

CONSULTING  
ENGINEERS



INTERNATIONAL ENGINEERING COMPANY, INC.  
A MORRISON-KNUDSEN COMPANY

B-212

HEADQUARTERS OFFICE  
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17 April 1981

Mr. James L. Doane, Manager  
Bureau of Hydroelectric Power  
City of Portland  
1800 S. W. Sixth Avenue  
Portland, Oregon 97201

Subject: Price Proposal for Additional Work for Stress  
Analysis for Bull Run Dam No. 1 for Response to  
Corps of Engineers' Comments

Dear Mr. Doane:

In response to your request by telephone to Ram Sharma, and in conformance with previous discussions, we have prepared a proposed scope of additional work for stress analysis studies for Bull Run Dam No. 1 and an estimated cost for performing this work. A copy of the IECO's proposal (Appendix A) is enclosed for your review.

The proposed scope of work is based on our understanding of the work considered necessary to develop appropriate and effective response to Army Corps of Engineers' comments on IECO's "Interim Report on Phase I Investigations, September 1979". The Corps comments are contained in their letter dated 5 June 1980 to the State Water Resources Department, a copy of which was forwarded to us.

The proposed lump sum engineering cost for performing the scope of work outlined is \$6,000.00.

IECO can perform this work as an addition to the already completed Phase I of the current agreement for Bull Run Dam No. 1 Stability Studies.

We are prepared to discuss this proposal as you may wish. Please contact Ram Sharma (415/442-7738) for any questions you may have in this regard. Work can start promptly upon your direction.

Yours truly,

R. B. Christensen  
Vice President

RBC/sjw

Encl: a/s

PRICE PROPOSAL FOR  
ADDITIONAL STRESS ANALYSIS WORK  
FOR  
BULL RUN DAM NO. 1

SECTION I - GENERAL

This proposal is prepared in response to the 16 October request by telephone from Mr. James L. Doane, Manager, Bureau of Hydroelectric Power, City of Portland, for a cost estimate for performing additional stress analysis work for Bull Run Dam No. 1. The additional work is considered necessary to develop appropriate and effective response to Army Corps of Engineers' comments on IECO's "Interim Report on Phase I Investigations - September 1979." The Corps' comments are contained in their letter dated June 5, 1980 to the State Water Resources Department, a copy of which was furnished to IECO with letter dated June 12, 1980 from Chief Engineer, Bureau of Water Works, City of Portland.

The proposal describes the scope of additional work for stress analysis to develop necessary response to Corps' comments and the estimated cost for performing the proposed scope of work.

The work described herein will be additional to the already completed Phase I of the Technical Services Agreement dated April 1979 between the City of Portland and IECO for the Bull Run Dam No. 1 Stability Studies.

SECTION II - SCOPE OF WORK

IECO will perform engineering services to accomplish the proposed scope of work for additional stress analysis studies described as follows:

2.1.1 STRESS ANALYSES STUDIES

- Two-dimensional finite element stress analysis of the maximum dam section for PMF loading (Res. W. S. E1 1057.5; T.W. E1 886.5)

including a crack extending from the upstream toe along dam base for a length established according to the criteria by U. S. Bureau of Reclamation (now Water Power Resources Service); uplift corresponding to the PMF loading condition applied as upward point loading along the dam base.

- Conventional gravity stress analysis of the maximum dam section having radial planes instead of parallel planes one foot apart for comparison of stability for the two cases.
- Preparation of summary report, and drawings showing graphic presentation of the results and evaluation of dam stability.

### 2.1.2 COMPLETION TIME

Completion time for the work included herein will be 2 calendar weeks (14 days) following notice to proceed with the work.

### 2.1.3 ESTIMATED COST

The cost for performing the work described herein is estimated to be \$6,000 detailed as under:

Stress analysis and Report	130 Man-hours	- \$5,500
Computer Cost		- <u>500</u>
Total Estimated Cost		- <u><u>\$6,000</u></u>

## ORDINANCE NO. 151583

An Ordinance amending Contract No. 17772 with International Engineering Company, Inc., and authorizing additional expenditures for professional services in the amount of \$6,000 in connection with work as requested by the Army Corps of Engineers and for the final report for the Bureau of Water Works, authorizing the drawing and delivery of warrants, and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds:

1. That commencing in 1979, the City undertook a Finite Element Analysis of Dam No. 1 and the firm of International Engineering Company, Inc. was selected after review of proposals by Consultant Selection Committee established in accordance with Chapter 5.68 of the City Code.
2. That the Army Corps of Engineers requested additional work in connection with the Finite Element Analysis.
3. That it is necessary to amend Contract No. 17772 with International Engineering Company, Inc. to provide for the additional work for the lump sum of \$6,000, in accordance with the proposal submitted.
4. That it is necessary to expend \$5,300 for the final report (Phase IV in the original ordinance).

NOW, THEREFORE, the Council directs:

- a. The Mayor and Auditor are authorized to execute on behalf of the City an amendment to Contract No. 17772 with International Engineering Company, Inc. for the above-stated engineering services at a cost of \$6,000, said amendment to be substantially in accordance with Exhibit "A" attached to the original only of this Ordinance, and by this reference made a part hereof.
- b. The Mayor and Auditor are authorized to draw and deliver warrants upon receipt of invoices for services performed, said warrants not to exceed \$6,000, to be charged to the Bureau of Water Works, BUC #18600374, Object Code 210 (Professional Services), Project #1161, said warrants to be delivered to International Engineering Company, Inc., 220 Montgomery Street, San Francisco, CA 94104.

**ORDINANCE No.**

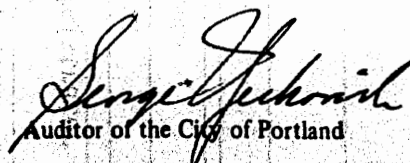
Section 2. The Council declares that an emergency exists in order that there be no unnecessary delay in securing engineering services for the requested additional work in analyzing Dam No. 1; therefore, this Ordinance shall be in force and effect from and after its passage by the Council.

Passed by the Council,

**MAY 21 1981**

Mayor Ivancie  
J. L. Doane/jr  
May 13, 1981  
BUC #18600374

Attest:

  
Auditor of the City of Portland

THE COMMISSIONERS VOTED AS FOLLOWS:		
	Yeas	Nays
JORDAN	/	
LINDBERG	/	
SCHWAB	/	
STRACHAN	/	
IVANCIE		/

FOUR-FIFTHS CALENDAR	
JORDAN	
LINDBERG	
SCHWAB	
STRACHAN	
IVANCIE	

Calendar No. **1569**

## ORDINANCE No. 151583

### Title

An Ordinance amending Contract No. 17772 with International Engineering Company, Inc., and authorizing additional expenditures for professional services in the amount of \$6,000 in connection with work as requested by the Army Corps of Engineers and for the final report for the Bureau of Water Works, authorizing the drawing and delivery of warrants, and declaring an emergency.

Filed MAY 14 1981

GEORGE YERKOVICH  
Auditor of the CITY OF PORTLAND

By George Yerkovich

Deputy

INTRODUCED BY	
Mayor Ivancie	
NOTED BY THE COMMISSIONER	
Affairs	
Finance and Administration <b>FJI/MK</b>	
Safety	
Utilities	
Works	
BUREAU APPROVAL	
Bureau: Water Works	
Prepared By:	Date:
J. L. Doane	May 13, 1981
Budget Impact Review:	
<input checked="" type="checkbox"/> Completed <input type="checkbox"/> No required	
Bureau Head: <u>Carl Goebel</u> Carl Goebel, Administrator	
CALENDAR	
Consent <input checked="" type="checkbox"/>	Regular <input type="checkbox"/>
NOTED BY	
City Attorney	
City Auditor	
City Engineer	