Facilities Condition Assessment Overview

Board of Supervisors Meeting Work Session
October 8, 2019
Agenda

• Background
• Benefits and Purpose
• Scope and Process
• Forecasted Costs
• General Conclusions
• Next Steps
Facilities Condition Assessment (FCA) Overview

Background

• Required per the County’s Comprehensive Financial Policy Section 5-3

• Produce an independent, professional, and comprehensive facilities assessment to ascertain the condition, useful life, deficiencies, and cost estimates for facilities, systems, and major components

• Provide a resource for identification of requirements for the maintenance, repair, enhancement, or replacement of facilities and their component systems
Facilities Condition Assessment

**Purpose**

- Capture data regarding inventory and status of buildings
  - HVAC, Electrical, Plumbing, Roof, Elevators, Finishes, Parking Lots, and Building Envelope
- Utilize data
  - Identify short/long-term maintenance issues
  - Budget planning
  - Equipment/systems replacement forecasting
  - Preventative maintenance scheduling
Facilities Condition Assessment

Benefits

• Helps County to understand the current condition of our facilities and upcoming needs
• Defensible capital maintenance plans
• Resource in cost/benefit analysis for repair vs. replacement
• Comprehensive inventory and supporting data for systems, components, and equipment
• Cost efficiency opportunities through prioritization and project packages
Facilities Condition Assessment Does Not Address

• Service delivery needs
• Adequacy of systems/equipment for their functions
• Site needs such as storm water, septic/sewer, water lines and other potential factors
• Other improvements that are not condition related (ex. Enhanced lighting at Glenvar Library, security improvements, disaster resiliency, fueling infrastructure, etc.)
• Non-structural maintenance (fields, landscaping, and trees)
• Repairs/replacement from significant weather events
Facilities Condition Assessment Scope, Process, and Results

Byron Dunlap, PE
Cardno Principal
Project Manager
byron.dunlap@cardno-gs.com
410.610.0388
Who is Cardno?

• Professional Engineering and Environmental Services Company
• Asset Management Practice since 1992
  • Facility Condition Assessments
    • 1 Billion+ SF
    • 100,000 Buildings
  • Decision Support Software
• All Resources In-House
• Division Headquarters and Facility Assessment Team based in Charlottesville
• Local Presence:
  • Cardno Charlottesville office
  • 8 Cardno offices in Virginia (Arlington, Ashland, Bluefield, Charlottesville, Hampton, Norfolk, Reston, Richmond)

GLOBAL

| Staff | 6,000+
|-------|
| Offices | 130+

AMERICAS

| Staff | 2,500+
|-------|
| Offices | 100+
Facilities Condition Assessment
Scope of Work

• Includes 113 facilities including traditional buildings, PRT infrastructure, and Comm/IT communication tower support

• Approximately 5,000 individual components inventoried
Process

- **Short Term Benefits**
  - Prioritized Work Items (Deficiencies)
  - Referenced Inventory / Cost Estimates
  - Actionable Work Plan
  - Update Work Order Systems

- **Long Term Benefits**
  - Proactive Vs Reactive
  - Forecasting and Data Analysis
  - Decision Support Tool Vs. 500-Page Report
Cost Liabilities and Methodology

Current Repair Needs (Deferred Maintenance)
• Specific deficiencies identified
• Work items and cost estimates are provided in a prioritized recommended 5-year plan

Forecasted Repair Needs (Recapitalization)
• Replacement/renewal projections of inventoried equipment and components
• Based on estimated service life
Cost Liabilities and Methodology (continued)

Estimated Annual Maintenance

• Annual cost necessary to maintain the facilities and infrastructure in good working condition
• Includes preventive maintenance and repairs that occur as part of “doing business” annually

Service Call List

• Any small deficiencies that fall below the value of items inventoried but that were noted by the assessment team
• Such items were minimal and costs were included in deferred items
## Forecasted Operating/Capital Maintenance Program

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2022</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>FY 2025</th>
<th>FY 2026</th>
<th>FY 2027</th>
<th>FY 2028</th>
<th>FY 2029</th>
<th>FY 2020 – FY 2029 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Repair Needs</td>
<td>$0.560</td>
<td>$0.816</td>
<td>$0.676</td>
<td>$0.913</td>
<td>$1.043</td>
<td>$0.000</td>
<td>$0.000</td>
<td>$0.000</td>
<td>$0.000</td>
<td>$0.000</td>
<td>$4.008</td>
</tr>
<tr>
<td>Forecasted Repair Needs</td>
<td>$0.811</td>
<td>$0.882</td>
<td>$0.987</td>
<td>$1.048</td>
<td>$0.841</td>
<td>$1.598</td>
<td>$1.010</td>
<td>$1.719</td>
<td>$1.974</td>
<td>$2.640</td>
<td>$13.512</td>
</tr>
<tr>
<td>Deduct Future CIP Level Projects</td>
<td>($0.860)</td>
<td>($0.520)</td>
<td>($0.872)</td>
<td>($1.275)</td>
<td>($0.818)</td>
<td>($0.300)</td>
<td>($0.904)</td>
<td>($0.771)</td>
<td>($1.096)</td>
<td>($8.288)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$2.971</td>
<td>$3.711</td>
<td>$3.400</td>
<td>$3.374</td>
<td>$3.833</td>
<td>$3.578</td>
<td>$3.840</td>
<td>$4.318</td>
<td>$4.752</td>
<td>$37.422</td>
<td></td>
</tr>
</tbody>
</table>

*Excludes Needs Already Funded with Active CIP Projects and Regionally Supported Entities (i.e. Fire Training)
## County Contribution to Operating & Capital Maintenance Program

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2022</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>FY 2025</th>
<th>FY 2026</th>
<th>FY 2027</th>
<th>FY 2028</th>
<th>FY 2029</th>
<th>FY 2020 – FY 2029 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Operating Costs associated with CMP</td>
<td>$1.815</td>
<td>$1.870</td>
<td>$1.926</td>
<td>$1.984</td>
<td>$2.043</td>
<td>$2.104</td>
<td>$2.167</td>
<td>$2.232</td>
<td>$2.299</td>
<td>$2.368</td>
<td>$20.808</td>
</tr>
</tbody>
</table>

*Operating Costs assume 3.0% inflation annually
Non-Assessment Related Expenditures

Annual Expenditures Based on Historical and Current Budgeted Include:

• PRT- Field and tree maintenance, trail/road maintenance, landscaping, signage, security improvements, fencing, park furnishings, and volunteer projects

• GS- Security, drainage, sewer/septic, fuel tanks, accessibility needs, appliances, construction and renovation projects related to operational and service needs, and specialty equipment

• Sheriff- Industrial kitchen repair/replacement
### Forecast of Assessment and Non-Assessment Recurring Funding Level

<table>
<thead>
<tr>
<th></th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2022</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>FY 2025</th>
<th>FY 2026</th>
<th>FY 2027</th>
<th>FY 2028</th>
<th>FY 2029</th>
<th>FY 2020 – FY 2029 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recurring Estimated Non-Assessment Expenditures</strong></td>
<td>$0.441</td>
<td>$0.454</td>
<td>$0.468</td>
<td>$0.482</td>
<td>$0.496</td>
<td>$0.511</td>
<td>$0.527</td>
<td>$0.542</td>
<td>$0.559</td>
<td>$0.575</td>
<td>$5.056</td>
</tr>
<tr>
<td><strong>Net Projected Deficit</strong></td>
<td>$0.237</td>
<td>$0.730</td>
<td>$0.237</td>
<td>$0.167</td>
<td>$0.581</td>
<td>$0.280</td>
<td>$0.302</td>
<td>$0.445</td>
<td>$0.873</td>
<td>$1.254</td>
<td>$5.107</td>
</tr>
</tbody>
</table>
General Conclusions

• The County has done an excellent job of utilizing available funds to strategically address the most critical needs
• CMP and operating funds used for unplanned capital maintenance (i.e. flooding and vandalism) and other needs not related to assessment scope
• Staff will work to prioritize and plan for needs in the budget development process using the FCA data as a resource
• Software platform and data beneficial for use in planning
• Identified funding level challenges exist, however, the County has done a good job of prioritizing available resources for critical systems and needs
Decision Support Tool (Cloud Based)

- Organizes **facility and infrastructure assets** in multi-level Hierarchy for roll-up & drill down reporting.
- Stores **inventory** of Facility and Site Infrastructure components.
- Forecasts component renewals based on condition ratings and Maintenance Factors.
- Documents **Work Items** from observed deficiencies and groups into Work Packages.
- Stores Work Item **cost estimates**. Import estimates from RSMeans Online.
- **Prioritizes** execution of Work Packages using one of three prioritization methods.
- Generates multi-year Requirements, Budgets and Spending **Forecasts** linked to FCI.
- Supports “What If” **alternative forecasting analyses**, saving time in generating multiple plans for different budget scenarios.
- Stores **reference documents** and photos with each asset, inventory item or Work Item.
- Includes field data collection application that runs on Apple iPad. Reduces field time.
Next Steps

• Ensure the FCA provides an on-going resource for the period in between formal assessments (7-10 years) as opposed to solely a snapshot in time

• Staff to utilize software platform to update actions completed, deferred, component/equipment inventory, and other variables for recurring planning

• Integrate data to/from existing facility management/work order systems utilized by General Services and Parks and Recreation

• Utilize the FCA to inform Capital Maintenance and Capital Improvement program
Questions & Comments