



Construction Contracting for Todd Shipyard Sediment Remediation Project



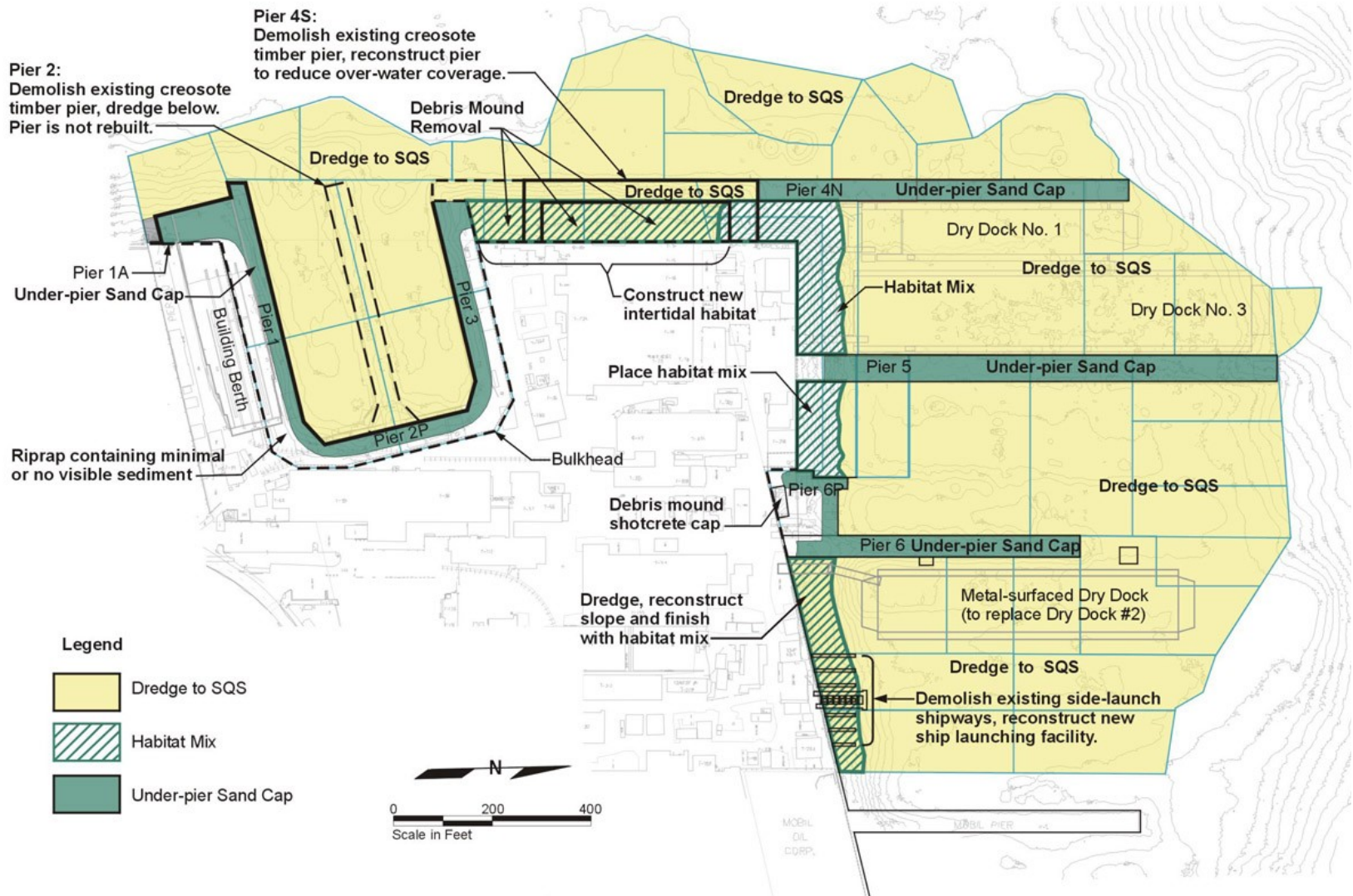
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Project Overview





Unique Work Elements

- Dredging & disposal of high water content sediment
- Sediment contains large quantities of shipyard debris
- Cleanup criteria are very conservative
- Sediment beneath piers must be capped
- Work must be conducted within operating shipyard
- Fishbowl setting

Dredging of High Water Content Sediment



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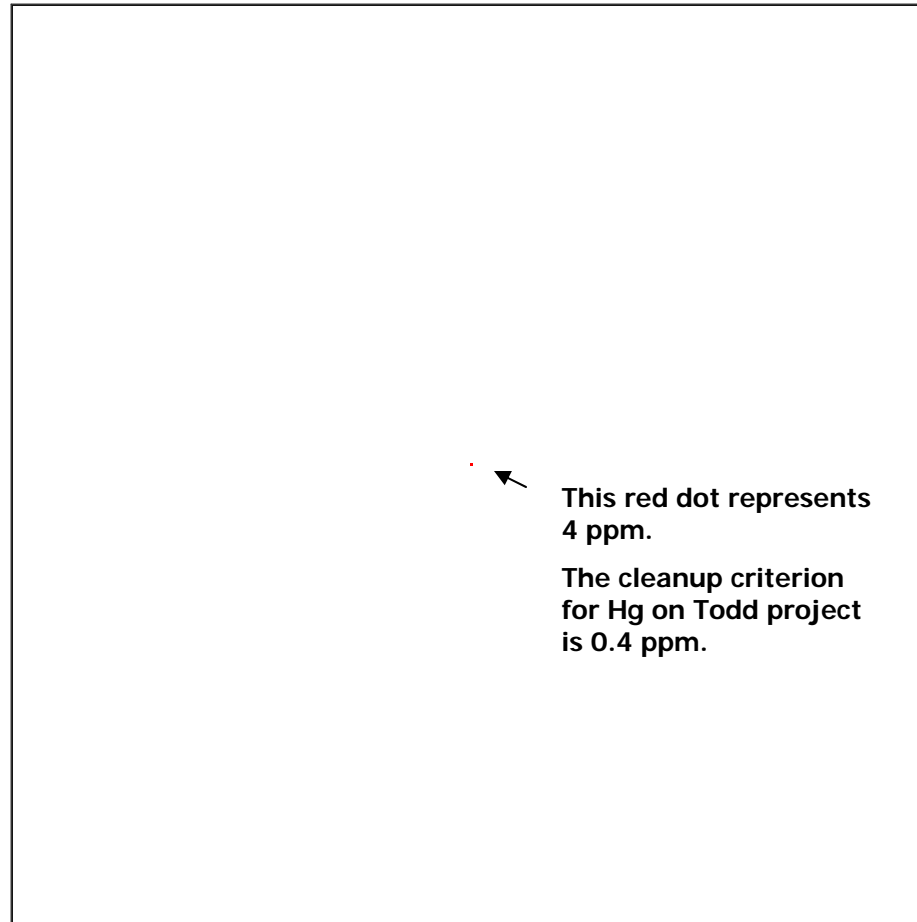
Large Quantities of Shipyard Debris



Large Quantities of Shipyard Debris



Cleanup Criteria are Very Conservative



Capping of Areas Beneath Existing Piers



Work Must Be Conducted Within a Busy Operating Shipyard



Fishbowl Setting





Conventional Design/Bid/Build Approach Problematic for Key Components of the Work

- Dredging
- De-watering of Dredged Material
- Under-pier Capping



Objectives for Construction Contract Approach for Todd SRP

- Align financial motivations of Owner & Contractor
- Incentivize Contractor innovation and involvement in continuous improvement of construction methods
- Ensure project design matches well with contractor abilities & equipment



Selected Construction Contract Approach for Todd SRP

- Integrate selected contractor into project team early during development of the project design
- Perform work on a “cost” basis
- Incentivize Contractor to keep costs low



Competitive RFP at 30% Design

- RFP fully described all aspects of the job
- Sent to select short-list of Contractors
- Contractor proposals presented their work experience, technical approach, and Target Cost
- Proposals required significant effort on part of bidders
- Contractor selected based on target cost & technical approach



Pre-construction Services

- GCC involved in shaping final design
- Target Cost held constant, except for “significant” changes in scope
- Provided credence to project design with regulators
- Provided constructability review & ensured design fit GCC equipment and experience



Cost Contract

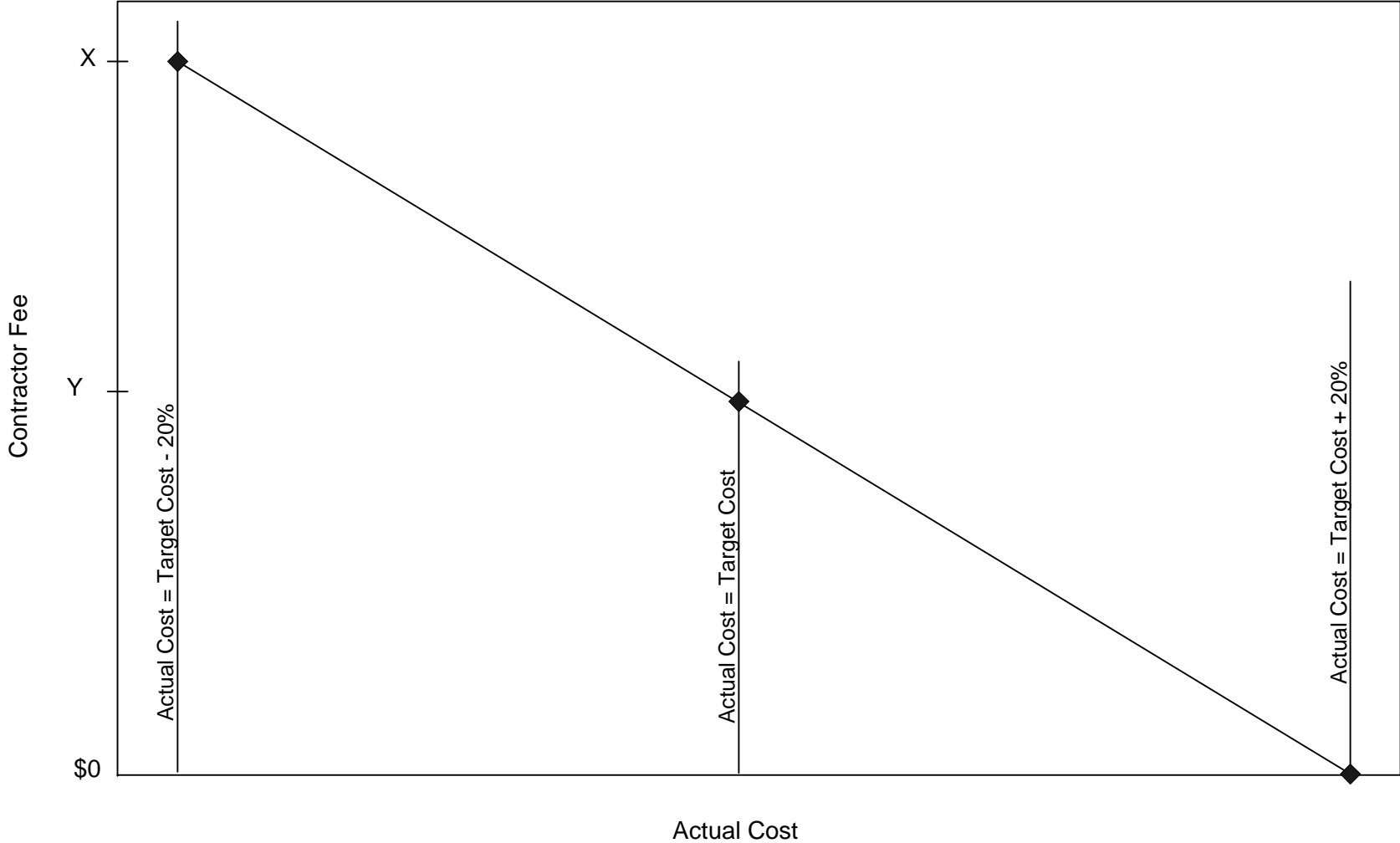
- Reimburses Contractor for all direct costs of the work
- Removes financial risk from Contractor, thereby reducing bid costs to cover unknown/unquantifiable risks



Incentive Fee

- Fee based on comparison of actual cost to target cost
- Incentive of sliding scale fee—more powerful incentive than traditional Value Engineering structure

Sliding Scale Fee





Project Benefits of Cost plus Incentive Fee Contract

- Contract structure creates a win/win situation
 - Owner maintains risk
 - Contractor incentive to remove or minimize risk
- Examples on Todd project include sediment disposal and dewatering

Costs for Disposal are Huge



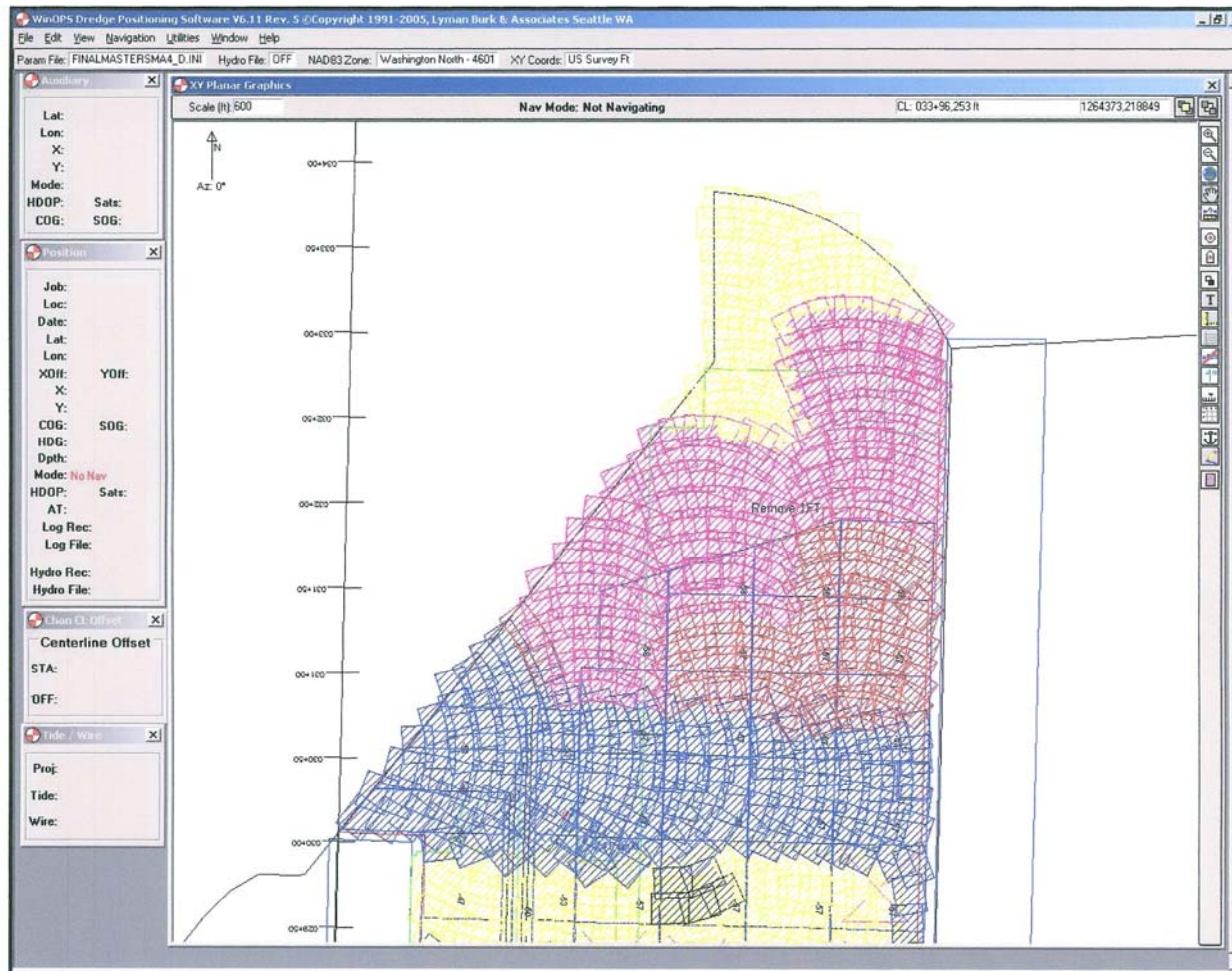
Both parties benefit by reducing over-dredging



Dredge operator carefully monitors dredge depths, frequent bathymetric surveys



Dredge operator carefully monitors dredge area & bucket placement





Dewatering

- Cost to dispose of water the same as cost to dispose of sediment
- Significant opportunity to minimize disposal costs through dewatering of recovered sediment
- Contractor has spent a lot of effort tweaking dewatering process to improve efficiency

On-site Dewatering Reduces Disposal Costs



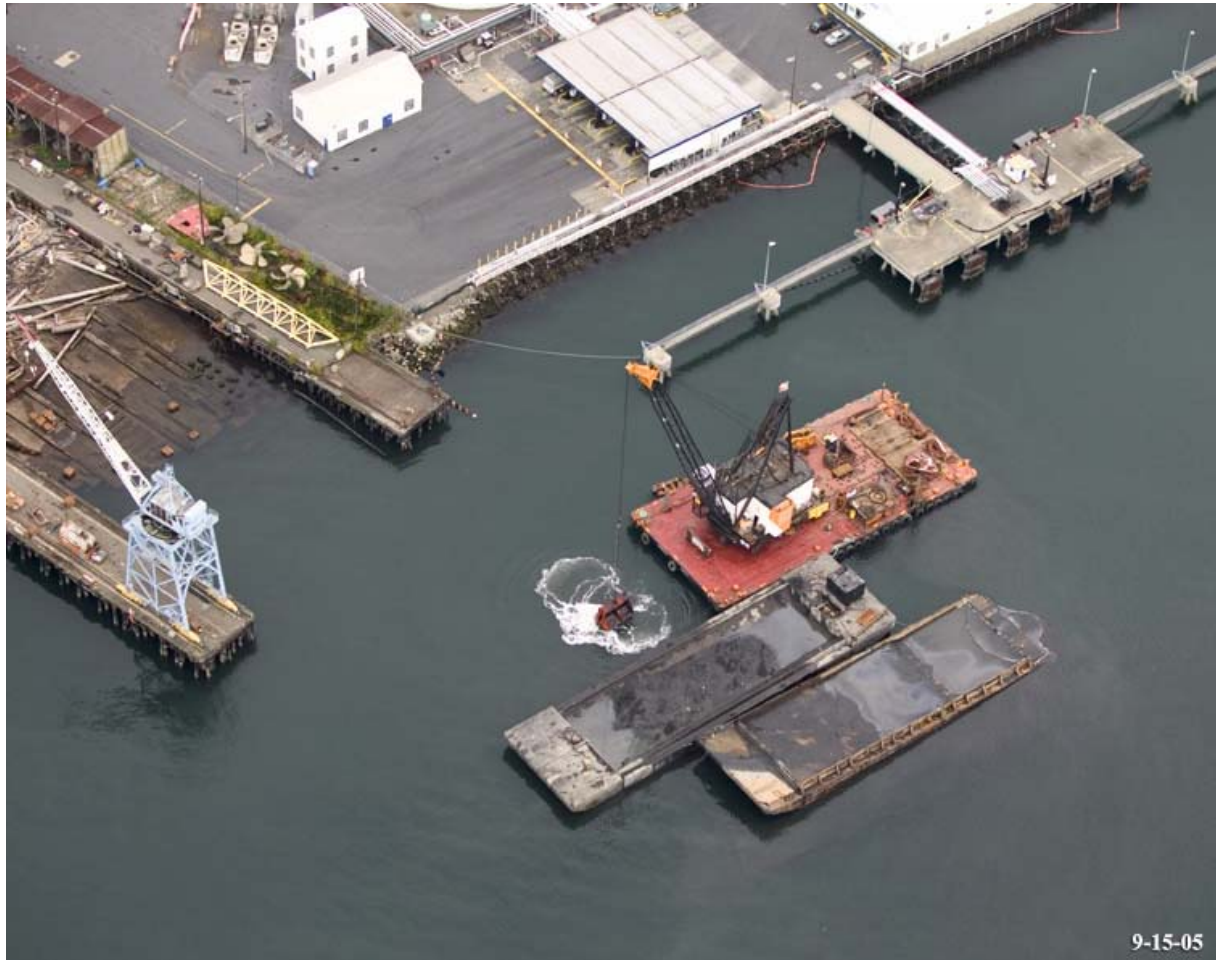
Minimizing volume of material sent for disposal benefits Contractor (increased fee) and Owner (reduced cost)



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On-site Dewatering Process





Value of Good Relationship

- Contract type removes adversarial relationship between Owner & Contractor
- All parties work toward common goal
- Good Owner/Contractor relations result in good regulator (EPA) relations

