Bus Stop Facility Database and Accessibility Study
About LYNX

1972
About LYNX

- 270 Vehicles
- 900 Employees
- 85,000 Week day Passenger Trips

The Third Largest Urban Transit System
LYNX 10 Years Goal
Current Bus Stop Data Flow

Figure 15. Current Bus Stop Data FX OPS Workflow
Enterprise GIS and Asset Management System

Diagram showing the components and flow of a GIS system, including Public User, GIS Data Users, GIS Coordinator, GIS Technician, Bus Stop Data, Service Planner, GIS Software License Manager, and Sensitive Data with GIS Components.
Enterprise GIS and Asset Management System - the Future

Figure 22. Automated Collection of Stop Amenities Data using DSRC/RFID
Project Tasks

- Improve Bus Stop Access Data
- Paratransit Data Collection
- Inventory / Data Collection
- Integration, Tracking
- Bus Stop Management - VUEWorks
About DTS

- Started in 2004
- GIS
- Asset Management
- Data Collection
- Programming
- Engineering
- Planning
About DTS - VUEWorks

- Web-based Asset Management System
- ESRI Platform
- Condition
- Work Orders
- Risk
- Reporting
- Data Linking
- Document Linking
Project Inventory Limits
Markets and Domains

Transportation

Water, Wastewater, and Stormwater

Power Generation, Transmission and Distribution

Facilities
VUEWorks Solution Overview

**Strategic Asset Management**
- Track condition, depreciation & value
- Prioritize consequences of failure
- Forecast capital budget needs
- Create & manage capital projects

**Work Management**
- Document & track citizen issues
- Create & track work orders
- Manage time & expenses for labor & equipment
- Manage quantity & expenses for inventory

**Map & Data Sharing**
- Web browser based
- View maps and data
- Manage users
- Search & report
- Display & manage layers
- List and edit attributes
- Link documents & data
- Manage facilities
Bus Stop and Access

Bus Stop, Shelter, Access Data Library
Data Extraction
VUE Works Data Base and Application Requirements
Condition Module

- Condition Inspection Data are Crucial for Modeling the Life-Cycle of any Asset
- Condition Data are considered a “Point-in-Time”
- Multiple Condition Categories can be Collected and Aggregated to develop an Overall Condition for an Asset
- Condition is rated on a scale of 0-100, Good, Fair, Poor, or any other Rating criteria
Multiple Condition formats depending upon Asset

- Bus Shelters – standard itemized condition
- Bus Stops – ADA Compliance
Condition Module
Work Order
Risk can be defined as the Likelihood of Asset Failure and the Consequences of Failure to system operation or Customer Safety.

Failure Modes and Probabilities aid in development of a Risk Matrix.

Risk Matrix supports the prioritization of assets actions; maintenance, repair, rehabilitation or replacement.

Risk determines WHEN and WHERE to spend limited maintenance and Capital Improvement dollars.
Valuation determines the current book value of assets based on their Install Date, Cost, Warranty and Life Expectancy.

Valuation calculates the amount of depreciation occurring annually per asset type.

Valuation estimates overall value of each asset type based on historic cost data.
## Asset Valuation Calculation

<table>
<thead>
<tr>
<th>Layer</th>
<th>Historical Cost</th>
<th>Accumulated Depreciation</th>
<th>Present Year Depreciation</th>
<th>Current Value</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC Unit</td>
<td>$186,743,652</td>
<td>$78,634,461</td>
<td>$7,597,002</td>
<td>$108,109,191</td>
<td>$244,338,969</td>
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<tr>
<td>Roofs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>$186,743,652</td>
<td>$78,634,461</td>
<td>$7,597,002</td>
<td>$108,109,191</td>
<td>$244,338,969</td>
</tr>
</tbody>
</table>

### Remaining Life (years): **2036**
- Age: **6.3**
- Year of Construction: **2006**
- Years Added By Maintenance: **0**
- Original Life Expectancy: **30**

**Present Value:**
- Historical Cost: $773,500
- Value Added By Maintenance: $0
- Accumulated Depreciation: $161,764
- Salvage Value: $0
- Present Replacement Cost: $946,520

Depreciation calculated from the beginning of the year following the year the asset was placed in service:

<table>
<thead>
<tr>
<th>Year</th>
<th>Value Added or Removed</th>
<th>Years Added or Removed</th>
<th>Remaining Life at End of Year</th>
<th>Depreciation Expense</th>
<th>Total Change in Value</th>
<th>Value at End of Year</th>
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</thead>
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<tr>
<td>2006</td>
<td>$773,500</td>
<td>30.0</td>
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Data Maintenance with ArcGIS for Windows Mobile
Thank You!

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