

STATE OF HAWAII
REQUEST FOR SOLE SOURCE STATE PROCUREMENT OFFICE
 STATE OF HAWAII

TO: Chief Procurement Officer

FROM: Dept. of Business, Economic Development and Tourism /Office of Planning/Coastal Zone Management
 (Department/Division/Agency)

Pursuant to §103D-306, HRS, and Subchapter 9, Chapter 3-122, HAR, the Department requests sole source approval to purchase the following:

Description of goods, services, or construction:

- I. Update the parameters of the customized HAZUS 99 SR-2 regional computer model of Hawaii and Maui counties and electronically re-publish the analysis results in revised editions of the HAZUS Data Products originally done in 2003. The following scientific and engineering enhancements shall be included:
 - Perform seismic calculations consistent with USGS to revise the ground accelerations estimated by Hawaii attenuation in order to rectify software errors in HAZUS output
 - Update seismic soil profile parameters for Hawaii county to incorporate consideration of a new FEMA soil survey study when it becomes available in early 2005
 - Determine the expected economic and casualty mitigation effects of a code benchmark year for single wall residential construction in Hawaii county, considering seismic hazards for deterministic maximum considered earthquakes and average annualized losses.
- II. Assess the 2004 HAZUS-MH Earthquake Module (preferably SR-1) to verify four software patches in a Hawaii and Maui county regional model. Issue a report on operational performance factors related to HAZUS 99 SR-2 and HAZUS-MH, and identify the transition methodology for the customized Hawaii and Maui county Building Inventory Database created by the Hawaii State Earthquake Advisory Committee of State Civil Defense.

Name of Vendor:	Martin & Chock, Inc.	Cost: \$65,000
Address:	1132 Bishop Street, Suite 1550 Honolulu, Hawaii 96813	

Term of Contract:	From: ^{Contract} Upon execution December 1, 2004 To: June 30, 2005	Prior Sole Source Reference No.
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The goods, services, or construction has the following unique features, characteristics, or capabilities:

Over the past several years, Martin & Chock, Inc. has been customizing and validating the HAZUS 99 software Hawaii database to incorporate Hawaii and Maui County-specific building inventories, code adoption and enforcement policy histories of each county, geospatial and soil type information GIS layers, seismological and attenuation parameters, building damage functions, and construction cost data parameters, and implementing and testing these parameters under the supervision of the Hawaii State Earthquake Advisory Committee. Moreover, sensitivity and validation analyses were previously performed utilizing historical earthquake events of various magnitudes and seismic source regions, in order to compare results with recorded data and historical accounts. The Hawaii State Earthquake Advisory Committee and State Civil Defense then decided in 2003 to authorize the production of HAZUS Data Products utilizing this customized model.

Further investigation has identified additional parameter updates that are necessary to resolve recently discovered software bugs in FEMA's source code and to incorporate important new findings of separate studies performed in 2004. This involves revisions to specialized database files, seismic ground calculations, and expert knowledge of the HAZUS methodology, as well as the ability to independently verify results of the computer software.

STATE OF HAWAII NOTICE OF SOLE SOURCE

The Chief Procurement Officer is in the process of reviewing the request from the Department of Business, Economic Development & Tourism for the sole source purchase of the following goods, services, or construction:

I. Update the parameters of the customized HAZUS 99 SR-2 regional computer model of Hawaii and Maui counties and electronically re-publish the analysis results in revised editions of the HAZUS Data Products originally done in 2003. The following scientific and engineering enhancements shall be included:

- Perform seismic calculations consistent with USGS to revise the ground accelerations estimated by Hawaii attenuation in order to rectify software errors in HAZUS output
- Update seismic soil profile parameters for Hawaii county to incorporate consideration of a new FEMA soil survey study when it becomes available in early 2005
- Determine the expected economic and casualty mitigation effects of a code benchmark year for single wall residential construction in Hawaii county, considering seismic hazards for deterministic maximum considered earthquakes and average annualized losses.

II. Assess the 2004 HAZUS-MH Earthquake Module (preferably SR-1) to verify four software patches in a Hawaii and Maui county regional model. Issue a report on operational performance factors related to HAZUS 99 SR-2 and HAZUS-MH, and identify the transition methodology for the customized Hawaii and Maui county Building Inventory Database created by the Hawaii State Earthquake Advisory Committee of State Civil Defense.

Vendor: Martin & Chock, Inc.

Address: 1132 Bishop Street, Suite 1550
Honolulu, Hawaii 96813

Term of Contract:	From: <u>upon contract execution date</u> December 1, 2004	To: June 30, 2005	Cost: \$65,000
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Direct any inquiries to: Department: Business, Economic Development & Tourism Contact Name/Title: Ann Ogata-Deal/Planning & Policy Analyst Address: P.O. Box 2359, Honolulu, Hawaii 96804	Phone Number: (808) 587-2804 Fax Number: (808) 587-2899
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Date Notice Posted: 12/10/04

A copy of this notice of sole source shall be posted by the Chief Procurement Officer and the purchasing agency in an area accessible to the public, at least seven (7) calendar days prior to any approval action.

Submit written objections to this notice to issue a sole source contract within seven (7) calendar days from the date this notice was posted to:

Chief Procurement Officer
Office/Agency _____
Address _____

REQUEST FOR SOLE SOURCE (Cont.)

How the unique features, characteristics, or capabilities are essential for agency to accomplish its work:

CZM (Coastal Zone Management) Hawaii partners with state and county agencies in the development of their multi-hazard mitigation plans. In order to establish eligibility for post-disaster Hazard Mitigation Grant Program funds following natural disasters, the State and each of the counties must have a Federal Emergency Management Agency approved multi-hazard mitigation plan in place. It is intended that the products developed under this project will become part of the State multi-hazard mitigation plan. It is also anticipated that these products will be published by DBEDT/CZM or SCD and that they will be utilized in informational briefings to officials in each county. This would serve to raise awareness of the potential event losses for emergency response planning, to emphasize the public safety responsibilities inherent in timely adoption of up-to-date building codes, and to identify issues with vulnerabilities of existing structures.

The following other possible sources for the goods, services, or construction were investigated but do not meet our needs because:

The nature of the work is of specialized research involving a unique knowledge of seismology and earthquake engineering, structural engineering, Hawaii construction history, probabilistic modeling and statistical inference, economic risk analysis, electronic database customization, and expertise in ArcView, ArcGIS Geographic Information Systems, HAZUS 99, and HAZUS-MH. The combined knowledge of the customized computer modeling of this geologic region and building inventory is uniquely held by this investigator. Please see attached letter from Major General Robert Lee.

Direct questions to: Ann Ogata-Deal _____

Phone: 587-2804 _____

I certify that the information provided above is to the best of my knowledge, true, correct and that the goods, services, or construction are available through only one source.

DEC 03 2004

Department Head or Designee

Date

Title (If other than Department Head)

Chief Procurement Officer's comments:

[Empty box for Chief Procurement Officer's comments]

Please ensure adherence to applicable administrative and statutory requirements.

Expenditure may be processed through a purchase order: Yes No In no, a contract must be executed and funds certified.

APPROVED DISAPPROVED

Chief Procurement Officer

12/17/04
Date