



STATE PROCUREMENT OFFICE
NOTICE & REQUEST FOR SOLE SOURCE

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STATE PROCUREMENT OFFICE
STATE OF HAWAII

TO: Chief Procurement Officer
FROM: Office of Information Management and Technology
Name of Requesting Department

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

1. Describe the goods, services, or construction to be procured.
3D GIS City Models of building structures covering 12.25 sq km of the Honolulu area. The proprietary model depicts 3D, accurate roof elevations as well as calculations of water run off. File formats are flexible and could be Shape Files which have all the data information that can be downloaded to CAD, Excel, etc. This information is needed for solar and storm water calculations and estimates. CyberCity3D has a provisional patent on their proprietary methodology for calculating roof space elevations and storm water run off that no other vendor provides.

Table with 2 columns and 2 rows. Row 1: Vendor/Contractor/Service Provider Name: CyberCity3D/Kevin DeVito, CEO (310)760-2556, kdevito@cybercity3d.com; Amount of Request: \$9,800.00. Row 2: Term of contract (shall not exceed 12 months), if applicable: From: Unencumbered use license To: ; Prior SPO-001, Sole Source (SS) No.: N/A

6. Describe in detail the following:
a. The unique features, characteristics, or capabilities of the goods, service or construction. See Attached.
b. How the unique features, characteristics or capabilities of the goods, service or construction are essential for the department See Attached.

7. Describe the efforts and results in determining that this is the only vendor/contractor/service provider who can provide the goods, services, or construction.  
 See Attached.

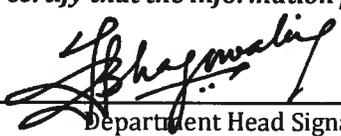
8. Alternate source. Describe the other possible sources for the goods, services, or construction that were investigated but did not meet the department's needs.  
 ESRI, US Geological Survey, Google

9. Identify the primary responsible staff person(s) conducting and managing this procurement. (Appropriate delegated procurement authority and completion of mandatory training required.)  
 \*Point of contact (Place asterisk after name of person to contact for additional information).

Name	Division/Agency	Phone Number	E-mail Address
Debra A. Gagne	OIMT	586-1930 ext.534	Debra.A.Gagne@hawaii.gov

Department shall ensure adherence to applicable administrative and statutory requirements, including HAR chapter 3-122, Subchapter 15, Cost or Pricing Data if required.

**All requirements/approvals and internal controls for this expenditure is the responsibility of the department.**  
**I certify that the information provided is to the best of my knowledge, true and correct.**

  
 \_\_\_\_\_  
 Department Head Signature

11-8-2012  
 \_\_\_\_\_  
 Date

**For Chief Procurement Officer Use Only**

Date Notice Posted: 11/15/12

Submit written objection to this notice to issue a sole source contract within seven calendar days or as otherwise allowed from date notice posted to:

[state.procurement.office@hawaii.gov](mailto:state.procurement.office@hawaii.gov)

Chief Procurement Officer (CPO) Comments:

Request is disapproved as it does not meet the requirements of a sole source procurement pursuant to HRS §103D-306, as other vendors are able to fulfill the requirements. In addition, the vendor is not compliant with HRS section 103D-310(c) and HAR section 3-122-112, (i.e. vendor is required to be compliant on the Hawaii Compliance Express). SPO understands that the department will use the appropriate method of procurement to fulfill their requirements.

If there are any questions, please contact Kevin Takaesu at 586-0568, or [kevin.s.takaesu@hawaii.gov](mailto:kevin.s.takaesu@hawaii.gov).

Approved

Disapproved

No Action Required

Oliver J. A.      11/29/2012  
Chief Procurement Officer Signature      Date

1. Describe Goods Services or construction to be procured.

3D GIS City Models of building structures covering 12.25 sq km of the Honolulu area. For \$9,800. The proprietary model depicts 3D, accurate roof elevations as well as calculations of water run off. File formats are flexible and could be Shape Files which have all the data information that can be downloaded to CAD, excel, etc. This information is needed for solar and storm water calculations and estimates. CyberCity3D has a provisional patent on their proprietary methodology for calculating roof space elevations and storm water run off that no other vendor provides. Six inch resolution data provides accurate assessment of roof areas.

6. Describe in detail the following:

a. The unique features, characteristics, or capabilities of the goods , services or construction

Honolulu specific. CyberCity 3D provides a unique, one of a kind GIS mapping that combines stereo images of the Honolulu area to create 3D maps of roof elevations. This data provides accurate representations relative to the solar readiness of structures in the Honolulu area, as well as accurate assessments of the flow patterns for storm water run off. CyberCity 3D will provide us with the 3D GIS data for the Honolulu Area, providing the data in an Arc GIS Map form and as shape files that can be down loaded. The data files cover buildings within a 12.25 sq km area of the Honolulu. The maps will be used for communication to the public at large and for the enhancement of the economic development of green jobs related to solar and storm water management. Last year alone 7,500 solar permit requests were processed.

b. How the unique features, characteristics or capabilities of the goods, service or construction are essential for the department.

Department of Business Economic Development and Tourism plans to use the data for applications in green energy, to further the States' Energy goals. The Office of Planning intends to use the data for distribution to GIS users throughout the State and City & County to apply data to Solar readiness applications. The Office of information Management and Technology plans to make the data publicly available to allow citizens and businesses access to information that would aid them in solar readiness planning for their property and wastewater management planning. Files can be downloaded and used for engineering, mapping, solar installation, solar mapping, storm water collection specifications, architecture, line of site analysis and many other GIS applications.

Immediate beneficiaries include

- Renewable energy agencies and permitting specialists
- Water management
- City planning
- Commercial solar energy installations and marketing
- Public safety agencies
- Civil engineers both local government and private sector

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7. Describe the efforts and results in determining that this is the only vendor/contractor/service provider who can provide the goods, services or construction

Consultation with the GIS coordinator, Joan Delos Santos, in the Office of Planning. Consultation with Department of Economic Development and Tourism office Energy office representative, Cameron Black, Consultation with the City and County of Honolulu GIS Coordinator, Ken Schmidt. Additionally an internet search of 3D GIS Modeling for Honolulu for Solar readiness yielded only Academic papers and references to ESRI (a Cyber City partner) and CyberCity themselves.

GIS Magazine describes the service as follows: *CyberCity 3D™ GIS buildings, unique in their roof detail modeling and more geometrically accurate than traditional "extruded footprint" buildings, are created from stereo images. Unlike traditional 3D modeling methods, which involve building footprint extrusions to obtain "block-shaped" buildings, CyberCity 3D™ buildings include detailed roof feature polygons. They feature pitched roofs that can be arched, domed, flat, gabled or skillion. The Company markets both new building creations as well as off-the-shelf buildings. Multiple formats are available for most commercial applications and rendering tools.*

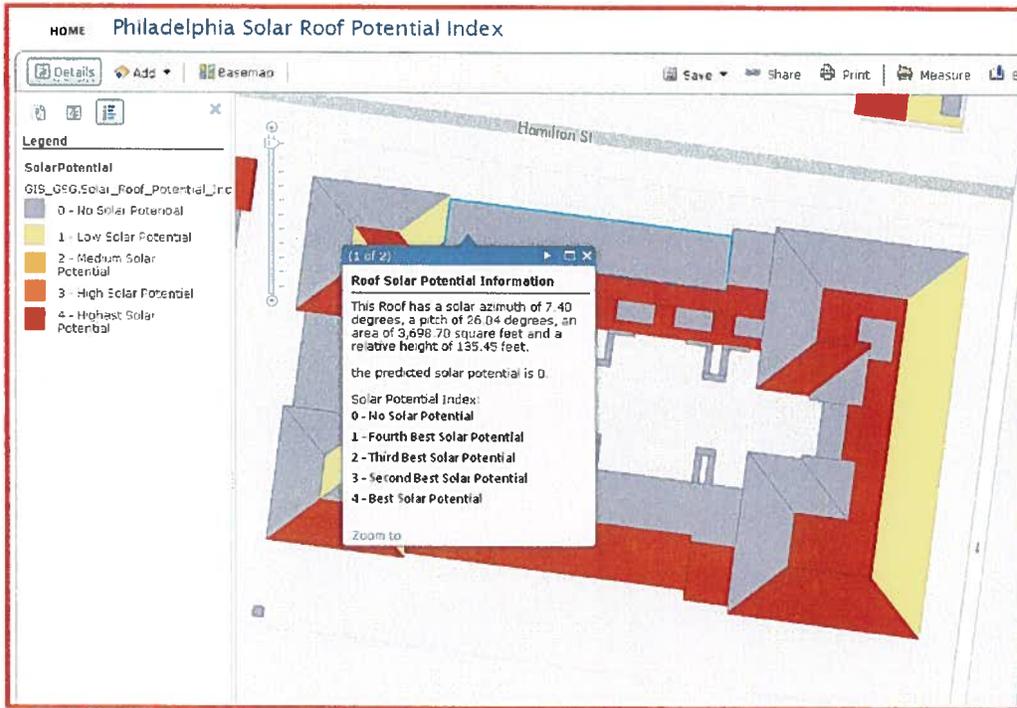
The cost for someone else to develop similar geo-coded files would be far greater than \$9,800. To create the base data would require a fly-over of the Honolulu area, which would cost thousands of dollars. Furthermore the added programming, calculations and effort to add value to the raw data by developing the geometrical algorithms to mimic the roof elevations logic would be costly and time consuming.

Thank you for the opportunity to provide you with 3D GIS data for your open data program. Here is the summary of the proposal:

Product	Square Kilometers	Number of Measured Structures	3D GIS City Models Quote
Honolulu Area Off The Shelf	12.12	7,984	\$ 9,800
Honolulu Area New Build	17.75	11,479	\$ 40,825

I believe you mentioned providing the data in a Arc GIS Map form and as shape files that can be down loaded.

One interesting map design is from the City of Philadelphia:







Date: 10/24/2012

RE: Honolulu

Our company is pleased to submit a quote for 3d city models. Please review our quote and let me know if you have any questions or comments.

<u>Product</u>	<u>Square Kilometers</u>	<u>3D Untextured Model Quote</u>
Honolulu Off the Shelf	12.25 sq km	\$9,800
Honolulu New Build	17.75 sq km	\$40,825

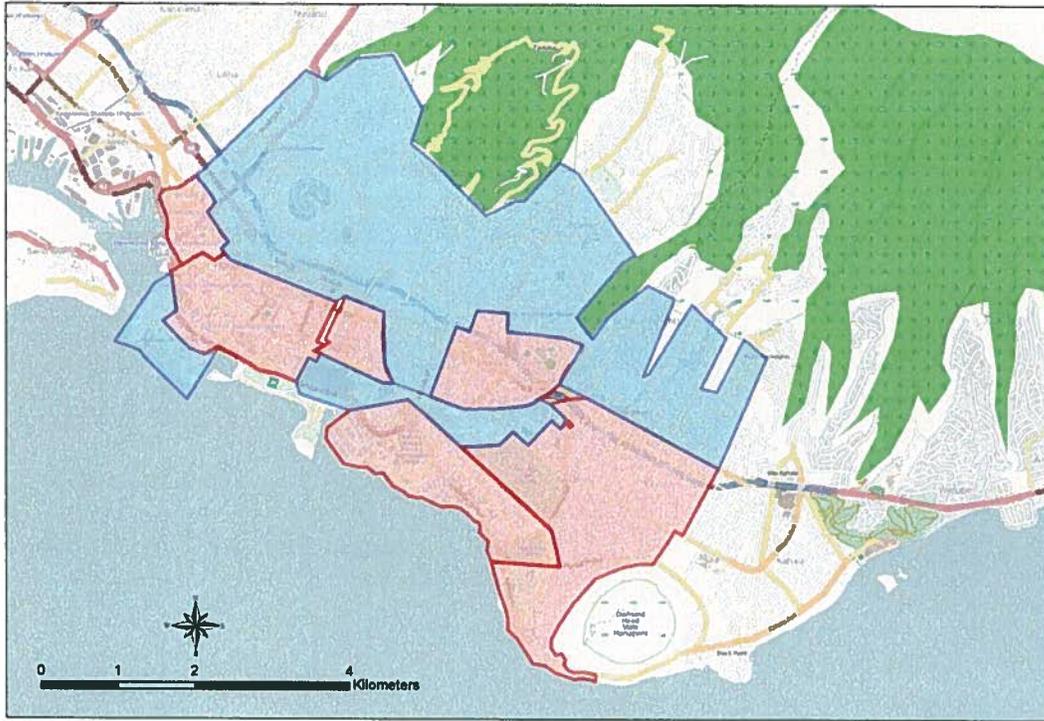
**Deliverables Include:**

- 1) File format: File Geodatabase
- 2) Unencumbered use license. Data is part of the Open Data Program

**Payment Terms:** Net 30

**Coverage Area Map on following page:**

# HONOLULU COVERAGE



**Quote Valid for 60 Days**

Thank you,

Kevin DeVito

CEO

310-760-2556 d

[kdevito@cybercity3d.com](mailto:kdevito@cybercity3d.com)

Andy Yang

Manager of GIS 3D Production

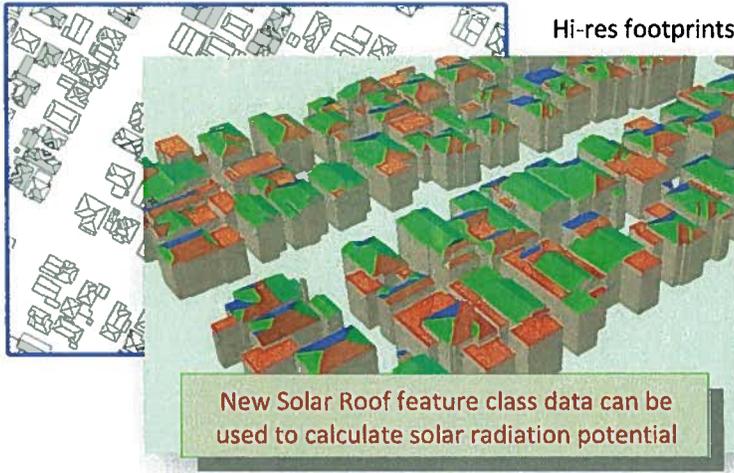
CyberCity 3D, Inc.

[ayang@cybercity3d.com](mailto:ayang@cybercity3d.com)

# CYBERCITY 3D, INC'S HONOLULU CITY MODEL FEATURES



3D Multipatch buildings created from stereo pairs, not extruded.



Hi-res footprints with roof detail.

SOLAR_ROOF			Data Field	Description
OBJECTID *	SHAPE *	EGID	EGID	Building ID number
12797	Multipatch M	ESG000000	Absolute Height	Height relative to sea level
12795	Multipatch M	ESG000000	Relative Height	Height relative to DTM
12796	Multipatch M	ESG000000	Surface Area Total	Total 3D area
12798	Multipatch M	ESG000000	Surface Area X, Y	2D polygon total area
1	Multipatch M	ESG000000	Slope Min	Slope of roof polygon minimum
12794	Multipatch M	ESG000000	Slope Max	Slope of roof polygon maximum
12793	Multipatch M	ESG000000	Roof Pitch Angle	Solar roof slope in degrees
12792	Multipatch M	ESG000000	Roof Type	Roof description (Flat, Saddle, etc)
12791	Multipatch M	ESG000000	Solar Azimuth	Roof orientation relative to North
3	Multipatch M	ESG000000	Solar Surface Area	Solar roof surface area
2	Multipatch M	ESG000000		
4	Multipatch M	ESG000000		
5	Multipatch M	ESG000000		
6	Multipatch M	ESG000000		
7	Multipatch M	ESG000000		
13184	Multipatch M	ESG000000		
13185	Multipatch M	ESG000000		
13186	Multipatch M	ESG000000		

Valuable GIS data is available from multiple feature classes.

For more information, call CyberCity 3D at **1.877.607.2233**  
or email [sales@CyberCity3D.com](mailto:sales@CyberCity3D.com).

[www.CyberCity3D.com](http://www.CyberCity3D.com)

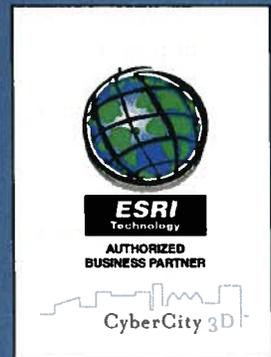
300 Continental Blvd., Suite 420, El Segundo, CA 90245 USA

## High Resolution Footprints and 3D Building Multipatch

- Urban planning and redevelopment
- Zoning issues and variances
- Economic development
- Emergency services
- Enhancing tourism
- Maintenance of

## Sustainability/ Renewable Energy

- New Feature Class, *Solar Roofs*, enables solar planners, installers and property owners to realize significant savings measuring and evaluating rooftops
- New Feature Class, *Roof Style*, facilitates identification of "Green Roofs"



# CyberCity 3D™ Data & Applications

Showcase city GIS data  
on a 3D-built platform

Provide accessibility to data in an  
interactive, informative format

Application examples:

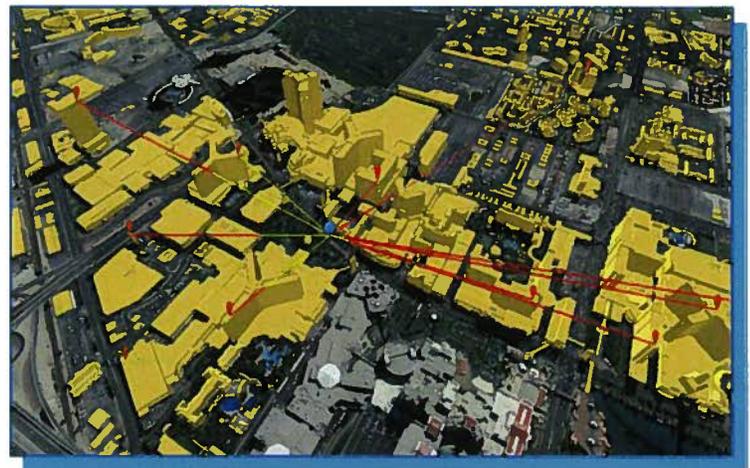
- Urban planning and redevelopment
- Zoning issues and variances
- Economic development
- Sustainability and renewable energy
- Environmental planning
- Emergency services (Police & Fire)
- City infrastructure maintenance
- Mobile mapping
- Tourism enhancement



Data Field	Description
EGID	Building ID number
Absolute Height	Height relative to sea level
Relative Height	Height relative to DTM
Surface Area Total	Total 3D area
Surface Area X, Y	2D polygon total area
Slope Min	Slope of roof polygon minimum
Slope Max	Slope of roof polygon maximum
Roof Pitch Angle	Solar roof slope in degrees
Roof Type	Roof description (Flat, Saddle, etc)
Solar Azimuth	Roof orientation relative to North
Solar Surface Area	Solar roof surface area
2D Solar Area	2D polygon area measurement
Sp Façade	Superstructure façade area
SP Roof	Superstructure roof area



- Esri® Partner Network 
- Leading 3D content provider
- Highly innovative technology & solution-driven company
- Specializing in 3D for CityEngine® and ArcGIS®



For more information, call CyberCity 3D at 1.877.607.2233  
or email [sales@CyberCity3D.com](mailto:sales@CyberCity3D.com).

[www.CyberCity3D.com](http://www.CyberCity3D.com)

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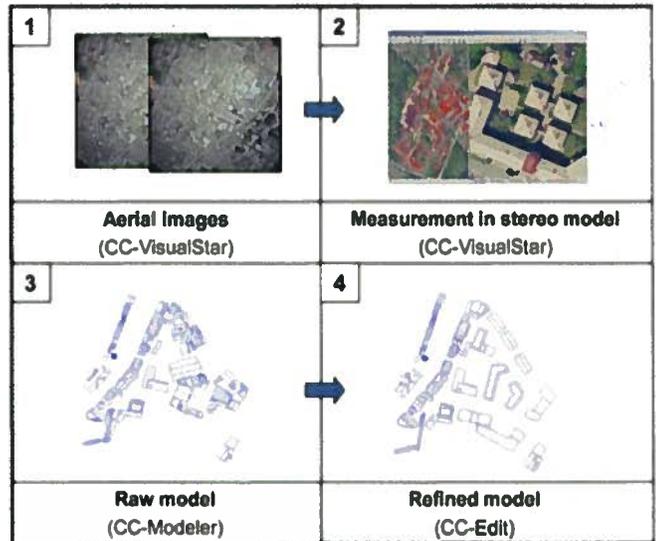
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## Our 3D GIS Buildings

- Proprietary semi-automated software technology enables construction of 3D models of large areas
  - From aerial photos
  - From satellite imagery
  - From oblique imagery
- Using stereo pairs of aerial images, relevant roof points are measured and coded to create 3D roof structures
- CyberCity 3D models can be exported to a host of software file formats:
  - Esri® formats PGDB, 2D basic and 3D Multipatch, KMZ, shapefiles, Open Flight, DXF, and several others
- High quality, 3D renderings
- Integrates seamlessly into Esri® CityEngine® and ArcGIS®

## CC-Software in use for a typical workflow



## Benefits

3D allows stakeholders to communicate their plans with enhanced visualization and analysis, resulting in amplified effectiveness:

- View project development in multimedia formats over time with dynamic inputs
- Enhance marketing communications and community outreach
- Respond to the needs of stakeholders faster and more cost-effectively
- Improve project analysis efforts across disciplines

CyberCity 3D™ has a data library of over 1,000,000 buildings in 60 plus cities around the world. Our leadership in 3D modeling has resulted in some of the highest quality and most affordable 3D models available anywhere.

