

Use of Design Build for the Delivery of the Brightwater Marine Outfall

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T R E A T M E N T S Y S T E M

Outfall Highlights

- \$44M MCAA – Design & Construction
- 5,420 feet long - 58 – 84” diameter, single or twin pipes
- Diffuser section is 500 feet long
- Outfall is buried near-shore & laid on the bottom off-shore to -605 feet MLLW
- Shared construction site
- Environmentally sensitive area - eelgrass
- Extensive permit conditions

Project Delivery Methods

- Traditional
 - Design-Bid-Build
- Alternative Project Delivery
 - Authorized by WAC 39.10
 - General Contractor/Construction Manager
 - Design-Build
 - Work Order Contracting

Why Use DB for Outfall?

- King County looking for procurement alternatives
- Outfalls are very dependent on contractor, materials and methods.
- 1st WTD DB project – simple scope
- Expect to use DB for future projects
- Procurement tool box has options, DB is one

Key Elements in Using DB

- Pre-design - accurate criteria and complete scope
- Know what you want and limit change
- Preliminary geotechnical studies complete
- Lengthy permits and studies are complete
- Site selected
- Staff or consultant used to prepare DB/RFP

Outfall Performance Criteria

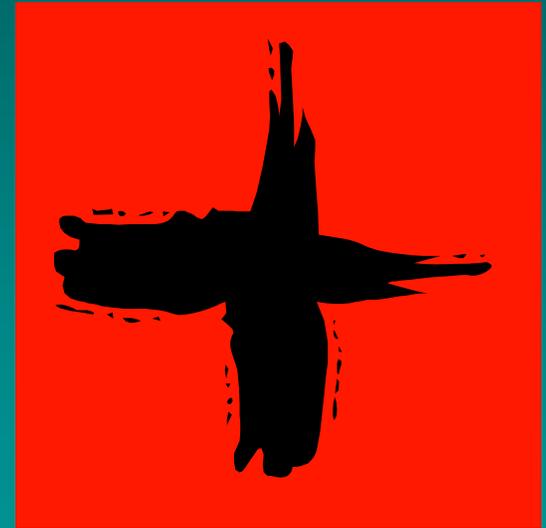
- Flow 8 – 170 mgd
- 58 – 84” diameter – buried
- 58 – 76” diameter – off-shore
- No minimum velocity criteria
- Minimum Froude number
- Maximum velocity 18 fps @ 170 mgd
- Driving head 48 feet @ 170 mgd @ extreme tide + sea level rise
- Design life of 75-years

Outfall Prescriptive Criteria

- Location/alignment determined
- Material - HDPE or polyurethane lined & coated steel
- First 900 feet of outfall is buried
- Shoring is required to -30 feet MLLW
- 4,520 feet bottom laid
- 500 foot long diffuser
- Limited in-water work window
- Other permit restrictions

DB / Infrastructure Advantages

- Means and methods is contractor's domain, DB ties the design & choice of materials closer to the contractor
- Straightforward projects & designs
- Ultimate teaming opportunity
- Single point of responsibility
- Cost & time savings??



DB & Infrastructure Concerns

- Lack of creativity options
- Owner preferences for materials
- Projects cover large areas
- Multiple permit, neighborhood and environmental constraints
- During proposal phase confidentiality restricts communication
- Coordination between project elements



Marine Outfall DB Differences

Technical

- Permits are system-wide
- Detailed pre-design effort
- Defined project
- Contract interfaces
- RFQ/P package delivery
- GDR & GIR
 - More geotechnical investigations are needed
 - Price proposal adjustments after site investigations for certain conditions



Marine Outfall DB Differences Contractual

- Entire RFQ/P ready at advertisement
- Incentives
- Project Labor Agreement
- State Revolving Fund Loan
- Owner Controlled Insurance Program
- Honorarium paid to all



RFQ/P Preparation

- Prepared by KC WTD with review assistance from CM team
- Put out all elements together
 - Proposal requirements
 - Terms & Conditions
 - Technical requirements
- Contract vs. Reference documents
- Modifying elements as we go

RFQ/P Process

- Multi-step process
 - Advertise all elements and request Statements of Qualification
 - Evaluate SOQs & narrow the field
 - Request proposals
 - Evaluate proposals & narrow field
 - Request BAFOs with clarifications
 - Select best proposal & conform contract
 - Continuous refinement of specifications, T&C



SOQ & Proposal Evaluation

- Evaluation Team
- Review Panel
- Criteria and points published
- Clarification meetings
- Proposal presentations
- What you ask for depends on potential DB teams



SOQ & Proposal Evaluation

- Criteria:
 - Experience & technical competence
 - Past performance
 - Financial resources
 - Workload
 - Construction approach
 - Proposal price – (relative to other proposers)
 - Proposal design concept
 - Required head (relative to a maximum)
- Points:
- 300 SOQ
vs 175
Proposal
 - 825
Proposal
 - Total
1,000**

Honorarium

- Informal Survey
 - 17 infrastructure projects
 - \$14M - \$725M MACC
 - 0.1% - 0.54% of MACC paid
- Brightwater Marine Outfall
 - \$35 - \$40M MACC
 - Proposal honorarium \$95,000
 - BAFO honorarium \$20,000
 - Honorarium is 0.27% - 0.36% of MACC
 - Paid to all proposers



Marine Outfall RFQ/P Schedule

- RFQ/P Prep started Jan. 2006
- Two reviews/revisions
- RFQ/P advertised Nov. 2006
- SOQ submitted Dec. 2006
- Proposals received May24, 2007
- BAFOs due August 9, 2007
- DB under contract October 1, 2007

Design & Construction Schedule

- Design start Oct. 1, 2007
- Construction @ Pt. Wells
May 1, 2008
- Required construction
completion Oct. 15, 2010
- BW startup & testing, late-
2010



Design Builder Input

- Goal is to be “fair” in relationship with the DB team
- During Proposal Phase
 - Technical requirements
 - Incentives
 - Materials escalation clause
 - Marine “Severe Weather” clause
 - Terms & Conditions
- During Proposal Evaluation – same



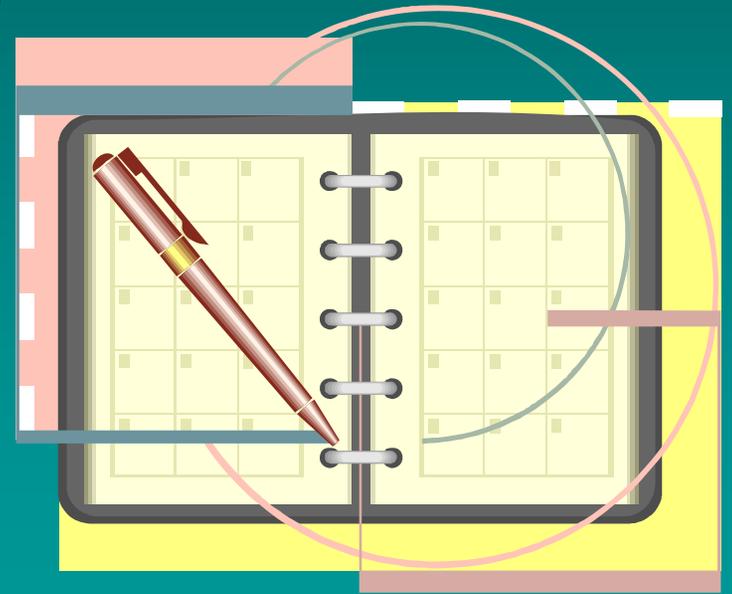
Lessons Learned

- Balance innovation & getting what you want
- Mindset change from D/B/B
- Don't be afraid of prescriptive elements
- Remain flexible where flexibility is given
- Hands off during design
- Learn as you go



Lessons Learned – part 2

- Schedule
 - CM or Proposal Manager selection
 - RFQ/P preparation
 - RFQ/P review & revisions
 - SOQ
 - Proposal
 - BAFO
 - Conform Contract
 - Contract execution



Lessons Learned – part 3

Advertise!!!!

- Essential activity
- Press releases
- Daily Journal of Commerce
- Local & National Media
 - Engineering News Record
 - Contractor Periodicals
- PM available to talk
- Web Site
- Active Solicitation



Questions

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