



Signature Report

December 6, 2005

Ordinance 15336

Proposed No. 2005-0322.1

Sponsors Edmonds

1 AN ORDINANCE authorizing King County, through the
2 wastewater treatment division of the department of natural
3 resources and parks, to adopt the design-build procedure of
4 public works contracting for construction of the
5 Brightwater marine outfall project.

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8 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

9 SECTION 1. Findings.

10 A. The King County council adopted the regional wastewater services plan
11 ("RWSP") by Ordinance 13680 on November 29, 1999, which set forth policies intended
12 to guide the county in providing treatment at its expanding plants and in expanding
13 treatment capacity through 2030. The RWSP calls for construction of Brightwater by
14 2010 to provide needed wastewater capacity for portions of north King and south
15 Snohomish counties.

16 B. The Brightwater project includes a 36 million gallon per day (mgd)
17 wastewater treatment plant and conveyance facilities to transport untreated wastewater to

18 the Brightwater treatment plant and discharge treated wastewater to Puget Sound through
19 a marine outfall.

20 C. Constructing an outfall pipeline deep in Puget Sound requires highly
21 specialized design and construction requirements.

22 D. The department of natural resources and parks and its consultants evaluated
23 traditional and alternative construction project delivery methods and recommended that
24 the marine outfall be constructed using the design-build contracting method. The
25 evaluation determined that having a single entity responsible for both design and
26 construction will minimize, if not eliminate, delays in constructing the marine outfall.
27 The design-build contracting method will also foster scheduling efficiencies by allowing
28 phased procurement/construction of the certain portions of the marine outfall to proceed
29 while design of other project elements is still being completed. A summary of King
30 County's process to select the design-build contracting method for constructing the
31 Brightwater marine outfall is included as Attachment A to this ordinance.

32 E. The Brightwater marine outfall qualifies for the design-build contracting
33 method under RCW 39.10.051(2)(a) because it costs over ten million dollars and requires
34 highly specialized construction activities and technologies.

35 F. As required by RCW 39.10.051, the King County executive initiated a public
36 notification and review process on the proposed use of the design-build contracting
37 method to construct the Brightwater marine outfall. As part of this process, staff from the
38 department of natural resources and parks held a public hearing on April 29, 2005, to
39 receive public comment on the proposal. The comments received during this hearing are
40 provided as Attachment B to this ordinance.

41 SECTION 2. The King County council hereby determines that the development
42 of the Brightwater marine outfall project shall be procured pursuant to the design-build
43 contracting method authorized in chapter 39.10 RCW. The King County executive is
44 hereby authorized to contract for design-build services on the Brightwater marine outfall
45 project through a competitive process as outlined in chapter 39.10 RCW.
46

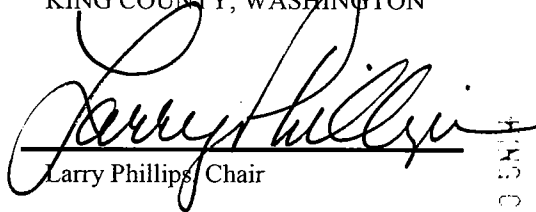
Ordinance 15336 was introduced on 8/15/2005 and passed by the Metropolitan King
County Council on 12/5/2005, by the following vote:

Yes: 9 - Mr. Phillips, Ms. Lambert, Mr. Dunn, Mr. Ferguson, Mr. Hammond,
Mr. Gossett, Ms. Hague, Mr. Irons and Mr. Constantine


No: 0

Excused: 4 - Ms. Edmonds, Mr. von Reichbauer, Mr. Pelz and Ms. Patterson

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON


Larry Phillips, Chair

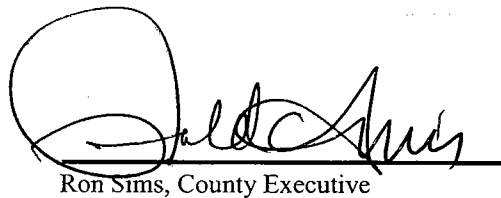
ATTEST:



Anne Noris, Clerk of the Council

2005 DEC 16 PM 1:40
RECEIVED
CLERK
KING COUNTY COUNCIL

APPROVED this 16 day of December, 2005.


Ron Sims, County Executive

- Attachments**
- A. Summary of King County's Process to Select the Design-Build Contracting Method for Construction the Brightwater Marine Outfall, B. King County Department of Natural Resources and Parks Wastewater Treatment Division - King County Public Hearing - Brightwater Outfall Design-Build Project

Attachment A

Summary of King County's Process to Select the Design-Build Contracting Method for Constructing the Brightwater Marine Outfall

King County is proposing to use the design-build contracting method for constructing the Brightwater marine outfall and has begun preparations for procuring a design-build team in early 2005. This attachment summarizes the process used by King County to select the design-build method and highlights the advantages of using the design-build method for constructing the outfall. Following a brief overview of the Brightwater project, this attachment summarizes King County's evaluation of different project delivery strategies for building new wastewater capital projects, including a description of the design-build method and the legal basis for using it. This attachment concludes with a discussion of why the design-build method is best suited for use in constructing the Brightwater marine outfall.

Brightwater Overview

King County's adopted wastewater comprehensive plan, the Regional Wastewater Services Plan (RWSP), identified a set of wastewater capital projects to be constructed during the next 30 years. One of the key projects identified in the RWSP was a new treatment plant and associated conveyance system to be constructed in the north service area by 2010. These facilities, collectively termed the Brightwater system, consist of the following components.

- A 36 million gallon per day (mgd) treatment plant that will provide secondary treatment to wastewater from homes and businesses in King County's north service area, including portions of north King and south Snohomish counties.
- Approximately 13 miles of large-diameter influent and effluent conveyance tunnels, a 170 mgd influent pump station, access portals, and associated odor control facilities.
- A marine outfall to Puget Sound, which includes a 60-inch diameter outfall pipe approximately 5,200 feet long and a 500-foot long diffuser located at a depth of approximately 600 feet.

Evaluation of Project Delivery Strategies

As the RWSP was being finalized in 1999, King County undertook an evaluation of innovative project delivery methods for use in constructing the wastewater projects outlined in the RWSP. The evaluation was conducted by a three-person task force that received direction and feedback from a steering committee. The evaluation considered the advantages and disadvantages of each method and developed a decision-making framework for selecting an appropriate delivery method for future capital projects. The evaluation also identified preliminary recommendations for project delivery methods for the individual project elements. The findings from the

evaluation were published in an April 1999 report.¹ With respect to the Brightwater marine outfall, the report recommended that King County consider the use of the design-build method. A review of the design-build method and the legal basis for using it are presented as follows.

The Design-Build Method

The design-build method is a project delivery system in which the owner contracts with a single entity for the complete design and construction of the facility. Formerly used almost exclusively by the private sector, the popularity of the design-build method is increasing in the public sector. Reasons include recent changes in legislation, pressures to bring projects on-line more quickly and cost effectively, and reluctance by owners to increase in-house staff. The table below compares some key elements of the traditional design-bid-build method and the design-build method being proposed for the Brightwater marine outfall.

	Design-Bid-Build	Design-Bid
Planning Phase	Owner should define the flows to be conveyed/treated, select site, initiate environmental review.	Same.
Design Phase	Focus on "how" the project will be designed. Produces a detailed technical specification.	Focus on "what" the end product will be. Produces a more general performance specification.
Contractor Selection	Low bid.	Designer and contractor qualifications and price.
Owner Involvement	Owner administers and coordinates two contracts: one with designer and one with construction contractor. There are often multiple contract packages for each. Potential adversarial triangle of owner, designer, and contractor	Single contract for design and construction with a single responsible party. Owner only concerned about whether project meets performance specifications and not the technical details. Limited owner involvement in design.

Legal Basis for using Design-Build

State law allows public agencies to implement capital projects using the traditional design-bid-build contracting method (RCW 39.04). In terms of design-build, Sections 39.10 and 70.150 allow King County to use the design-build method for public works projects valued at more than

¹ King County Department of Natural Resources and Parks. Regional Wastewater Services Plan. Building Wastewater Infrastructure: New Project Delivery Strategies. April 1999.

ten million dollars or where using the traditional method of awarding contracts in lump sum to the low responsive bidder is not practical for meeting desired quality standards or delivery schedules. Both of these conditions apply to the \$28 million Brightwater marine outfall.

The RCWs also require a public notification and comment process on the owner's intent to adopt a design-build contracting method. King County advertised the public hearing on April 5, 2005, in the Seattle Times, the Daily Journal of Commerce, the Everett Herald, and Siete Dias. The public hearing was held on April 29, 2005, and King County received three verbal comments. One commenter stated that, in his experience as an engineer, there is no substantial cost benefit to using the design-build method but there is more potential for getting the job done on schedule. Another commenter, also an engineer, stated that design-build is a good method for controlling risk, which is a primary factor in construction of the marine outfall. The third commenter stated he was there to hear the comments of others. No written comments were received.

Design-Build Suitability for the Brightwater Marine Outfall

Constructing the Brightwater marine outfall will be a very complex and specialized undertaking. The outfall pipe must be trenched through the shore and nearshore environments and then placed on the sea floor for a distance of about 4,000 feet and to a depth of more than 600 feet. This work must take place in the highly variable nearshore and marine environments that are strongly influenced by tides and currents. The best approach to addressing these constraints while satisfying King County's performance specifications is to select a contractor and a designer at the same time. The key benefit of this approach is that the designer and contractor work together from the start to ensure the design supports the contractor's means and methods for constructing the outfall. It also provides greater flexibility to adapt means and methods during construction to address actual conditions encountered during construction.

Given the specialized nature of this project, King County does not believe that awarding contracts in lump sum to the low responsive bidder is practical for meeting desired quality standards or delivery schedule. The efficiency inherent in having a single entity responsible for both design and construction will potentially reduce project costs and minimize delays in project completion. The design-build method also encourages efficient project scheduling by allowing the design-build contractor to phase its procurement/construction of certain portions of the marine outfall while the design of other components of the project is being completed.

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KING COUNTY
DEPARTMENT OF NATURAL RESOURCES AND PARKS
WASTEWATER TREATMENT DIVISION

KING COUNTY PUBLIC HEARING
BRIGHTWATER OUTFALL DESIGN-BUILD PROJECT

1:00 to 2:00 p.m.

April 29th, 2005

ORIGINAL

King Street Center, Conference Room 5B
Seattle, Washington

KATHERINE M. CULLMAN
CCR 3001

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REPRESENTING KING COUNTY

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Woodinville, Washington 98072-6010

Senior Project Administrator:

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Wastewater Treatment Division
King Street Center
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Seattle, Washington 98104-3855

Court Reporter:

KATHERINE M. CULLMAN
VAN PELT, CORBETT & BELLOWS
423 Second Avenue Extension S., #21
Seattle, Washington 98104

* * * * *

OPENING STATEMENT, MR. KEN CURL

I'm going to go ahead and open the public hearing for the Brightwater Outfall Design-Build Project. My name is Ken Curl. This is Friday, April 29, 2005, at 1:00 p.m. The hearing is scheduled from 1:00 to 2:00 p.m. today.

We are in King Street Center, 201 South Jackson, and we are in conference room 5B.

The contract number or RFP number for this is E58016E.

We will make introductions. Again, my name is Ken Curl. I'll be covering the reasons for design-build. Russ Pabarcus, who's an engineer in our wastewater treatment division will talk a little about the project background.

And then we will open the hearing for public comment. What we are doing today is taking public comment. This will not be a question and answer session in any way. What our task is, is to take down your comments with regard to the use of the design-build process for procuring the construction of the Brightwater outflow.

So I'm going to go ahead and cover the reasons. This is taken from our Reason Statement that was published along with our advertisement for this hearing:

The RCW allows public agencies to use a design-build procurement procedure for public works projects valued at over \$10 million dollars where the alternative will

1 serve the public interest by providing substantial
2 fiscal benefit or that use of the traditional method of
3 awarding contracts in lump sum to the low responsive
4 bidder is not practical for meeting desired quality
5 standards or delivery schedules.

6 The preliminary cost estimates for construction of
7 the marine outfall is approximately \$27.9 million,
8 including \$1.85 million in Washington state sales tax.
9 The project involves highly specialized design and
10 construction requirements, including the use of special
11 construction materials to prevent corrosion and
12 abrasion during installation and operation of the
13 pipeline; the need to select among several marine
14 construction methods for the outfall pipeline and for
15 placing it on the seafloor at such a great depth; the
16 need to use construction mitigation measures meant to
17 protect salmon and the marine and coastal environments;
18 and a strong possibility that the contractor will need
19 to adapt means and methods during construction to
20 address actual conditions encountered in the highly
21 variable marine and nearshore environments.

22 Given this complexity and the variability, the
23 County does not believe that awarding contracts in lump
24 sum to the low responsive bidder is practical for
25 meeting desired quality standards or delivery

1 schedules.

2 The efficiency inherent in having a single entity
3 responsible for both design and construction will
4 potentially reduce project costs and minimize delays
5 and project completion.

6 This procedure also encourages efficient project
7 scheduling by allowing the design-build contractor to
8 phase its procurement/construction of certain portions
9 of the marine outfall to proceed while design of other
10 project elements of the outfall project is being
11 completed.

12 Those are the reasons we've stated for use of the
13 design-build process, one of the alternative processes
14 allowed by RCW 39.10.

15 I'm going to go ahead and let Russ read the project
16 background statement into the record, and then we'll go ahead
17 and take comments.

MR. RUSS PABARCUS, PROJECT BACKGROUND

I'm Russ Pabarcus, an engineer to King County.

The Brightwater treatment system consists of the treatment plant, the associated conveyance system, and a marine outfall. The conveyance system will connect existing sewage collection pipes to the treatment plant and convey treated wastewater to an outfall and diffuser in Puget Sound.

The Brightwater Treatment Plant is a 36-million gallon per day facility that will provide wastewater treatment for portions in north King County and south Snohomish counties.

The associated conveyance system includes approximately 13 miles of influent and effluent tunnels of 170 million gallon per day peak capacity influent pump station, odor control and other facilities. The marine outfall includes a 60-inch diameter outfall pipe, approximately 5,200 feet long, and a 500-foot long diffuser located at a depth of approximately 600 feet.

Construction will include trenching the outfall pipe to the shore and nearshore environments and then laying approximately 4,000 feet of pipe on the seafloor.

The County is considering using a design procurement procedure for the marine outfall construction.

The preparation for procuring a design-build team is scheduled to begin in early 2005. The schedule would allow

1 marine outfall construction to begin in approximately mid 2009
2 and be completed before the Brightwater system comes online in
3 2010.

4 MR. CURL: Thank you.

5 As I stated earlier -- thank you Russ -- we are not here
6 as a Q&A session. We are here to take public comment. And so
7 what I'll do is just ask you to make your comments in the order
8 that you arrived.

9 All right, Tom, you want to go ahead.
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STATEMENT OF MR. TOM DeLAAT

My name is Tom DeLaat. I am a professional engineer, and I'm employed by Parametrix, Inc. in the Seattle area. We have offices in Bellevue and Sumner. And I played a role in the pre-design for the outfall as a subconsultant to HDR.

The thing that caught my attention on the description of this particular project was the -- at least my perception of the statements which said that you felt there was the potential for providing substantial fiscal benefit for this particular approach to the construction of the outfall. You can interpret that statement in many ways. One statement, or one interpretation would be the idea that there's going to be a cost benefit of doing it -- the construction by means of design-build versus the more traditional design-build method. And I don't really feel that that is a proper indication of what design-build benefit on this project would be, the main reason being that historically, I don't think that projects that go the design-build route have been shown to save substantial money to the benefit of the owner of the facility.

Typically, in my opinion and experience, projects that are done on the design-build basis more potentially run the benefit of getting the job done when you want it done or ahead of schedule than it does one of saying you're going to save money.

In my role as the manager of the predesign for the

1 outfall, I consented to the concept of doing design-build on
2 this project focused on the basis that it was of a means
3 considering the risks for this particular project to get it done
4 in the schedule that has been put in front of us for completing
5 the work. And I still believe that, that with the schedule
6 you're on, you run a great potential for success in getting the
7 project done on time.

8 There are risks with the project, and I don't think that
9 -- we've tried to portray those risks during the predesign, and
10 I don't know of anything different today to say that those risks
11 are any different than what we portrayed during the many
12 discussions that we had on the project and in the predesign
13 reporting that was done.

14 That's my statement.

15 MR. CURL: Thank you. You're welcome to stay.
16 You're welcome to leave. Thank you for your statement.

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STATEMENT OF ANDREW MENCKE

MR. CURL: I don't know your name, I'm sorry.

MR. MENCKE: My name's Andrew Mencke, and I work for Cosmopolitan Engineering Group. And I came to this meeting just to observe and see what was being commented on and some of the concerns that would be associated with the design-build concept or lack thereof concerns. So I was just here to observe today.

And that's my statement.

MR. CURL: All right. Thank you for coming.

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STATEMENT OF ADE BRIGHT

Yeah, my name is Ade Bright. I'm an engineer with Bright Engineering in Seattle. And I also was a part of the consultant group that did the preliminary design of the outfall pipeline.

The comment I have has to do with risk. Our last studies indicated, more so than anything else, that risk is a primary factor in the construction of this particular project. We did put together a workshop naturally indicated -- I mean a workshop that included a number of consultants, engineers, tunnel people, and contractors, and that the one principle, the result of that was everybody agreed that risk was a big factor rather than the essential costs. The design-build option is good for that because we can flush out a lot of all the difficulties upfront and then look at risk and see how things goes.

So I do -- that's all the comments I have, I guess.

MR. CURL: Okay. Thank you.

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CLOSING STATEMENT BY MR. CURL

It is now 2:00 p.m., and we are adjourning the public hearing for the Brightwater Outfall Design-Build Project. I want to take this opportunity to thank the people that did come and provide comment.

Thank you.

[Public hearing adjourned at 2:03 p.m.]

