

FISCAL NOTE
 Requested by Legislative Council
 03/17/2011

REVISION

Amendment to: SB 2206

1A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2009-2011 Biennium		2011-2013 Biennium		2013-2015 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures				\$100,000		\$13,000
Appropriations						

1B. **County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2009-2011 Biennium			2011-2013 Biennium			2013-2015 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts

2A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

Fiscal Note Summary:

Funding to defray the costs of establishing and maintaining a record of anemometer towers within the state, and providing education for pilots on using this web site.

B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

Costs:

- 1) Information Technology Department (ITD) costs for developing a database of existing and future towers, and displaying this information on a map which can be accessed through the aeronautics web site by pilots during their pre-flight planning.
- 2) ITD recurring costs associated with hosting this information.

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

A. **Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

Expenditures - Data Processing - \$100,000

Line Item 30

Aeronautics Commission Special Fund (324)

C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation is also included in the executive budget or relates to a continuing appropriation.*

In accordance with Senate Bill 2206.

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Phone Number:	701.328.9650	Date Prepared:	03/16/2011



ITD Estimate for MET Tower Inventory.docATTVIL25.doc



Software Development Division Budget Estimate

To:	Date Issued: 03/01/2011	Prior Est. Date:
Lawrence Taborsky Aeronautics Commission	From: Paula Dosch	
	Prepared By: Ron Nelson/Bob Nutsch	
Project Description: Create a system to inventory the location of Anemometer towers in North Dakota.		
WMS Work Order Number: 172550	WMS Service Request: 1325282	

ITD is recommending your agency budget **\$74,862** for this project. This amount includes an estimated **\$68,056** based on requirements we received during the interview process plus an additional **\$6,806** for scope changes. The additional **10%** is based on ITD's experience with scope changes in projects this size. Including this additional amount will give your agency the flexibility to cover typical scope changes, and remain within your budgeted amount. A more accurate estimate will be prepared once this project has started and the analysis phase is completed. The cost to complete the analysis phase is estimated to be approximately **\$12,389**.

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ITD estimates this project to take **5 months**. This timeframe is a projected timeframe based on typical project staffing levels. The actual timeframe will be determined during the Planning Phase and will be based on the availability of customer and ITD resources at that time.

ITD suggests you budget **\$520** per month for the on-going cost of running the application. This amount includes the hosting charges, estimated storage and Software Development maintenance costs. All ITD services will be billed to your department monthly at actual cost.

Should you decide to proceed with this project, please approve the cost estimate via the online Work Management System. Upon your approval, you will be prompted to submit a service request under the existing work order. All ITD services relating to this project will be billed to your department monthly at actual cost.

At the start of the project ITD will review any estimate over 90 days old. If necessary a revised estimate will be issued.

Project Description

This Cost Estimate includes the costs to create a system to inventory the location of Anemometer towers in North Dakota. There are 4 companies that erect Anemometer towers. These towers are used to gather data for potential wind farm locations. The towers are usually less than 200 feet and can be erected anywhere. These towers don't have a warning light since they are less than 200 feet and can cause problems for crop dusters and emergency personnel. This system would allow the Aeronautics Commission to maintain the companies in a database and then allow those companies to enter the location and effective dates of the towers. An inquiry and download would allow the location to be used by Crop Dusters, Emergency Personnel, the FAA and even the general public.

Assumptions

The one-time costs (development) of the routines are based on the following assumptions:

- This cost estimate is based on a blended hourly rate of \$100 due to the unknown availability of ITD Software Development staff at the time this estimate was issued. If only ITD Software Development staff work on this project, billing will be at the normal ITD Software Development (11-13) biennium rates.
- ITD will assign a project manager to the project.
- This application could be written in Java or .Net.
- A SQL Server or an Oracle Database could be used.
- The application will secure user access to functionality using Microsoft Active Directory accounts/groups and/or IBM Tivoli Directory Server (TDS) (State of North Dakota Login ID).
- All application data will be transmitted securely using a SSL certificate.
- The application will be load tested to ensure the application performs under stress and does not cause any server performance issues.
- Department staff will produce any necessary Help documents/user manuals, implementing the documents as HTML web page(s) available from a department's web site.
- Department staff will provide any necessary training documents or training sessions for application users.
- The project will follow ITD's software development quality assurance methodologies and processes.

Determining Costs

The cost estimate includes the following processes:

Process	Description
Internal Processes	
Admin Login	The Admin login would allow access to the application for the Aeronautics Commission to administer the companies that erect anemometer towers.
Search Add/Maintain/Delete Companies	This process would allow for the Aeronautics Commission to add, maintain and delete companies that erect anemometer towers. It would also allow them to maintain the billing information for the companies (very minimal – date paid, this is a yearly fee).
Add/Maintain Security	This would allow the Aeronautics Commission to administer security for the companies and allow then access to the application.
Tabular data converted to spatial	Data collected by the application will be converted to a spatial format on the GIS Hub for display in the map.
Develop project file and map service	Data layers including anemometer locations will be developed into a map, storing this information into an MXD project file which will be used as the source of the map service which is used by the mapping application.
External Processes	
Company Login	This process would allow companies to login in externally to the application to maintain the location of their towers.
Add/Maintain/Delete anemometer towers	This process would allow companies to add, maintain and remove the location of anemometer towers using global-positioning coordinates. It would allow other details to be added with an effective date. Only the effective date and the location would be available for inquiry and downloading. When the tower is removed, the record would be removed from the database.
Location Preview	After entering coordinates, the location will be displayed on a map for verification.
Public	
Search/Inquiry/ Download	This option would allow anyone to display the global-positioning coordinates of the towers and the effective date of the towers. It would also have a download option.
Mapping Application	Vendor from IT Professional Services Contract Pool will develop a mapping application based on Esri JavaScript API. This application will have basic tools including: zoom, pan, print (to PDF, landscape/portrait, scale bar, north arrow, legend, title, date/time stamp)

One-Time Cost for System Development

The cost for development is estimated to be \$74,862. This amount includes an estimated \$68,056 based on requirements and an additional \$6,806 for scope changes. The additional 10% is based on ITD's experience with scope changes in projects this size. Including this additional amount will give your agency the flexibility to cover typical scope changes, and remain within your budgeted amount. A more accurate estimate will be prepared once this project has started and the analysis phase is completed.

On-Going Monthly Costs

On-going monthly costs are estimated as follows:

ITD Systems/Programming	\$ 200 per month – used as necessary
Application Server	\$ 320
Total	\$ 520

Application Server costs cover the hosting of the application as well as monitoring the servers and applications for availability.



Providing Customer-Centric Services

The Information Technology Department (ITD) provides technology leadership for state government and the people of North Dakota. ITD exists solely to help State agencies discover, assess, and implement information technologies. ITD's Software Development Division develops, implements, operates and supports software solutions that meet our customer's need as provided in this cost estimate. ITD also provides server computing, local and wide area network support, voice and data technologies, video conferencing, and other emerging technologies. The following overview describes the services ITD considers valuable to our customers. We hope you'll find this helpful in assessing the value of our services.

State Government IT Partner

ITD knows the business of North Dakota State government and understands inter-agency relationships. We've been servicing State agencies since 1968. Upon request, we'll provide references offering honest referrals about our services.

Our customer relationships are long-term partnerships.

Affordable Cutting Edge Technology

ITD helps agencies discover best fit solutions for their agency at affordable rates. ITD charges only to recover costs – we retain no profit with our low rates. Our staff is trained in many new and existing technologies, so we can readily assess customer requirements and provide solutions that best fit an agency's needs. ITD implements and supports IT solutions on modern hardware in modern facilities, using operating systems and software no older than current version minus 1.

Whenever it's necessary to extend our capabilities, we augment our current staff with outside vendors to meet demands.

Quality

ITD develops applications within the processes of a structured systems development methodology. This includes functional testing and all applications are tested for usability and performance (load tested). ITD Meets State & Federal Audit Compliance. Our infrastructure and operation processes are reviewed by and meet state and federal audit requirements. ITD Supports State Enterprise Architecture Standards, and our software and infrastructure meet North Dakota Enterprise Architecture standards.

We build compliance into our service offerings which relieves the customer of State standard compliance concerns.

Dedicated & Experienced Staff

ITD employees submit to an FBI background check and are bound by the same confidentiality requirements as agency staff. ITD's staff is cross-trained to provide continuous backup. We provide dedicated architects to design effective, top-notch infrastructure for security, system hosting, software development, and telecommunications. Our staff applies formal project management practices to all projects.

ITD strives to retain innovative, talented, and dedicated staff. ITD's staff is tenured with an average of 13 years of service.

Support Structure

ITD offers several levels of customer support, including 24 x 7 support for applications and infrastructure.

Customer Service Surveys indicate 99% of customers are very satisfied with our support.

Flexible Infrastructure

ITD's infrastructure and support structure are designed to meet varied needs. ITD designs and builds applications that can operate in a redundant environment. If one server fails, another server picks up the workload with little or no down time.

We can design and host any size application.

Disaster Recovery

ITD has the tools and resources required to monitor software applications and computer system infrastructure to assure adequate performance and up-time. Applications can be monitored on a 24 x 7 basis. If a disaster occurs in our Computer Systems area or Statewide Network, customer applications can be running within hours.

ITD's standard practice is to keep all data, applications, and systems backed up in a secure location to meet customer expectations.

Security

By investing in the infrastructure and training required to prevent malicious activity within our IT environment, ITD has dedicated staff to assure that customer data and applications are secure.

We use source code control software to provide sound source code management.

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