

MIAMI-DADE COUNTY OFFICE OF THE INSPECTOR GENERAL



FINAL AUDIT REPORT

Audit of Miami-Dade Aviation Department's Professional Services Agreement With Howard, Needles, Tammen & Bergendoff, dated September 7, 1966 (as Amended on April 2, 1985), for Consulting Engineering Services

IG07-78A

June 5, 2009

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I. INTRODUCTION

The Office of the Inspector General (OIG) performed an audit of the Professional Services Agreement (PSA) between the Miami-Dade Aviation Department (MDAD) and Howard, Needles, Tammen & Bergendoff (HNTB). The Dade County Port Authority (DCPA) authorized and approved this PSA on September 7, 1966, pursuant to Board Resolution R-951-66. By way of that resolution, the Trust Agreement, in effect at that time, dated October 1, 1954, was incorporated by reference into the PSA's scope of services. The only amendment to the PSA occurred on April 2, 1985, pursuant to Board of County Commissioners of Dade County (BCC) Resolution R-447-85.¹ HNTB currently provides bond engineering services to MDAD pursuant to the PSA's 1985 amended terms.

MDAD's Capital Program currently operates under an amended and restated Trust Agreement, dated December 15, 2002, which is the successor Trust Agreement to the one dated October 1, 1954. Under the Trust Agreement, MDAD obtains financing for its "Improvement Program" and for repairing and renovating MDAD buildings and facilities financed or refinanced using Trust Agreement bond proceeds. Trust Agreement Section 705, *Employment of Engineers*, requires MDAD to "employ an independent engineer or engineering firm or corporation" to perform and carry out the duties imposed on what the Trust Agreement calls the "Consulting Engineer" (CE). Under this trust agreement, the CE has two basic functions as the bond engineer: one is to ensure that MDAD uses bond proceeds to construct only approved projects and the other is to ensure that MDAD maintains the completed facilities in such a manner as to sustain their revenue generating capacity.

The purpose of the audit was to ensure that the PSA is being properly managed and that MDAD is adequately monitoring HNTB, who serves as Consulting Engineer for Trust Agreement services and who, in addition, provides other professional engineering services for MDAD.

¹ Of note, the earliest dated records obtained by the OIG mention that HNTB provided consultant engineering services at MIA under a 1959 PSA for MIA's "Initial Improvement Program" construction and other improvements financed by a \$21 million bond issue, the proceeds of which were deposited in the "Improvement Construction Fund." In this 1959 PSA, there was reference to a 1958 PSA, wherein HNTB was hired to provide consulting engineering services related to MIA construction and other improvements, other than those included in the "Initial Improvement Program," financed by a \$10 million bank loan, the proceeds of which were deposited in the "Special Construction Fund." Thus, it appears that HNTB has been continuously providing bond/consultant engineering services to MDAD since the late 1950's.

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II. TERMS USED IN THIS REPORT

ADF	Aviation Department Facilities
A/E	Architecture and Engineering
BCC	Board of County Commissioners of Miami-Dade County, or its predecessor the Board of County Commissioners of Dade County
CE	Consulting Engineer
CIP	Capital Improvement Program
DCPA	Dade County Port Authority
HNTB	Howard, Needles, Tammen & Bergendoff
MDAD	Miami-Dade Aviation Department
MIA	Miami International Airport
NTDP	North Terminal Development Program
OIG	Miami-Dade County Office of the Inspector General
PAP	Port Authority Property
PSA	Professional Services Agreement
SA	Supervising Architect
SO	Service Order

III. RESULTS SUMMARY

We believe this is the first audit by any County entity of the Professional Services Agreement between MDAD and the engineering firm of HNTB, as Consulting Engineers, since the inception of the 1966 PSA. Our audit has one primary recommendation, in addition to five findings with accompanying recommendations for improvement in areas where we believe there is a need for better administration and greater involvement by MDAD in the management of its construction and related activities.

The OIG's primary recommendation is that MDAD should initiate a competitive solicitation seeking proposals from firms wishing to provide the bond engineering services required by the 2002 Trust Agreement and in conformity with the 2003 resolution, which, among other things, unified the two property and revenue streams into one unified Airport System and, thus, one unified bond engineering function as required by the Trust Agreement.

Our first finding focuses on the lack of any contract terms regarding the PSA's duration and funding. The subject PSA has neither a stated contract duration nor an

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authorized not-to-exceed contract amount. Unlike most County contracts, and we believe most other government contracts, this PSA was awarded with no authorized amount that would require periodic renewal and re-funding approval by the BCC, which would also include MDAD's reporting of HNTB's performance justifying its continued retention as the CE. We note that this PSA has been before the BCC, or its predecessor, only twice in the last 42 years—the first time when it was originally approved in 1966 and again in 1985 when it was amended. If not replaced in its entirety, MDAD should consider amending this PSA to include a stated duration and dollar amount. Even if this PSA were to state a duration of 10 years with a not-to-exceed amount of some unspecified dollar amount—not that the OIG is recommending this, but—it would still be better than what currently stands. Moreover, we note that the PSA has not been amended to reflect the Amended and Restated 2002 Trust Agreement or the merger of the Port Authority Properties and Aviation Department Facilities revenue and property systems that was effective, as of June 1, 2003.

Finding No. 2 is that 97% of HNTB's CE work, amounting to approximately \$25.4 million in fees over our 5-year audit period, is not controlled and monitored by MDAD's service order (SO) system. This work comprises what HNTB labels as "Trust" work, including its construction monitoring, construction design plans and construction contracts review, contractor payment certifications, and its annual inspection(s) and report. In addition, this work includes what we believe to be "non-Trust" work, such as 40/50-Year building recertifications, Type II and Type III inspections, other specialty inspections, and studies. We believe that MDAD should use its service order system to control all HNTB services both as the CE and as an engineering firm providing other requested services. If properly executed and managed, the full use of its service order system would help MDAD strengthen its internal controls over the various deliverables required of HNTB, regardless of its role. The SO can be a useful management tool in that it requires MDAD management to engage itself with all of HNTB's work. The service order process also draws management into the budgeting process of costs and the scheduling of when the various deliverables will be available.

Our Finding No. 3 is that HNTB does not always segregate its costs for performing Trust work from its costs for performing non-Trust work when invoicing MDAD. HNTB, in some instances, invoices only its costs for performing certain types of Trust work associated with construction oversight and approval of Construction Fund expenditures. However, in other invoices, HNTB commingles its costs related to conducting Trust required annual inspections and preparing the annual report with what we believe to be is non-Trust work. Consequently, HNTB invoiced MDAD for

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approximately \$4.7 million of fees (and reimbursable costs) for commingled Trust and non-Trust work. Our recommendation for Finding No. 3 is that MDAD should require HNTB to segregate its fee charges for the various services that it performs showing its fees to perform Trust work separately from those fees charged for non-Trust work. We believe separate invoicing for such work is appropriate and would help MDAD better manage both HNTB's Trust and non-Trust work.

In Finding No. 4, we state that MDAD should consistently apply charges for similar HNTB work to the same fund. MDAD did not consistently apply thirteen HNTB invoices, totaling \$915,345, to what would appear to be the appropriate fund. In the cited instances, MDAD inconsistently applied HNTB charges for the described work to a different fund when compared to similarly described work on other invoices. MDAD should review the identified vouchers and correct the voucher postings as deemed necessary.

Our fifth finding is that MDAD relies on HNTB to provide non-CE services that we believe could and should be competitively solicited and awarded to other engineering firms. In total, fees totaling about \$2.2 million have been paid to HNTB for non-CE engineering work performed during the five years covered by our audit. Table 3 (page 21) shows MDAD SO work and fee payments during our audit period totaling \$690,749 (HNTB Project #28618, #39220, and #43738), and fee payments for other operational support activities totaling \$1,509,738, that we believe MDAD should, as future needs require, competitively solicit and award to other engineering firms. We recommend that MDAD evaluate its use of HNTB for non-Trust work and consider competitively soliciting and awarding such work to other engineering firms.

MDAD Response with OIG Rejoinders

A copy of this report, as a draft, was provided to MDAD and to HNTB for their comments, on April 3, 2009, although our recommendations were directed solely at MDAD. MDAD and HNTB both provided responses to the draft report and they are attached to this final report as OIG APPENDIX A and APPENDIX B, respectively.

MDAD addresses our primary recommendation that this PSA be competitively solicited and awarded by deferring to comments made by the U.S. Bank National Association (Co-Trustee to the 2002 Trust Agreement and successor in interest to Wachovia Bank, National Association). In its response, MDAD stated that it had asked the Trustee and Co-Trustee for their comments on our draft report and that the Co-Trustee responded in a letter, dated May 4, 2009, to Aviation Director José Abreu.

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MDAD included the Co-Trustee's response with its response to our draft report (see APPENDIX A). The Co-Trustee, in view of the current circumstances concerning MDAD's capital improvement plan (CIP), asks that MDAD defer any replacement of the current CE, until the current anticipated completion date of the CIP has occurred, which is targeted for sometime in 2011.

While we respect the Co-Trustee's position, we are, nonetheless, concerned that this end-date, like the North Terminal Development Project completion date, is a moving target. Construction activity on the CIP will likely not be completed for several more years, as delays continue to beleague the project. Moreover, the current CIP surely is not the same CIP that was in place when the 1954 Trust Agreement was instituted. CIPs, in general are, are dynamic, and evolving programs, as its user needs change. And, although the main projects under the current CIP are coming to an end, albeit, not anytime soon, CIP activity will continue. MDAD's need for a bond engineer will exist until all bond proceeds have been paid back to the bondholders. By 2011, the incumbent bond engineer will have served continuously for 45 years pursuant to the original, non-competitive agreement. While no one has ever been able to provide a reasonably accurate completion date for the North Terminal Development Project, we ask that MDAD establish a definite date for when it will seek re-procurement of a successor bond engineering professional services agreement.

We also note that the Co-Trustee specifically limited its comments to HNTB's CE services; that is, it did not address HNTB's other activities. HNTB's non-CE activities, for example, North Terminal Development Project schedule reviews, whether service order authorized or not, have HNTB appearing to become a DAC (Dade Aviation Consultants) replacement. This end stage, at a minimum, will also last for decades. Our issue is that MDAD justifies using HNTB for the non-CE services because it is the CE and is familiar with MDAD. Apparently, it is MDAD's thinking that it is efficient and effective to have HNTB continue performing these services, notwithstanding the fact that it is performing these non-CE services, under a non-competitive award piggybacked on its primary role. The OIG is concerned that MDAD may be tempted to continue using this justification, which will also allow MDAD to continue to follow a bad contracting precedent, rather than maintaining the role of the CE as a stand-alone role.

Regarding our first recommendation, that MDAD should consider amending this PSA to include a stated duration and amount, MDAD acknowledges that this PSA "should have been issued with a finite term and dollar limit, because that is the best and standard practice for issuing contracts." However, MDAD does not indicate whether it

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will attempt to amend the current contract or add such provisions to any future PSA for CE services. Accordingly, we reiterate our recommendation since we believe that MDAD could amend this PSA with a stated duration and a not-to-exceed dollar amount. This recommendation is exclusive of our primary recommendation that MDAD should initiate a competitive solicitation seeking proposals from firms wishing to provide the bond engineering services required by the 2002 Trust Agreement.

Our second recommendation is that MDAD should use its service order system to authorize, control, and monitor contract deliverables and budgets. MDAD states that it uses an annual budget amount as its control over HNTB costs and that such budget has not been exceeded. Notwithstanding, MDAD indicated it will implement the OIG's recommendation. MDAD states that in the future it "will issue an annual service order for the budgeted indirect costs attributable to HNTB" and will issue separate service orders for HNTB performed inspections (other than those required for HNTB to meet the Trust's annual inspections requirement) and recertifications, whose costs currently are commingled in the annual budget amount with HNTB's Trust work costs. With regards to a singular "annual service order" as proposed by MDAD for HNTB's annual indirect costs, we believe that such a service order should include, at a minimum, a showing of the discrete tasks (e.g., contractor pay requisition review, design review and approval, etc.) associated with each of the various individual projects listed in MDAD's CIP, staffing assignments, salary rates, and estimated other direct costs. Indeed, instead of one massive annual service order, we would suggest that MDAD issue discrete service orders for each Trust-required work activity.

Our third recommendation is that MDAD should require HNTB to segregate its charges according to the work performed, e.g., Trust work versus non-Trust work. MDAD states that HNTB already does so. MDAD agreed to adopt the OIG's recommendation and change its current practice. MDAD states that it will issue separate work orders for building inspections and recertifications, and HNTB's annual indirect costs. These steps will provide the additional cost segregation that the OIG believes is necessary for MDAD to better manage HNTB activities.

The report's fourth recommendation is that MDAD should consistently apply HNTB charges for similar work to the same fund. MDAD acknowledges that in two of the OIG's cited instances of questionable postings, MDAD initially had misapplied the charges to the incorrect fund but that it already corrected the mischarges in its accounting records. The remaining OIG cited instances have, according to MDAD, "an immaterial effect on financial reporting." While the amount may be immaterial for financial reporting purposes, MDAD should have adequate procedures to prevent such

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mispostings from occurring in the future and to timely detect and correct those that do occur.

Finally, the OIG recommends that MDAD competitively solicit and award certain services provided by HNTB that the OIG believes are not required of a CE under the Trust Agreement. MDAD "disagrees in principle with this finding" although its response does not clearly state why it disagrees with the OIG. MDAD does make a statement defending its position, however, which exemplifies precisely why the OIG affirms that such services should be competitively solicited and awarded:

[HNTB's] role is one of oversight and to provide recommendations on repair methodologies as they must concur with the results so they can state a position as part of their Trust Agreement responsibilities. Their performance of inspections guarantees the same.

MDAD states it accurately—HNTB performs an oversight function. In addition, MDAD stresses that HNTB provides no design services to the department. Notwithstanding, HNTB's current service order work is not oversight; it is active engagement in program management. Similarly, we believe its inspections and recertifications work is program management activity, not oversight. We note in our report that HNTB, undoubtedly, is well qualified to perform such work and there may be synergy with its other activities, in having it do the work. This relationship, however, does not mean that it should be doing the work. The OIG believes that HNTB issuing recommendations on operational issues, which may be later evaluated by HNTB in its objective oversight function, creates a personal impairment to its independence. Accordingly, we disagree with MDAD on this issue, and reiterate our recommendation.

HNTB Response with OIG Rejoinders

Although no OIG recommendation was directed at HNTB, it, nonetheless, responded to our draft audit report. In its response, HNTB emphasizes that its billings have never exceeded MDAD's budget for its services. HNTB asserts that "This is a testament to the appropriate checks and balances established by MDAD while still allowing the CE [HNTB] the flexibility to perform its independent functions, such as verifying the accuracy and validity of capital fund expenditures, in accordance with the Trust and required due diligence."

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Additionally, HNTB defends its inspections and recertifications work as "Trust" work. The OIG agrees with HNTB's stated position that such work is "in keeping with the department's responsibility under the Trust to maintain their facilities..." We, however, disagree with HNTB's implied position that it is acceptable for a bond engineer to perform these operational services. The CE's role is to evaluate and report on MDAD's management thereof, not to participate in it. As described by HNTB in its response to the OIG, its inspections/recertification reports "are used by MDAD as the scope documents for the selection of an A/E firm to provide design services to address remedial requirements." Clearly, this puts HNTB in an operational role, one-step removed from the preparation of actual design documents.

Lastly, HNTB mentions that the OIG did not note in its draft report that its review of HNTB invoices, under the subject PSA and over the 5-year audit period, found "only one (1) minor overbilling of approximately \$300 among the \$21 million of billings, and that error has been corrected and credited back to MDAD."

IV. OIG JURISDICTIONAL AUTHORITY

In accordance with Section 2-1076 of the Code of Miami-Dade County, the Inspector General has the authority to make investigations of county affairs and the power to review past, present and proposed County and Public Health Trust programs, accounts, records, contracts, and transactions. The Inspector General has the power to analyze the need for, and the reasonableness of, proposed change orders. The Inspector General is authorized to conduct any reviews, audits, inspections, investigations, or analyses relating to departments, offices, boards, activities, programs, and agencies of the County and the Public Health Trust.

The Inspector General may, on a random basis, perform audits, inspections, and reviews of all County contracts. The Inspector General shall have the power to audit, investigate, monitor, oversee, inspect and review the operations, activities and performance and procurement process including, but not limited to, project design; establishment of bid specifications; bid submittals; activities of the contractor and its officers, agents and employees, lobbyists; and of County staff and elected officials, in order to ensure compliance with contract specifications and detect corruption and fraud.

The Inspector General shall have the power to review and investigate any citizen's complaints regarding County or Public Health Trust projects, programs, contracts, or transactions. The Inspector General may exercise any of the powers contained in Section 2-1076, upon his or her own initiative.

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The Inspector General shall have the power to require reports from the Mayor, County Commissioners, County Manager, County agencies and instrumentalities, County officers and employees, and the Public Health Trust and its officers and employees, regarding any matter within the jurisdiction of the Inspector General.

V. TRUST AGREEMENT BACKGROUND

There was a Trust Agreement between The Chase Manhattan Bank (Trustee), First Union National Bank (Co-Trustee), and Miami-Dade County, dated October 1, 1954. A successor Trust Agreement between The Chase Manhattan Bank (Trustee), Wachovia Bank (Co-Trustee), and Miami-Dade County, dated December 15, 2002, amended and restated the 1954 Trust Agreement. The Agreements have allowed MDAD to obtain financing for its improvement programs and projects intended for its properties and facilities through the issuance of revenue bonds. These Trust Agreements are the same regarding their requirement for a bond engineer (or—as the function is labeled in the agreements—a “Consulting Engineer”). For example, Section 705 *Employment of Engineers* of both Trust Agreements requires MDAD to hire a CE. We used the 2002 Trust Agreement as a basis for our review.

Overview of MDAD Property and Facility Categories²

Up until May 31, 2003, MDAD segregated its projects and facilities, and their related revenue streams and financing, into one of two categories. One category was Port Authority Properties (PAP). The second category was Non-Port Authority Properties, which were also known as Aviation Department Fund Facilities (ADF Facilities). MDAD financed its construction programs for each category using bond proceeds obtained under separate financing agreements.

PAP, before May 31, 2003, consisted of all airport land and facilities that MDAD acquired or constructed with government grants, passenger facility charges, and proceeds of revenue bonds issued by the County under the terms of the 1954 Trust Agreement and the Amended and Restated Trust Agreement of 2002. PAP included MIA, its passenger terminals and other major buildings, and other County general aviation airports (Homestead General Airport, Kendall-Tamiami Executive Airport, and

²The following Overview was prepared using information contained in Ernst & Young's *Financial Statements and Other Financial Information, Miami-Dade County Aviation Department, Years Ended September 30, 2002 and 2001, with Report of Independent Certified Public Accountants*, and KPMG's similar report for the years ended September 30, 2002 and 2003.

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Opa-locka Executive Airport), and their associated buildings. The County pledged that revenues generated from these properties would be used to repay the bondholders their principal investments and associated interest charges.

ADF Facilities, before May 31, 2003, consisted of the MDAD properties, including the Airport Hotel and its Top-of-the-Port Restaurant, in addition to cargo and certain other MIA facilities. These properties were acquired or constructed with government grants, passenger facility charges, and proceeds from County-issued "Special Revenue and Aviation Facilities Variable Rate Demand Bonds" not issued under the aforementioned 1954 or 2002 Trust Agreements. Similar to PAP revenues, the County pledged that revenues generated from ADF Facilities would be used to repay Aviation Facilities bondholders their principal investments and associated interest charges. The projects and specific facilities comprising the ADF Facilities were defined in the last of a series of resolutions, which was known as the Master Resolution (BCC Resolution R-1654-84, dated December 4, 1984).

Effective June 1, 2003, PAP and ADF Facilities and associated revenue streams were merged by way of BCC Resolution R-417-03.³ The Resolution approved several items, including: the merger of the PAP and ADF revenue systems; that ADF assets be incorporated into PAP; that the Aviation Facilities Revenue Bonds be entirely refunded; and that the Master Resolution be defeased.⁴ As a result, since June 1, 2003, MDAD has operated a single property and revenue system referred to as the "Airport System." However, even with the unification of the two revenue streams, the basis for the HNTB's work remains the 2002 Trust Agreement.

Consulting Engineer Duties Under the 2002 Trust Agreement

Trust Section 210(c) requires the CE to prepare:

[A] statement, signed by the Consulting Engineers certifying that the construction or acquisition of the Improvements or Projects described in the resolution authorizing the issuance of such bonds is, in their opinion, necessary to place or maintain the Port Authority Properties in proper condition for their safe, efficient, and economic operation or to preserve,

³ Pursuant to Trust Section 1308 *County Not Prevented from Issuing Obligations*, the County may add to what comprises "Port Authority Properties" by resolution of the Board, if such additions meet the stated criteria defined in section.

⁴ From "defeasance" which is an antiquated word for a document terminating the effect of an existing writing, such as a deed or contract, if some event occurs. (Law.com Dictionary)

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extend, increase or improve the service rendered the Port Authority Properties, and giving their estimate of the total cost of the Improvements or Project or portions thereof (including a reserve for contingencies), to be financed in whole or in part by the issuance of such bonds . . .

Section 407(b) *Requisitions on Construction Fund* requires the CE to review and certify its approval on all payments funded by bond proceeds drawn from the Construction Fund [MDAD Fund 501, discussed on page 18].⁵ We note that reviewing and certifying contractor pay requisitions, along with its work to complete related activities required by later-cited Sections 411 and 702, are HNTB's most time-consuming work activities, as indicated by the fact that it collected over \$20.6 million of its fees out of the total \$26.2 million of fees paid by MDAD during our audit period. Collectively, these activities include field inspections of on-going construction, technical reviews of construction drawings and specifications, approval of construction contracts, and final inspections to ensure that the completed projects conform to approved plans, and the aforementioned certifying approval for payment of contractor invoices. This last step of signing off on the pay requisition, i.e., certifying it for payment, is one key deliverable for the work activity. When appropriate, the CE is required to issue final certificates of completion pursuant to Section 411 *Certificate after Completion of Improvements; Disposition of Balance in Construction Fund*.

Similar to other bond engineering engagements, the most visible deliverable produced by the bond engineer is the annual report. For HNTB that is its preparation of the annual report on the Port Authority Properties. The County files this report with the bond Trustee and Co-trustee and mails it to all bondholders whose names are on file with the Clerk of the Board of County Commissioners. Section 503 *Duties of Consulting Engineers* requires the CE to inspect MDAD properties annually, to prepare an annual report, and to include, among other statements in its report:

. . . their findings whether the Port Authority Properties have been maintained in good repair and sound operating condition, and their estimates of the amount, if any, required to be expended to place said Properties in such condition and the details of such expenditures and the approximate time required therefore.

⁵ See Trust Section 210 *Issuance of Bonds for Additional Improvements or Project*.

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In addition, the CE is required to review and approve all plans and specifications related to MDAD's Improvement Program, for which bonds shall be issued under provisions of the Trust Agreement, pursuant to Section 702 *Acquisition and Construction*. This Section also requires the CE to approve all construction contracts related to the aforementioned plans and specifications. Other CE duties include making recommendations as to the amounts that should be deposited into the Reserve Maintenance Fund, as provided for in Section 501 and, if necessary, providing its certified approval of emergency disbursements from the Reserve Maintenance Fund, pursuant to Section 509.

Concerning those funds that are available to pay for CE services, Section 705 specifies that most CE work can be paid for using bond proceeds. The notable exception to this specification is the CE work associated with performing the annual inspection and preparing the annual report. This work is specifically to be paid by MDAD as part of its cost of operation and maintenance of the Port Authority Properties.

Lastly, Section 705 sets forth what is required to replace the CE:

The Authority further covenants that between the Effective Date and the fifth (5th) anniversary of the Effective Date, before employing any engineer or engineering firm or corporation as Consulting Engineers . . . it will secure the written approval of the Trustee.

This meant that from December 15, 2002 (effective date of the 2002 Amendment) to December 14, 2007 (fifth anniversary of the effective date), MDAD would have needed the approval of the Trustee to change the CE. However, since December 15, 2007, MDAD has not needed the Trustee's approval in order to change the firm providing MDAD with bond engineering (a.k.a. CE) services.

VI. PSA BACKGROUND

1966 PSA

As previously mentioned, the subject PSA was authorized in 1966 by the Dade County Port Authority (DCPA) Board through its approval of Resolution R-951-66. The Board Resolution authorizing and approving this 1966 PSA, and in the PSA itself, clearly indicated therein that the CE services required by the 1954 Trust Agreement were incorporated by reference into the PSA. The PSA allows HNTB to perform CE

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services for MDAD at its various facilities, including Miami International Airport (MIA), Homestead General Aviation Airport, Kendall-Tamiami Executive Airport, and Opa-locka West Airport. In addition, the PSA allows HNTB to provide other engineering services unrelated to the Trust Agreement.

The 1966 PSA scope of services is in two parts. The first part, Article III, *Consulting Engineer's Basic Services*, is divided into three subsections titled *Improvement Program Development Services*, *Construction Phase Services*, and *Annual Administrative Services*. The second part, Article IV, is titled *Improvement Program Coordination*.

1985 Amendment to the PSA – An Overview

On April 2, 1985, the BCC approved the first (and only) Amendment to the 1966 PSA (BCC Resolution R-447-85). This amendment merged the roles of the bond engineering services provided by HNTB under the 1966 PSA (associated with the Trust Agreement and PAP as the CE), with those bond engineering services it was providing to MDAD, as the “Supervising Architect” (SA) for non-Port Authority properties under the Master Resolution.⁶ We emphasize that notwithstanding the title “Supervising Architect,” HNTB was performing many of the same bond engineering services that it was performing as the CE for PAP projects and facilities pursuant to the aforementioned Resolutions and Trust Agreements.

Accordingly, as HNTB's SA duties, with respect to non-Port Authority properties and projects, were similar to those of HNTB's CE duties, with respect to Port Authority properties and projects, the County believed it was desirable to formally add HNTB's SA duties to its 1966 PSA for CE services. The intent was to provide more clear definition of both sets of duties, as well as to formally revise the method and amount of compensation due to HNTB for performing such collective duties that would be required under both MDAD financing agreements. HNTB's dual role of providing bond engineering services as CE and as SA lasted until May 31, 2003, when the BCC approved the merger of MDAD's two property systems into one Airport System. However, while HNTB has been providing bond engineering services for the entirety of MDAD's Airport System properties and facilities, since June 1, 2003, the PSA, under which HNTB provides its services, has not been updated to reflect this change.

⁶ HNTB was the designated SA on these other aviation-related projects and facilities that MDAD had not acquired, constructed, or financed under the 1954 Trust Agreement.

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1985 Amendment Article III Consulting Engineer's Basic Services

The amended 1985 PSA collectively recites the bond engineering services that comprise the totality of the CE services required under the Trust Agreement and of the SA services required under the 1984 Master Resolution, as well as the other services that MDAD may direct HNTB to perform. The amended PSA kept the same basic format and structure of the 1966 PSA. Much of the language that was added or deleted was nothing more than that necessary to incorporate SA services and references to ADF facilities into the PSA. In addition, the amended PSA formally incorporates MDAD's "Improvement Program" as part of MDAD's Trust work and MDAD's "ADF Improvements" program as part of MDAD's Master Resolution projects. Effectively, this placed all of MDAD's capital construction programs and projects under one or the other of its bond issuing agreements subject to the oversight of HNTB acting as both the CE and SA.

The amended PSA work scope comprises almost nothing else but CE/SA work. However, under Other Basic Services, a new Section 3.37 authorizes MDAD to request other non-CE/SA services from HNTB, as long as the request is in writing:

The CE shall, when directed by the County in writing, prepare special analyses of the needs of the County, planning and programming requirements, financial feasibility, life-cycle costing, or other such studies related to, but not necessarily a part of, the Improvement Program.

Major types of HNTB work, not otherwise specifically provided for in the PSA and now what we consider Trust work, that arguably have been (are being) performed pursuant to Section 3.37, include:

- Lease/Tenant Close-out Inspections—detailed observations complete with written assessments performed at MDAD that were facilities leased to others at lease termination. The inspections identify maintenance issues and Code violations, and are used to prepare cost estimates to repair facilities and, if necessary, to upgrade areas for use by new tenants with similar needs or business purpose, etc. This work is referred to as "Type II Inspections."
- New Lease/Tenant Inspections—similar to Type II inspections but its objective is to review space for maintenance and Code issues, prepare cost estimates to repair/renovate area for use by a new tenant whose needs and/or business

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purpose are different from the previous tenant. This work is referred to as "Type III Inspections."

- 40 and 50-Year Building Recertification Inspections and Reports—these inspections/reports are required by the Florida Building Code and County Ordinances. Their purpose is to certify the building's structural soundness, electrical safety, and the soundness and safety of the exterior building envelope. If necessary, HNTB identifies needed repairs and prepares cost estimates to implement the repairs.

The work performed by HNTB in these three areas is not subject to MDAD's service order system. On the other hand, HNTB performs certain other non-Trust work that are service order driven projects with approved budgets showing work assignments, estimated work hours, and costs. These service order assignments include, but are not limited to: providing, as-needed, management assistance, inspections, and other work related to MDAD's pavement repair contract; preparing North Terminal Program Schedule Review(s); and, since the departure of Dade Aviation Consultants (DAC), providing, as-requested, services related to design management, MDAD's Design Guidelines Manual, and support of MDAD's Americans with Disabilities Act of 1990 (ADA) compliance.

1985 Amendment Article II Term

The 1966 PSA never stated a fixed contract term. Instead, the PSA provided for an indefinite effective period beginning with the signing of the PSA Program and ending with the completion of MDAD's 1966 Improvement Program's Construction Phase, unless MDAD ended the Program or terminated HNTB for cause while the Program was operational. The amended PSA changed this Article so that the PSA would be effective until the date that the County completed two actions:

Employ in accordance with Section 7.08 of the [Master] Resolution another independent person or firm to replace the Consulting Engineer as Supervising Architect ... ; and

Employ in accordance with the provisions of Section 7.05 of the Trust Agreement an engineer or engineering firm or corporation to replace the presently-employed Consulting Engineer ... having first secured the written approval of the Trustee and having mailed notice to each principal underwriter.

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The first stated requirement would no longer appear to be needed after the merger of the PAP and ADF systems, in June 1, 2003. The second requiring the written approval of the Trustees to replace HNTB as the CE—became moot on December 15, 2007. However, with or without these requirements, this PSA's term is indefinite, i.e., there is no end date to this contract and no requirement that MDAD, as contract administrator, seek the BCC's approval for additional time to the contract, or additional contract appropriation for that matter.

1985 Amendment Article V Fees and Compensation

The 1966 PSA had two payment options. For "Improvement Program" work, HNTB was to receive a fixed fee of 1½% of the actual cost of construction of the Improvement Program periodically billable based upon work performed. In addition, HNTB was initially to receive a fixed fee of \$15,000 (later \$30,000 and eventually, as negotiated) for "Trust" work (plus allowable other direct costs). The totality of these fees were to cover all HNTB costs and profits for providing the required services, except for its costs of printing plans and specifications "but all incidental expenses such as travel, per diem, long distance telephone, and similar items of personal expense are specifically included in the fees." The 1985 Amendment changed these fixed-fee payment terms into one that is 100% cost reimbursable for all direct labor hours and allowable other direct costs.

Under Section 5.01 of the Amended PSA, MDAD will reimburse HNTB for its actual cost of salaries for personnel, other than partners, that are engaged directly in performing the services. The maximum salary rate allowed under the PSA was initially set at \$28.30 per hour. Subsequent salary increases are limited to the yearly increase in the Consumer Price Index. As of April 2008, the maximum salary rate was \$58.28 per hour. In addition, MDAD will pay HNTB 165% of HNTB's direct salary costs as full compensation for overhead, payroll burden, and profit. Additionally, MDAD will reimburse all allowable related travel and direct expenses of the CE.

Section 3.38 of the PSA allows MDAD to request HNTB to obtain the services of "Special Consultants." HNTB would then hire the special consultant(s) and be reimbursed for its costs, plus an additional 5% to cover its cost of administration and insurance resulting from the employment of said Special Consultants, pursuant to Section 5.02. According to HNTB's senior management, they do not use the services of special consultants. Our audit did not discover any instances of payment by MDAD to HNTB as reimbursement for the work of any Special Consultants.

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VII. MDAD SERVICE ORDERS AND FUND ACCOUNTING

Service Orders

We note that for "Trust" work, HNTB performs the services and bills MDAD for its direct costs (principally direct labor) plus a multiplier for whatever the quantity of hours that it has expended over the billing period to complete the named work. We observe that MDAD does not issue service orders for these activities. Likewise, no service orders are issued for Type II and III Inspections and 40/50 Year Building Recertifications, which are non-Trust work.

In contrast, HNTB also performs certain other "non-Trust" work that is controlled through the issuance of a service order, in that the work is authorized with approved budgets showing work assignments, estimated work hours, and costs. However, we note that while these service order assignments are typically cost constrained, they are not always time constrained. In such cases, when the authorized funds are expended, MDAD simply adds funds by way of an addendum to the original service order. For example, HNTB has been assisting MDAD with its RM-6 Contract (pavement repairs) under one SO or another since 1991.

Fund Accounting

MDAD uses Enterprise Fund accounting to classify, record, and report its financial activities. Enterprise Fund accounting is similar to that used by the private sector. Enterprise Funds are used when a government or a governmental entity engages in a business-type activity and intends to recover all or part of the cost for the services. The Trust Agreement identifies these funds and includes specific requirements about each fund's sources of money and allowable uses of said money. MDAD's total budget is comprised of five separate funds, three of which MDAD uses to pay HNTB fees. These three funds are Funds 101, 301 and 501. MDAD operational revenues supply the moneys credited to Funds 101 and 301, while moneys from bond proceeds are credited to Fund 501.

- **Revenue Fund (MDAD Fund 101)** — All revenues derived from Port Authority Properties are to be deposited to the credit of this Fund. The moneys held in this Fund shall be used to pay "Current Expenses" pursuant to Article V *Revenues and Funds* Section 505 *Payments From Revenue Fund*. Current Expenses are defined, in part, as the County's reasonable and necessary current expenses of the maintenance, repair, and operation of Port Authority Properties, which includes

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HNTB's costs of performing its annual inspection and preparing its annual report. In addition, Section 505 sets forth the procedural requirements for processing payment requests from the Fund.

- **Reserve Maintenance Fund (MDAD Fund 301)** — Article V, Section 503(a) *Duties of Consulting Engineers* states, in part, that one CE duty is to annually recommend to MDAD that amount which should be deposited during the ensuing fiscal year to the credit of the Reserve Maintenance Fund for the purposes set forth in Section 509. Section 509 *Use of Moneys in Reserve Maintenance Fund* states, in part:

moneys held for the credit of the Reserve Maintenance Fund shall be disbursed only for the purpose of paying all or part of the cost of unusual or extraordinary maintenance or repairs, renewals and replacements, the cost of replacing equipment, and premiums on insurance carried under the provisions of this [Trust] Agreement.

- **Construction Fund (MDAD Fund 501)**—Trust Article IV *Custody and Application of Proceeds of Bonds* Section 401 *Construction Fund* requires the creation of the Dade County Port Authority Construction Fund, a.k.a. the Construction Fund. Section 210 of the Trust Agreement requires that the initial bond proceeds, and any proceeds from future bond issues under the subject Agreement, be deposited in this fund.

Section 403 *Payment From Construction Fund* states that moneys contained therein shall be used to pay for the cost of “Improvements or Projects” as later provided for. Section 404 *Items of Cost of Improvements or Projects* defines all eligible or allowable costs that can be paid using moneys from this Fund. Section 407 *Requisitions on Construction Fund* sets forth the procedural requirements for processing payment requests from the Fund.

HNTB Fee Distribution Presentations

The following three tables show different presentations of the fee amounts paid to HNTB for the five-year audit period. As shown on the next page, Table 1 presents fee amounts as invoiced by HNTB by HNTB project number. Table 2 (page 20) summarizes how MDAD classified the fee payments summarized by fund. Table 3 (page 21) summarizes how the OIG believes these fees should be classified by type of work, i.e., as Trust work or operations support.

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TABLE 1 HNTB Invoice Amounts by HNTB Project Number

HNTB Work Description	No. of HNTB Invoices	MDAD Fund No.	Fee Amounts Paid	Fee Pymts. %
Service Order (SO) Work				
HNTB Project #28618 — Pavement Repairs ^(a)	59	301	\$318,754	1.22%
	2	501	\$15,907	.06%
Subtotal — #28618	61		\$334,661	1.28%
HNTB Project #39220 — North Terminal Development Schedule Review/Report ^(b)	19	501	\$282,067	1.08%
Subtotal — #39220	19		\$282,067	1.08%
HNTB Project #43738 — Other SO Assignments ^(c)	1	301	\$4,932	.02%
	12	501	\$104,465	.40%
Subtotal — #43738	13		\$109,397	.42%
Total — All Service Order Work	93		\$726,125	2.78%
HNTB Project 09441 — Trust Work				
Trust services including those provided pursuant to Sections 210, 407, 411, and 702	3	101	\$714,920	2.73%
	67	501 ^(d)	\$20,018,934	76.53%
Subtotal	70		\$20,733,854	79.26%
Trust services pursuant to Section 503 Annual Inspection and Report, and Type II & Type III Inspections, and 40/50 Year Building Recertifications	77	101 ^(d)	\$4,483,978	17.14%
	26	301	\$213,884	.82%
Subtotal	103		\$4,697,862	17.96%
Total — All Trust Work	173		\$25,431,716	97.22%
GRAND TOTAL	266		\$26,157,841	100.00%

^(a) MDAD SO Nos. 206, 209, and 209.1

^(b) MDAD SO Nos. 210, 210.2, and 210.3

^(c) MDAD SO Nos. 208, 211, and 212

^(d) Some earlier fee payments were charged to Fund Nos. 511 and 111, which MDAD no longer uses

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TABLE 2 MDAD Fund Classifications of HNTB Fee Amounts

MDAD Fund No.	HNTB Work Description	No. of HNTB Invoices	Fee Amounts Paid	Fee Pymts. %
101	HNTB Project #09441—Trust Work, including those pursuant to Sections 210, 407, 411, and 702	3	\$714,920	2.73%
	HNTB Project #09441—Trust Work, including those pursuant to Section 503 Annual Inspection and Report, and Type II & Type III Inspections, and 40/50 Year Building Recertifications	77	\$4,483,978	17.14%
	Subtotal Fund No. 101 (111)	80	\$5,198,898	19.88%
301	HNTB Project #28618 — Pavement Repairs	59	\$318,754	1.22%
	HNTB Project #43738 — Other SO Assignments	1	\$4,932	0.02%
	HNTB Project #09441—Trust Work, including those pursuant to Section 503 Annual Inspection and Report, and Type II & Type III Inspections, and 40/50 Year Building Recertifications	26	\$213,884	0.82%
	Subtotal Fund No. 301	86	\$537,570	2.06%
501	HNTB Project #28618 — Pavement Repairs	2	\$15,907	0.06%
	HNTB Project #39220 — North Terminal Development Schedule Review/Report	19	\$282,067	1.08%
	HNTB Project #43738 — Other SO Assignments	12	\$104,465	0.40%
	HNTB Project #09441—Trust Work, including those pursuant to Sections 210, 407, 411, and 702	67	\$20,018,934	76.53%
	Subtotal Fund No. 501 (511)	100	\$20,421,373	78.07%
GRAND TOTAL		266	\$26,157,841	100.00%

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**TABLE 3 OIG Classification of HNTB Fee Amounts by Work Type
(Accumulated by HNTB Task Descriptions)**

Work Type by HNTB Task Descriptions	Total HNTB Direct Labor Charges + Multiplier	%
Trust Work		
Annual Inspection and Report; Annual Fence, Bridge, and Pavement Inspections	\$3,143,635	12.02%
Project Manager supervision, review, etc.; Design and Construction Phase services; Contractor pay requisition certifications and approvals	\$20,665,297	79.00%
Subtotal Trust Work	\$23,808,932	91.02%
Operations Support		
Type II & Type III Inspections; 40/50-Year Building Recertifications; Other Inspections and Related Services (Hotel, Building 715); Specialty Inspections and Studies	\$1,509,738	5.77%
HNTB Project #28618—RM-6 contract administration and related assistance	\$334,423	1.28%
HNTB Project #39220—NTDP schedule review	\$253,436	0.97%
HNTB Project #43738—MDAD SO assignments	\$102,890	0.39%
Subtotal Operations Support	\$2,200,487	8.41%
Total Direct Labor + Multiplier	\$26,009,419	99.43%
HNTB Reimbursable Expenses and MDAD Adjustments	\$148,422	0.57%
Grand Total MDAD Payments to HNTB	\$26,157,841	100.00%

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VIII. AUDIT APPROACH

Audit Objectives

Our objectives were to review the activities of HNTB pursuant to the amended 1985 PSA and to review certain provisions of, and compliance with the 2002 Amended and Restated Trust Agreement. Our audit also included a review of the disbursements made to HNTB against approved expenditures and whether such expenditures were properly supported with service orders, vouchers, and invoices, and whether these documents were consistent with the PSA and good business practice. We checked whether MDAD consistently accounted for similar HNTB work activities by way of its posting HNTB fees to the appropriate fund. Lastly, we evaluated MDAD's contract administration of HNTB services and activities.

Audit Scope and Methodology

The audit scope encompassed the five-year period beginning October 1, 2002 and ending September 30, 2007. We reviewed enabling documentation, including the 1954 and 2002 Trust Agreements, the 1966 PSA and its 1985 Amendment, and relevant resolutions of the Dade County Port Authority and its successor, the BCC.

Our audit consisted of identifying all work assigned to HNTB under the PSA, and reviewing payments to HNTB for the five-year period. We verified that all SO work assignments were properly approved. We also verified that invoices from HNTB were consistent with terms of the PSA. We also obtained and analyzed deliverables for Trust and SO work. We spent considerable time performing field work at HNTB's offices where we examined documentation relating to deliverables, invoicing and timekeeping processes. Additionally, we reviewed reports from MDAD's Project Graphic Tracking System (PGTS), which MDAD uses to track construction project budgets, and contract and associated SO amounts.

We reviewed 100% of the HNTB invoices approved and paid by MDAD for the five-year period ended September 30, 2007. During this period, there were 266 invoices amounting to \$26,157,841. The total value of invoices attributable to Trust Work was \$23,808,932, or 91.02% of the total amount paid. In addition, there were invoices totaling \$2,200,487, or 8.41% of the total amount paid, for operations support and service order specific work. The remaining \$148,422 (0.57%) paid was for HNTB reimbursable expenses. A breakdown of these dollar amounts is presented in Table 3.

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We reconciled the invoices listed on the *Detailed Payment History by Vendor* report that is produced by MDAD's PeopleSoft system to HNTB's invoices.

We also examined HNTB's time keeping and payroll processes, reviewed personnel records, and tested the hours worked and pay rates that supported the invoices billed to MDAD. We performed additional procedures to test HNTB's internal controls. These audit procedures were as follows:

- Interviewed HNTB personnel and conducted walk-throughs of their activities, on and off the various construction sites, to gain an understanding of how they function
- Prepared summary flowcharts (transactions flow diagrams) documenting our understanding of the invoice preparation, and reviewed HNTB controls related to its payroll and timekeeping processes
- Selected various construction projects monitored by HNTB within the MIA North and South Terminals, and at Opa-locka and Tamiami Airports; conducted site visits to ascertain HNTB work activities related to those projects; and reviewed HNTB project files and contractor pay applications that had been certified and approved by HNTB, as part of its Trust work.

Lastly, we interviewed personnel from the MDAD Finance Department, and Contract Administration, and Project Management work units, in addition to HNTB management and field staff to gain a comprehensive understanding of the scope and process of HNTB activities and contributions. We did so to understand how HNTB performs its services, as well as how MDAD monitors and manages HNTB activities.

IX. AUDIT FINDINGS

FINDING NO. 1 MDAD's PSA with HNTB has an open-ended duration and funding amount.

The subject PSA has neither a stated contract duration nor an authorized contract amount. Unlike practically all County contracts—or public contracts for that matter—this PSA was awarded in 1966, and subsequently amended in 1985, with no authorized amount. The PSA neither contains a maximum authorization amount nor an

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appropriation amount, which would require periodic renewal and re-funding approval by the BCC. There is also no end date to this Agreement.

Duration

The 1966 PSA provided that HNTB would be CE until the completion of the 1966 Improvement Program (Program), “and thereafter on a year to year basis, unless otherwise terminated as hereinafter provided.” As later provided for, termination could occur either for convenience prior to the issuance of the 1966 bonds or for cause after the sale of the bonds.

The 1985 Amendment also left the contract duration unstated. Like the original 1966 PSA, we note that this Amendment was not issued in connection with a new trust agreement. The initiating condition apparently was the County’s desire to combine HNTB’s Trust required CE services (at that time, required under the 1954 Trust Agreement) with HNTB’s required SA services (required under a different bond issuing agreement) into one PSA for combined bond engineering services.

Under the 1985 Amendment, HNTB would serve as MDAD’s CE until the County chose to hire another CE, after first obtaining the written approval of the Trustee, and as SA, until the County hired another engineering firm for that role. The distinction between CE and SA services became moot because of BCC Resolution R-417-03, as described earlier in this report. (See Report section titled *Overview of MDAD Property and Facility Categories*.)

As it turned out, the 1966 bonds, similar to other predecessor bond issues, have been replaced with successive new issues through the years. Concurrently, new capital programs have succeeded the 1966 Program in the same manner that MDAD’s 1966 Program succeeded earlier such capital programs. Moreover, the 1954 Trust Agreement has also been supplanted by the Amended and Restated 2002 Trust Agreement. What did not change through all these years is that HNTB is still MDAD’s bond engineer.

Through MDAD’s various bond issues and capital programs since the 1954 Trust Agreement, there have only been two occasions that we know of where MDAD has put forward its contract for bond engineering services before the BCC (or its predecessor board) for action—the initial award of the 1966 PSA (as a bid waiver) and secondly, in 1985 for amendment. It appears that HNTB served as the CE under the [1954] Trust Agreement because it was CE under some predecessor agreement. In

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other words, HNTB may have been providing bond engineering services even prior to 1954. In fact, HNTB's tenure providing bond engineering or similar services dates back to, at least, the late 1950's (see footnote 1, page 1).

We raise this issue because we note that the earlier mentioned 1959 PSA (see footnote 1) also had no stated duration. It appears that, by default, the intent of this agreement was that HNTB's consulting engineering services "as outlined and defined in the [1954] Trust Agreement" were to be provided until all monies contained in the Special Construction Fund or the Improvements Construction Fund were expended. However, as we also noted, MDAD has continually implemented successive capital construction programs with concurrent successive funding sources since these earlier days.

MDAD keeps rolling forward HNTB's CE services under a new trust agreement by using as justification its past service under the immediately preceding trust agreement. Similarly, as we just noted, MDAD added SA services to the PSA by way of the 1985 amendment—absent a competitive solicitation for those desired services—because HNTB was already the CE. While the 1954 and 2002 Trust Agreements require MDAD to hire an engineering firm for prospective CE services for yet-to-be issued bonds, the Trust Agreements do not require that MDAD employ the same engineering firm that was the CE under a previous Trust Agreement. In effect, HNTB has been MDAD's one and only bond engineer for its capital program for the past 50 years. Public policy dictates that MDAD CE work should not be guaranteed, in perpetuity, to one firm.

Although there may be benefits to employing the same firm, MDAD, as a public institution, has a responsibility to take advantage of an appropriate occasion to seek competitive solicitations from other interested firms. We believe that the appropriate time is now, given that the written approval of the Trustees is no longer required to change the CE. Notwithstanding the absence of any poor performance indicators, the OIG questions the practice of a public entity retaining the services of a private firm for an indefinite term without any requirement that the contract term be periodically reviewed for extension.

Amount

Under the original 1966 PSA, HNTB services were compensated at a capped fixed-fee amount, payable upon milestones being achieved or through quarterly billings. The 1985 Amendment made a significant change to the payment terms and conditions.

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Under this Amendment, HNTB was now going to be reimbursed for every direct labor hour worked performing CE or other activities. The only restrictions were that MDAD would not pay for HNTB partner time and that the maximum hourly salary rate payable to its employees was capped. As earlier reported, the maximum salary rate allowed under the 1985 Amended PSA was initially set at \$28.30 per hour. Subsequent salary increases are limited to the yearly increase in the Consumer Price Index. As of April 2008, the maximum salary rate is \$58.28 per hour, which equates with an annual salary of \$121,222, based on a 40-hour workweek, over a 52-week year.

In addition, MDAD agreed to pay HNTB 165% of HNTB's direct salary costs as full compensation for overhead, payroll burden, and profit. MDAD reimburses all allowable related travel and direct expenses of HNTB.

This new fee structure does not impose any limits on the amount of fees that HNTB can earn, or more precisely, the amount of work hours HNTB can bill MDAD for its CE services. Consequently, the more HNTB work hours billed, the larger the HNTB fee is. Moreover, the vast majority of HNTB's work activities are not subject to the MDAD service order system. In particular, its Trust work is effectively self-generated. (See the following Finding No. 2.) At least under the 1966 PSA, HNTB fees and payments for the direct cost of its services collectively were limited to 1½% of the 1966 Improvement Program actual costs of construction. Although not quantified in the PSA itself, the total fee was quantifiable; whereas, this is quantification is not possible under the 1985 Amendment.

Besides the fact that the PSA does not establish a maximum authorized limit that can be paid to HNTB during the length of the engagement—or even what may be paid in the course of one year or some other interval of time—which, we believe, is an anomaly to any other County contract, the OIG is more concerned that this PSA does not contain any requirement for MDAD to periodically report to the BCC on the performance of this consultant to justify the additional expenditure of funds.

FINDING NO. 2 Most of HNTB's CE work is not controlled and monitored by MDAD's service order system.

As briefly mentioned above, most of HNTB's work, 97% or \$25,431,716, is not controlled by MDAD's service order system. This work comprises HNTB's "Trust" work, including its construction monitoring, construction design plans and construction contracts review, contractor payment certifications, and its annual

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inspection(s) and report. In addition, this work includes what we believe to be “non-Trust” work, such as 40/50-Year building recertifications, Type II and Type III inspections, and other specialty inspections and studies.

Notwithstanding, MDAD does issue service orders for certain types of work performed by HNTB. MDAD’s service order system uses preprinted service order forms with unique numbers and has a formal approval process. Project financial information is shown on the SO document, which is then loaded into MDAD’s Project Graphic Tracking System (PGTS). We acknowledge that HNTB’s “Trust” work is also shown in PGTS, but it is not associated with a formal MDAD SO, nor is it documented and approved in the same manner that MDAD documents and approves HNTB’s other engineering work. Instead, MDAD uses a “dummy” number—9441—as the SO number. This dummy number just happens to be the same number as HNTB’s internal project number. MDAD also enters a “dummy” service order amount. For example, as shown in PGTS (as of March 12, 2008), the service order amount for SO 9441.20, dated November 6, 2001, was \$25,000,000 (with corresponding expenditures totaling \$24,973,555).

We examined three “base” service orders (and later supplements) for the audit period and verified that they were approved by MDAD’s authorized signatories. The individual SOs issued to HNTB cover specific projects or tasks. Each SO includes estimated hours, labor costs, the applicable CPI factor and a total “not-to-exceed dollar amount.” The three SOs active in the past five years consist of HNTB work activity only in the areas of: management assistance, runways re-pavement, schedule reviews for the NTDP, and the creation of a Design Guidelines Manual. MDAD also has issued a SO to request assistance from HNTB in the area of compliance with the Americans with Disabilities Act of 1990 (ADA). However, for the five-year period covered by our audit, only \$726,125 or 2.8% of the payments were made pursuant to issued and authorized SOs.

We believe that going forward, MDAD should utilize its SO system to control all HNTB services, whether for Trust or other work. MDAD SO and/or project numbers—not HNTB project numbers—should be used as the primary reference numbers for initiating, authorizing and tracking SOs issued to HNTB. These SOs should be supported by submissions from HNTB detailing estimated work hours, staff positions, and rates broken down by types of CE services and the non-CE services that it provides regularly to MDAD. We believe this practice would be an important control because HNTB, as currently practiced, effectively authorizes itself to perform its CE services. We acknowledge that the Trust Agreement empowers, to some degree,

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the CE to work in a manner that it sees fit to accomplish its required obligations under the agreement. However, we do not believe that this reference is adequate justification for MDAD, as the holder of the PSA, to relinquish its fiduciary duty to ensure that expenditures thereunder are reasonable, necessary, and within approved budget guidelines.

If properly executed and managed, the full use of its service order system would help MDAD strengthen its internal controls over the various deliverables required of HNTB and its associated budgets, regardless of its role. The SO can be a useful management tool in that it requires MDAD management to engage itself with all of HNTB's work. The service order process also draws management into the budgeting process of costs and the scheduling of when the various deliverables will be available.

FINDING NO. 3 MDAD should require HNTB to segregate its fee charges for the various services that it performs showing its fees to perform Trust work separately from those fees charged for non-Trust work.

When invoicing MDAD, HNTB does not always segregate its costs for performing Trust work from its costs for performing non-Trust work. HNTB combines some of its costs for performing Trust work, such as those associated with construction oversight and approval of Construction Fund expenditures, in separate invoices. However, HNTB commingles its Trust work related to conducting its annual inspection(s) and preparing its annual report with work that we believe to be non-Trust work. HNTB accumulates and reports its related costs for these types of work using its project number 09441. In our Finding No. 2, we described this condition in some detail. A small percentage of this work is MDAD service order authorized and, accordingly, HNTB invoices for its fees in invoices identifying these discrete service order authorizations. In total, HNTB invoiced over \$725,000 to MDAD in fees and other reimbursable costs for these work order specific activities (see Table 1).

However, HNTB invoiced MDAD for approximately \$4.6 million for fees (and reimbursable costs) for commingled Trust and non-Trust work. Individual invoice supporting detail showed HNTB fees by task, with descriptions indicating the nature of the work performed. Using these descriptions, we could ascertain which tasks and fees were associated with Trust work and the tasks/fees that were not. Approximately \$3.1 million of these fees were associated with HNTB's annual inspection(s) and report,

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while the remaining \$1.5 million of fees were associated with non-Trust work, such as Type II and Type III Inspections, 40/50-year building recertifications, specialty inspections, and studies (see Table 3).

We believe separate invoicing for such work is appropriate and would help MDAD better manage HNTB's non-Trust work, to the extent that MDAD continues using HNTB to perform such work.

FINDING NO. 4 MDAD should consistently apply charges for similar HNTB work to the same fund.

MDAD did not consistently apply thirteen HNTB invoices totaling \$915,344.93 to what would appear to be the appropriate fund. In the cited instances, MDAD inconsistently applied HNTB charges for the described work, as shown in the following Table 4:

TABLE 4 Fee Amounts Not Consistently Applied

Item #	MDAD Voucher #	Summary HNTB Work Description	HNTB Invoice Amount	MDAD Fund as Charged	Correct MDAD Fund per OIG
1	V307707A	RM-6 Contract Administration	\$6,799.77	501	301
2	V3195542A		\$9,107.10	501	301
		Subtotal	\$15,906.86		
3	V286039A	Design & Construction Phase Services	\$4,139.64	101	501
4	V320599A		\$390,147.50	101	501
5	V321816A		\$320,632.37	101	501
		Subtotal	\$714,919.51		
6	V298664A	Annual Inspection and Report	\$92,999.98	301	101
7	V301294A		\$77,382.62	301	101
		Subtotal	\$170,382.61		
8	V320602A	Inspection Services, Hotel Repairs, & Bldg 715 Repairs	\$2,683.92	101	301
9	V322185A		\$2,200.56	101	301
10	F78718		\$2,666.96	101	301
11	F79729		\$2,194.84	101	301
12	F79722		\$2,926.45	101	301
13	F79822		\$1,463.22	101	301
		Subtotal	\$14,135.95		
	Total		\$915,344.93		

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We reviewed 61 vouchers that contained HNTB invoices for RM-6 Contract Administration. Items 1 and 2, totaling \$15,906.86, represent two vouchers that are incorrectly charged to Fund 501 (Construction). The remaining 59 vouchers from this group describe identical services but were charged to Fund 301 (Reserve Maintenance). All charges relate to HNTB Project #28618, which comprises MDAD service orders related to its RM-6 and Rubber Removal contracts and HNTB's assistance with MDAD's pavement management system.

We also reviewed 70 vouchers that contained HNTB invoices for Trust work related to the design and construction phases. Items 3-5, totaling \$714,919.51, represent three vouchers out of 70 that were incorrectly charged to Fund 101 (Revenue). The other 67 vouchers, also all relating to Trust work, were charged to Fund 501 (Construction). All charges were related to HNTB Project #09441, which includes HNTB's "Trust" work other than its annual inspections and report.

We also reviewed 26 vouchers that contained HNTB invoices for Trust and non-Trust work. Item #s 6 and 7, totaling \$170,382.61, represent two vouchers out of 26 containing HNTB invoices for HNTB annual inspection(s) and report, and other non-Trust inspection services that were charged to Fund 301 (Reserve Maintenance Fund). The other 24 vouchers, with similar work descriptions, were charged to Fund 101 (Revenue). Other expenses commingled with those for the annual inspection(s) and report are for various 40-Year Building Recertifications, studies, and Type II Inspections.

Lastly, we reviewed 77 vouchers that contained HNTB invoices for non-Trust work. Item #s 8-13, totaling \$14,135.95, represent six vouchers out of 77 containing HNTB invoices, for inspection and other services, related to hotel and MIA Building 715 repairs that were charged to Fund 101 (Revenue Fund). The other 71 vouchers, with similar work descriptions, were charged to Fund 301 (Reserve Maintenance Fund). The described charges related to HNTB Project #09441, which includes certain HNTB "non-Trust" work; in this case, for the aforementioned inspection and related services associated with hotel and MIA Building 715 repairs.

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FINDING NO. 5 MDAD relies on HNTB to provide non-CE services that could be competitively solicited and awarded to other engineering firms.

MDAD uses HNTB to perform what we believe are various non-CE services. Some of this work appears to be more directly related to performing or supporting MDAD operations rather than what may be appropriate for a bond engineer. In the described instances, we believe that—besides being unnecessary—the work activities are actually inconsistent with those responsibilities of an independent bond engineer. We note that the Trust Agreement requires MDAD to hire an “independent” engineering firm to act as CE. To the extent that HNTB may be providing operational support to MDAD, such activities affect the appearance of HNTB’s objectivity and independence. Although deleted in the 1985 Amendment, we note that Section 1.02 of the 1966 PSA *Description of Services* stated:

The Consulting Engineer shall also perform those duties required to provide independent observation and the exercise of prudent engineering and administrative judgment in connection with the Authority’s existing Trust Agreement, dated October 1, 1954, or a new Trust Agreement, if executed by the Authority . . . (OIG emphasis added)

Notwithstanding its deletion, the OIG believes this to be an accurate statement of a bond engineer’s most important quality and function, which guides its work in carrying out the activities and reporting as required under the bond financing instrument. To the extent that certain types of work, which has been performed by HNTB, does not have to be performed by the retained CE or should not be performed by the CE, we believe MDAD could and should competitively solicit and award this work to other engineering firms.

In total, there has been about \$2.2 million of other engineering work performed by HNTB. Table 3 on page 21 shows MDAD making fee payments totaling \$1,509,738, for other operational support activities (Type II and III Inspections, 40/50-year building recertifications). In addition, this table shows MDAD making fee payments totaling \$690,749 (HNTB Project #28618, #39220 and #43738) for operational support/program management services that should not be performed by the

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CE.⁷ We believe MDAD should, as future needs require, competitively solicit, and award these types of work to other engineering firms.

Other Operational Support

Types of work that are not required by the Trust Agreement and, accordingly, work that HNTB does not have to perform, include Type II and III inspections, and 40/50-year building recertifications. We computed that MDAD paid HNTB over \$1.5 million during our audit period for such services. Unlike the annual inspections and annual report required of the bond engineer, these types of inspections and the 40/50 year building recertification are performed on an as-needed basis. Type II and Type III inspections are performed when there is a change-over in lessee (tenant) or a change in use by the lessee or a new lessee. These services are the types of inspections that a typical facilities department would normally perform in the course of its operations. The same is true, we contend, of the 40/50-year certifications, which are required by the Florida Building Code, and are required countywide of all public and private structures.

We contend that these work activities currently provided by HNTB could and should be competitively solicited and awarded to other A/E firms. This contention especially applies because each activity (an inspection or recertification) is a defined work scope that would attract the attention of smaller A/E firms that may be interested in competing for this work. In these instances, we believe that it may be more appropriate for HNTB to affirm to the Trustees and bondholders that MDAD is properly maintaining its facilities, via its annual inspection and report, rather than for HNTB to recommend to MDAD how it should maintain its facilities, on an as-needed basis.

HNTB Project #28618

MDAD SO #206 (authorized amount \$45,977), SO #209 (authorized amount \$180,000), and SO #209.10 (authorized amount \$200,000) correspond to HNTB Project #28618. The scope of work of these SOs is for HNTB "to provide as needed assistance to the MDAD Project Manager" for all work on airport pavements, including MDAD's management of its RM-6 Contract, its Rubber Removal Contract, and its contract for the development and upkeep of the MIA Pavement Management System.

⁷ As later detailed in a following section, the MDAD authorized amount for these three projects numbers totals \$1,632,763. Of that amount, only \$690,749 has been paid. The projects remain open.

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Specific tasks include HNTB providing contract supervision and administration assistance, field services, and furnishing pavement information for the Pavement Management System.

As earlier described in Section VII, SOs, while initially cost constrained, are not always time constrained. As authorized funds are expended, MDAD simply adds funds by way of an addendum to the original SO. Specifically, as it relates to HNTB's work activity managing pavement repairs, it is worth noting that MDAD SOs for this work activity date back to the early 1990s.⁸

HNTB Project #39220

MDAD SO #210 series corresponds to HNTB Project #39220. The scope of work for the original service order (authorized amount \$84,000) was for HNTB to complete a schedule review of the North Terminal Development Project (NTDP) to include the identification of schedule deviations and causes thereof, and to "identify corrective actions to mitigate such deviations and to recover loss time and avoid additional budgetary impacts." HNTB was to "provide project management/coordination, scheduling personnel, and technical support personnel needed for the review." HNTB, in effect, was tasked with leading a working group comprised of the various key players from American Airlines, Dade Aviation Consultants (DAC), and MDAD.

As the NTDP continued to experience problems, MDAD issued SO Supplement #2 that added to the scope and increased the authorized amount by \$35,000. MDAD later issued Supplement #3 that increased the authorized amount by another \$107,000.

HNTB Project #43738

MDAD SO #208, SO #211 and SO #212 correspond to HNTB Project #43738. The scope of work of SO #208 (authorized amount \$145,000) is for HNTB "to assist in the architectural and engineering design management functions . . . due to MDAD design manager vacancies or for MDAD design managers who are otherwise not available on an on-call basis."

⁸ SO #105.00, issued in November 1991, started with an authorized amount of \$48,500 for HNTB to assist MDAD in managing the RM-6 Contract.

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The scope of work of SO #211 (authorized amount \$395,000) is for HNTB to “provide project management/coordination, scheduling personnel, and technical support personnel needed to support these functions [support of MDAD Design Guidelines Manual, ADA compliance, and value analysis/engineering].” These services were previously provided by DAC.

The scope of work of SO #212 (authorized amount \$440,786) is for HNTB to assist MDAD in the transition from DAC to a new in-house group, which will be established to perform the main program/project control functions previously performed by DAC. HNTB is expected to provide program scheduling and controls staff from its national resources to perform the functions of cost management, schedule management, and scope management.

Conclusion

HNTB's other work activities in the areas of Type II and Type III Inspections and 40/50-year building recertifications are not necessary for it to fulfill its CE responsibilities under the Trust Agreement. While we acknowledge that these activities are not necessarily inconsistent with those stated responsibilities, we believe that these activities represent work that, if not performed internally by MDAD personnel, should be competitively awarded to other A/E firms. MDAD should be required to competitively solicit the interest of other qualified firms for these assignments. We believe that given the relatively smaller compensation amounts and defined work scopes of these assignments, smaller A/E firms may show interest in competing for these jobs.

With regard to HNTB's SO work activities (corresponding to HNTB Project Numbers 28618, 39220, and especially 43738); these activities are also not necessary for it to fulfill its bond engineering responsibilities pursuant to the Trust Agreement. But, in these cases, we believe that—besides being unnecessary—these activities are actually inconsistent with those responsibilities of an independent bond engineer.

In both instances, HNTB's work activities appear to have strong operational overtones and scopes of work. We have no doubt that HNTB has the resources and the general business and MDAD-specific expertise to perform these services. In fact, there may be some synergy to HNTB doing the work. However, while HNTB may be able to complete these assignments efficiently and effectively, it does not justify extending these work assignments to HNTB given its role as MDAD's bond engineer. Any benefits derived from HNTB's work in these areas are offset by the potential conflicts of interest raised by its building inspections and recertifications and service order work.

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For example, MDAD SO #210 relates to HNTB providing scheduling assistance on the much beleaguered and delayed NTDP. To the extent that MDAD accepts this type of scheduling support—which is an inherently construction management function—it is in no position not to accept HNTB's recommendations arising from such work. MDAD knows that HNTB, as the CE, would later be required to inspect and pass judgment on the work or work products resulting from the described non-CE assignments. Thus, MDAD may find it difficult to critique or not accept the work product or recommendations arising from HNTB's operational support. However, the effect is that MDAD is transferring certain management responsibilities to HNTB and, as such, HNTB is acting as de facto management. We question whether HNTB can be an independent inspector and evaluator of its own contributions and support of MDAD's operations, and then prepare an annual report free of its own biases towards such contributions. We acknowledge that some of the work may not be the most sensitive or critical, and that the fee amounts involved are not large, but we assert that the principle involved is important, as it forms the bedrock underlying typical bond agreements, which require the employment of an experienced and independent firm as the bond engineer.

X. RECOMMENDATIONS

The OIG's primary recommendation is that MDAD should initiate a competitive solicitation seeking proposals from firms wishing to provide the bond engineering services required by the 2002 Trust Agreement and in conformity with the 2003 resolution, which, among other things, unified the two property and revenue streams into one unified Airport System and, thus, one unified bond engineering function as required by the Trust Agreement.

As we previously noted, the subject PSA is a highly unusual, if not an unprecedented, contractual relationship for a Miami-Dade County department to maintain. This relationship is an over 40-year old continuously operational contract originally awarded without competitive solicitation to a vendor that has never been required to submit any form of proposal, competitively solicited or not, to maintain the contract. While this contract is over 40 years old, the relationship goes back even farther. We note that contracts for bond engineers at other County departments are periodically subject to competitive solicitation, which can result in a change in the department's bond engineer. Other County bond engineering agreements have also had maximum authorized compensation limits, whereby management returns to the BCC for additional appropriations. Conversely, with the subject PSA, management has never

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had to seek additional appropriations or spending authority. Thus, we believe that MDAD's handling of the PSA has been and is today a questionable governmental business practice, notwithstanding whatever successes, benefits, and efficiencies that MDAD and HNTB have enjoyed through the years.

For MDAD to align itself so closely, in a noncompetitive environment, with one firm to provide an essential service for so long a period is undesirable. Bond engineers, in general, enjoy a preeminent role in any organization in which they serve because of the importance of their positions as Trustee representatives and protectors of bondholder investments. In this case HNTB's influence, however, may be unduly enhanced by its long service duration rather than the impact of its independent technical expertise. Arguably, it is to the point that given HNTB's institutionalization within the MDAD capital improvements program, that MDAD would consider it imprudent to replace HNTB now, or at any time in the near future.

Putting the benefits of its institutional knowledge aside, it is HNTB's continuous employment as the bond engineer—at least since the late 1950s—that calls for us to recommend that MDAD initiate a competitive solicitation for bond engineering services. In the realm of public contracting, we strongly believe that no firm should hold a de facto right to serve in the same capacity in perpetuity—or a least until MDAD ceases financing a capital improvements program through the issuance of revenue bonds, which may as well be in perpetuity. We emphasize that we are not saying or even implying that HNTB has not been providing quality services, effectively and efficiently or that we question its integrity. But that does not mean that MDAD should not consider a change, nonetheless.

Supplementing our primary recommendation, the below-enumerated recommendations relate to each of our findings and should be implemented with respect to the current PSA, and incorporated into any successor PSA.

1. MDAD should consider amending this PSA to include a stated duration and dollar amount. Even if this PSA were to state a duration of 10 years with a not-to-exceed amount of an unspecified dollar amount, it would still be better than what currently stands.
2. MDAD should use its service order system to authorize, control, and monitor contract/service order deliverables with separate budgets for all HNTB Trust and non-Trust work.

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3. MDAD should require that HNTB invoice its costs for providing Trust and non-Trust services separately.
4. MDAD should review the identified vouchers and correct the voucher posting as deemed necessary.
5. MDAD should evaluate its use of HNTB for work not required of a bond engineer under the Trust Agreement and, to the extent possible, consider competitively soliciting and awarding such work to other engineering firms.

MDAD's and HNTB's responses to our findings and recommendations are summarized and discussed in the RESULTS SUMMARY, which begin on page 4 of this report. MDAD's and HNTB's responses in their entirety are attached to this report, as Appendix A and Appendix B, respectively.

Requested Follow-up

The OIG requests that MDAD submit a follow-up report to the OIG in 90 days, on or before September 4, 2009, regarding the implementation of our recommendations and the timeline for a new solicitation or amendment to the current PSA.

The OIG appreciates the cooperation and assistance afforded us by personnel from the Miami-Dade Aviation Department and HNTB during the course of our audit.