



EXECUTIVE SUMMARY

RENEWAL/REPLACEMENT PROGRAM ASSESSMENT STUDY STRUCTURAL ELEMENTS

WGI (structural) was retained October, 2015 to review from a structural perspective the various projects and assets listed in the **Infrastructure Sales Tax Capital Projects List** and to pass professional opinion and judgment as to the overall validity of those projects and the process by which they come to be identified.

The scope of services included: 1) meeting with PBC Department /Division Directors responsible for the renewal/replacement (R/R) recommendations and discuss the Departments routine maintenance and condition assessment process; 2) reviewing their program protocol and reports to learn the specific process utilized to identify risk potential; 3) examining their method of prioritizing (R/R) projects based on the available funding; and 4) field verifying that the Department is appropriately applying the maintenance and condition assessment process in the field based on a random sampling of the projects listed in the (R/R) recommendations list.

The study included review of maintenance history and condition assessment reports and any other studies available for the assets listed in the (R/R) recommendations to determine whether:

1. the condition assessment is accurate;
2. the correct risk category has been applied; and
3. the department has considered combining projects to minimize costs of procurement or separating projects to minimize operational impacts.

Based on our observations and review of the available reports our report documents the following conclusions:

1. the thoroughness of the departments routine maintenance and condition assessment process;
2. the application of the maintenance and assessment process by the field personnel and the validity of their assignment of risk;
3. the validity of that process according to a working draft of an **Infrastructure Sales Tax Capital Projects List** and (R/R) schedule; and
4. recap best practices of the various departments (R/R) programs.

Based on my review of the reports, County assessments and interviews with staff, it appears as a general statement the County has implemented systems, practices and protocols to identify life safety issues and maintenance issues and reasonable replacement schedules for the infrastructure reviewed. The Departments have implemented regular maintenance on the infrastructure we inspected and it appears the maintenance has not been neglected or ignored.

During the review process it became clear that structural components of some of the infrastructure around the County has reached their functional life and in some cases closure of the structure is the only option. The closures result in reduced services to the County residents and potential life safety concerns such as unsafe roadway embankments, detours around bridges due to emergency repairs and fewer lifeguard towers at beaches.

Our findings concluded that the condition assessments of the facilities were accurate, the proper risk assessments have been applied and combining or separating projects into phases was considered in the renewal/ replacement recommendations. In WGI's opinion the structural items reviewed on the **Infrastructure Sales Tax Capital Projects List** identified valid needs for **Renewal/Replacement** that should not be deferred.



Brian Rheault Structures Project Principal

Brian.Rheault@WantmanGroup.com

t.561.686.3660 f.561.791.1995

LEO A DALY

January 7, 2016

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EXECUTIVE SUMMARY

MAIN DETENTION CENTER-EAST, WEST and SOUTH TOWER STUDY WEST COUNTY DETENTION CENTER A & B POD STUDY

LEO A DALY and its consultant TLC Engineering were commissioned to perform a limited visual condition assessment of the existing East, West and South Towers of the Main Detention Center Facility (MDC) located at 3228 Gun Club Road in West Palm Beach Florida and the West County Detention Center POD A & B Inmate Housing units located at 38840 State Road 80, Belle Glade Florida. In order to validate the MDC facilities current condition as described in the Track B Final Report dated December 16, 2005 (Completed by Pulitzer/Bogard & Associates, LLC/Spillis Candela DMJM) a visual walkthrough was completed by the Project Team in conjunction with members from PBSO and Palm Beach Counties Facilities Department. The review of the East, West and South Towers and POD A & B was limited to a visual assessment to determine the general physical condition and future viability and did not involve the review or assessment of existing mathematical calculations, life safety or deconstruction.

MAIN DETENTION CENTER- EAST, WEST and SOUTH TOWER STUDY

Our assessment for the Main Detention Center East and West Tower concluded that the interior finishes (including damaged officer workstation millwork), mechanical systems, plumbing accessories, select electrical panels, lighting, detention accessories and sprinkler systems will all require replacement due to age and high use. The Project Team additionally noted that the security and fire alarm systems are in need of replacement as the technology is antiquated and spare parts are no longer available or very hard to obtain. The structural components of the building appear to be in good condition with no evidence of deterioration or structural damage. This conclusion is consistent with the 2006 Track B Report findings that the East and West Tower will require a major investment in replacing existing equipment which has reached its end of service.

The existing electronic security system at the Main Detention Center is antiquated and spare parts are no longer available or very hard to obtain. Additional improvements will be necessary in the next few years to maintain the reliability and dependability of the detention center security. Due to the critical function of the facility, investment in the security infrastructure will be necessary to maintain the expected reliability and security. The following systems were included in this study:

- a. Control touch screen for inmate cell doors and PLC's
- b. Duress buttons integration thru Fire Alarm System.
- c. Intercom Systems
- d. Paging
- e. Fire Alarm System
- f. CCTV Surveillance & NVRs storage
- g. Card Access System
- h. Master Control Clock System

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NO. AAC000734

1400 CENTREPARK BOULEVARD
SUITE 500
WEST PALM BEACH, FL 33401
TEL 561.688.2111
FAX 561.697.8040
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Most of the above systems are the original systems from the 1980's or were modified over the past years and have reached end of life. The systems identified above are considered the "major building systems" requiring replacement. Sub-systems including required re-mapping and integration with related systems will additionally be required concurrently with the replacement of the above in order to create complete operational systems.

The South Tower is generally in good condition with the building requiring only minor renewal/replacement activities other than the replacement of all electronic systems including one subsystem which is currently non-functioning.

Please refer to the written assessment for a more detailed description of findings.

WEST COUNTY DETENTION CENTER A&B POD STUDY (PHASE 3)

Our assessment of the West County Detention Center concluded that general repairs appear to have occurred periodically, with only minor deterioration witnessed due to age and high use. POD A and B are generally in good condition with repair and replacement of finishes and select mechanical systems required as a result of high use and age.

Our assessment concluded that replacement of interior finishes including general painting, damaged officer workstation millwork, plumbing fixtures, water heaters, the fire booster pump and flooring are required as a result of high use and the systems reaching their end of life cycle.

At the exterior of the facility weatherproofing is required at select door/door frame locations where rusting was noted and replacement of deteriorated sealant at select door and window locations is additionally required. The roofing system over the A&B POD areas are an SBS Modified Bitumen system. Curbs are utilized to support mechanical equipment and raised rubberized supports are used to isolate the electrical conduit and water lines which are on the roof. The existing roof appears in poor condition and should be replaced along with select mechanical units on the roof which are at the end of their life cycle.

After the field investigation and meeting/interviewing of PBC staff, the Project Teams recommendations related to the Electrical and Low Voltage Systems in POD A & B are as follows:

- i. Replace all existing light fixtures with LED type.
- j. Replace the emergency generator system.
- k. Replace electrical panels in Pod C.
- l. Repair Pod A & B door control systems to correct door control issues.
- m. Fire Alarm Control Panel (FACP) - Requires complete separation of fire and door/duress alarms. Upgrade/ update to current EST3 software & firmware versions are required.
- n. All existing systems must remain in full operation and/or run in parallel with new systems if POD A&B is required to remain operational during the renovation/replacement project. Additional costs related to duplicative

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infrastructure will be incurred if this option is selected.

If the facility population permits, the second and preferred option would be the relocation of inmates and closure of POD A&B during the renovation/replacement project.

Please refer to written assessment for a more detailed description of findings.

Since the majority of the renewal/replacement project takes place in inmate occupied areas, it is essential that the work be scheduled, and the schedule maintained. For reasons of maintaining security within the detention facilities, limit introduction of contraband into the jail, reduce the duration of renewal/replacement phase and hence reduce the costs of the overall project, PBSO Corrections and County facilities have developed a six (6) phase renewal/replacement plan running from 2016-2020. This plan assumes that the inmate population will roughly stay at the current day level, and sequences the work in a manner that; 1) allows the relocation of the inmates from the work area during the duration of the phase and 2) uses existing security barriers to minimize temporary construction. Three projects (for budget purposes) entitled "Detention Facilities R/R – Phase 3-5", "Detention Facilities R/R – Phase 6" and "Main Detention Center – Electronic System Replacement" have been scheduled into six phases.

Phase 1 (FY 2016): MDC East Tower R/R Immediate Repairs

Phase 2 (FY 2016): MDC Electronic Systems Replacement – Programming and Design

Phase 3 (FY 2017): WDC A/B Buildings
WDC Electronic Repairs
MDC Electronics System Design

Phase 4 (FY 2018): MDC Central Plant and East Tower R/R
MDC Electronics Systems Replacement Install – All PLCs & head-end equipment and East Tower Infrastructure

Phase 5 (FY 2019): MDC West Tower R/R
MDC Electronics Systems Replacement Install – All remaining infrastructure and equipment installation
MDC Repurpose Admissions/Courts – Design

Phase 6 (FY 2020): MDC Repurpose Admissions/Courts - Construction

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End of Overview

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PALM BEACH COUNTY
MAIN JUDICIAL CENTER (MJC)
ELECTRONICS & SECURITY SYSTEM
TECHNOLOGY REPLACEMENT
RECOMMENDATIONS REPORT

Palm Beach County

PROJECT NO. 13220

Kimley»»Horn

J L JOHNSON, LEVINSON,
R D RAGAN, DAVILA, INC.
CONSULTING ENGINEERS

Executive Summary

The Palm Beach County Capital Improvements Division (CID) retained Kimley-Horn & Associates, Inc. (KHA) to perform an assessment of the existing security subsystems currently utilized at the Palm Beach County Main Judicial Center and to provide recommendations for the replacement of the various Electronics & Security System technologies being reviewed which include the following systems:

- CCTV Surveillance and Video Management System (VMS)
- Security Management System (SMS); including Command Center Operator Workstations
- Programmable Logic Controllers (PLCs)
- Duress
- Elevator Override Control
- Card Access
- Intercom System
- Fire Alarm System

The Kimley-Horn team was directed to review documentation provided by PBC to gain a deeper understanding of the existing systems and how these systems have been designed and are intended to operate. Based on that information, the team developed the *Current System Assessment* report that identifies each of the systems functionality requirements. In addition, the team was directed to conduct market research to evaluate the latest applicable known technologies available for consideration. This market research included a review of the latest known versions offered by the manufacturers of the existing systems currently implemented and a review of any alternate known applicable technologies for replacing each of the existing subsystems. Once completed, the Kimley-Horn team was tasked with summarizing the findings and making a proposed recommendation.

The Palm Beach County Main Judicial Center (MJC) was constructed approximately twenty-five (25) years ago and serves as the primary judicial center. This complex is comprised of three (3) separate structures: 1) Main Courthouse (MJC), 2) State Attorney/Public Defender (SAPD) building, and 3) a Central Energy Plant (CEP), collectively totaling approximately 875,000 sf. The security system for this complex consists of the several security subsystems outlined above that are integrated into a custom security management platform. These security subsystems are required to maintain the existing security program and sustain routine daily operations. This report describes each technology along with the replacement recommendation for the existing Security Management System (SMS) and subsystems.

At this time, the current SMS solution and several of the subsystems at the MJC are at their end-of-life and the hardware associated with these subsystems is no longer supported by the respective manufacturers. Although governing standards were adhered to when the building was constructed, certain devices in the facility do not currently comply with the Americans with Disabilities Act (ADA). In addition, servicing of the existing systems is becoming extremely difficult due to the lack of available parts. These systems are a fundamental component of ongoing operations, and no alternative facilities are available as a temporary replacement in the event of any systemic failure. Although implementing a replacement project of this magnitude is a significant undertaking with several inherent challenges, the risk associated with not proceeding with this effort is of even greater

consequence as it could result in the loss of ability to receive alarms (e.g. duress alarms, system status/failure alarms, etc.), failure of locking controls (e.g. at detention doors) and elevator controls; which make the facility less secure and compromises the overall functionality and public safety within the facility.

It is important to maintain the current level of integration implemented at the MJC with this replacement project. As such, the recommendation outlined in this report may specify that certain systems be replaced with a current day technology version of the existing system in order to maintain this integration. As a result, the proposed solution may offer added functionality due to modern advanced technology. However, even more important than maintaining the current level of integration is maintaining the day-to-day operations of the facility, which cannot be interrupted while implementing the replacement of these systems. In order to accomplish this, a detailed phasing plan must be developed and coordinated with the County in advance of any work to ensure a seamless transition as the systems are cut-over.



JOHNSON, LEVINSON,
RAGAN, DAVILA, INC.
CONSULTING ENGINEERS

1450 Centrepark Boulevard, Suite 350
West Palm Beach, FL 33401
(561) 689-2303 • (561) 689-2302 Fax
www.jlrdinc.com

**PALM BEACH COUNTY
RENEWAL / REPLACEMENT PROGRAM STUDY
MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION
PBC PROJECT NO. 15225**

EXECUTIVE SUMMARY

Johnson, Levinson, Ragan, and Davila, Inc. (JLRD) was engaged to review and analyze the process in which projects are identified for Renewal and Replacement (R&R) by Palm Beach County's Facilities Development & Operations (FD&O) and Parks & Recreation Departments. The purpose of the assessment was to review the documentation provided by those departments and review existing conditions through field observations of mechanical, electrical, plumbing, and fire protection (MEP&FP) elements in a random sampling of the County's R&R projects. Sampling of projects was obtained from the same random sampling methodology employed by the architectural professionals to prepare their assessment of architectural elements R&R projects. Documentation was reviewed for a total of forty-eight (48) R&R projects with MEP&FP elements, with forty-six (46) of those projects also having field observations performed.

Reviewed documentation included each department's asset audit procedures, recent facility audits, project scope of work statements, maintenance logs, field measurements, criteria / requirements, and R&R scheduling. Field observations were conducted to assess current condition, configuration, and evaluate remaining useful life expectancy of the respective system / equipment. With these findings, JLRD assessed the validity of the review process and procedures that are currently in place and how they compared to the actual field conditions of the subject infrastructure. Rough order of magnitude cost estimates for each project as generated by each department were also provided, however, JLRD did not review the validity of the cost values allocated relative to the scope of the projects as the consultant's statement of work did not request this effort.

Based on JLRD's reviews and observations, the FD&O and Parks & Recreation Departments' assessment criteria, audit documentation, and field conditions generally supported the scope and scheduling of the projects identified by the R&R programs. Although written documentation is not consistently available or in a format allowing for ease in auditing or for use in historical documentation, the methodologies utilized by FD&O and Parks & Recreation Departments personnel results in substantially similar conclusion as to the necessity and timing of R&R projects.



AECOM
2090 Palm Beach Lakes Blvd
Suite 600
West Palm Beach, FL 33409
www.aecom.com

561 684 3375 tel
561 689 8531 fax

Palm Beach County Renewal / Replacement Program Study Civil Elements

Executive Summary

The purpose of this study and report is to review the process that Palm Beach County's Engineering and Public Works, Facilities Development & Operations and Parks and Recreation Departments use to evaluate the assets which are identified for Renewal and Replacement. The review is based on information provided by those departments and a limited sampling of projects for field analysis. The Civil Engineering elements for review were limited to specific types of facilities maintained by the Engineering and Public Works, Facilities Development and Operations and/or Parks and Recreation Departments.

The civil engineering review of the process was based on a combination of interviews with County staff responsible for recommending which projects are added to the Capital Projects List, a review of the methodologies used to prioritize projects, and field inspections. While there are a few areas where rating scales and maintenance documentation may be used to further justify the prioritization of projects, the overall results of the study indicate that County staff has utilized sound methodologies based on thorough inspections of existing conditions, economics, and public health and safety to review and prioritize projects.

Palm Beach County
Renewal / Replacement Program Study
Architectural Elements

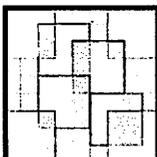
Executive Summary

Colomé' and Associates, Inc. was engaged to review and analyze the process in which Palm Beach County's Facilities Development and Operations - Facilities Management Division (FMD) and Palm Beach County's Parks and Recreation Department (Parks) identify projects for renewal and replacement. After completing a random sampling of the architectural projects included in the 2015 Project Inventory List, 93 were identified for review of FMD-supplied and Parks-supplied data, documenting the process in which deficiencies are identified and prioritized for renewal and replacement. Of the 93 projects, 31 projects were selected for site visits to verify the accuracy of the data at the project location. In addition, Colomé' & Associates, Inc. reviewed 10 playgrounds; 9 of which were selected for site visits.

Colomé & Associates, Inc. reviewed the following: preventative maintenance of assets, prioritization of projects, project schedule and cost implications over time, and the criteria for the addition of a project to the inventory list for renewal and replacement. The review of these processes was based on FMD and Parks supplied data and site visits. The criteria and methods used to identify and prioritize projects on the Project Inventory List was found to be based on ongoing reviews by multiple levels of County personnel and skilled tradesmen. In almost every case, the Project Inventory List reflected the information provided in the audits and inspections.

By adopting policies for review of each facility, both FMD and Parks have incorporated an ongoing program of review and maintenance of the facilities. The prioritization of the projects is clear and, in most cases, applied in a consistent and understandable manner. The criteria used for adding a project to the Project Inventory List is clearly defined by FMD and Parks. The time frames assigned to the renewal and replacement projects and related cost values for construction should be evaluated to provide a more accurate adjustment of cost escalation over time, as renewal and replacement needs are deferred due to insufficient funding and/or higher priorities.

The documentation of deficiencies in architectural and playground facilities funded by FMD and Parks provides a generally accurate representation of the extent of the deficiency and scope required for renewal or replacement. The consistent use of standard audit forms by FMD would facilitate an easier understanding of the project history, scope, time frame, and conceptual construction cost estimate. The use of multiple layers of oversight and qualified assessors for the analysis of deficiencies provides an accurate assessment of issues identified.



Colomé & Associates, Inc.

Florida Registration AA0003437

Architecture □ Planning □ Interiors

530 24th Street □ West Palm Beach, Florida 33407 □ Telephone: (561) 833-9147 □ Facsimile: (561) 833-9356 □ Email: colome@colome-arch.net

