for channel maintenance dredging
- PHA proposes terminals use clay from construction to raise dikes, reserving capacity
- Expensive to construct and maintain
Channel Improvements--Bigger Ships

- Port Authority solution, 100% Non-federal cost
- Barbours Cut--COMPLETE
- Bayport-finish in early November, 2016
- Houston is READY for neo-Panamax ships
Bayport Improvements

50’ wider in the land cut (in progress)

100’ wider in the bay (completed)

Deepen to -49’ to handle 45’ draft ships (complete in early June)
More Marsh Yields Better Navigation

Construction of bay marshes uses clay from the Bayport “flare”—which improves navigation in the channel system.
Houston Ship Channels: Bang for the O&M Buck

Dredging cost per ton of cargo moved

FY 14 Appropriation, CY 2013 total tonnage
Annual Federal Funding for “Highways”

$4.2 billion annually to keep cars and trucks moving

$120 million for the “maritime highways” to 28 Texas ports and the GIWW