




Memorandum



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To: Eulois Cleckley, Director
Department of Transportation and Public Works

From: Felix Jimenez, Inspector General 

Date: January 19, 2024

Subject: Closure of OIG Review Regarding Construction Engineering Inspection (CEI)
Services Utilized by the Department of Transportation and Public Works,
Ref: IG22-0001-A

Attached please find the above-captioned Inspection Report prepared by the Miami-Dade County Office of the Inspector General (OIG). The review focused on the Department of Transportation and Public Work's (DTPW) CEI utilization, including in-house County staff and CEI staff sourced from established County contracts.

The OIG review was predicated on proposed resolution that would have directed the County Mayor or the County Mayor's designee to utilize lump sum and/or cost plus fixed-fee payment structure in future solicitations and contracts for construction engineering or construction engineering inspection (CEI) services. Our review consisted of evaluating DTPW's usage of both in-house and consultant inspectors for roadway projects and site-specific projects. In addition, we contacted the Florida Department of Transportation to inquire about its lump sum pilot program as implemented in Districts 4 and 6.

While the proposed resolution has been deferred indefinitely, and the sponsoring commissioner is no longer a member of the Board of County Commissioners due to term limits, the OIG is satisfied with the review's assessment that the proposed resolution's impacts on project administration would have outweighed the purported benefits. As such, we wanted to provide you with a copy of this report for informational purposes. The OIG considers this review closed and a response to the report is not required.

The OIG would like to thank DTPW staff for the cooperation and courtesies extended throughout this review.

Attachment

cc: Jimmy Morales, Chief Operating Officer, Office of the Mayor
Namita Uppal, Director, Strategic Procurement Department
Yinka Majekodunmi, Commission Auditor, Office of the Commission Auditor



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INSPECTION REPORT
Review of Construction Engineering Inspection (CEI) Services
Utilized by the Department of Transportation and Public Works
IG22-0001-A

I. INTRODUCTION

The Miami-Dade County (County) Office of the Inspector General (OIG) initiated an inspection in February 2022 to evaluate the potential impact of a proposed resolution that would direct the County Mayor or the County Mayor's designee to utilize lump sum and/or cost plus fixed-fee payment structure in future solicitations and contracts for construction engineering or construction engineering inspection (CEI) services. A former County commissioner sponsored the proposed resolution intending to better control CEI project billings and minimize delays attributed to consultant inspectors.

To evaluate the potential impact of the proposed resolution, OIG auditors reviewed current practices, policies, procedures, and relevant records. We also interviewed County staff and contacted other parties, as needed. The observations presented in this report should suffice to make clear that the proposed resolution's impacts on project administration would have outweighed the purported benefits.

II. BACKGROUND, SCOPE, AND OBJECTIVES

The proposed resolution ([Legislative File No. 212576](#)) first appeared on the Chairman's Policy Council agenda of November 10, 2021, where it was forwarded to the Board of County Commissioners (BCC) agenda for December 1, 2021. Prior to the Board meeting, the Inspector General and Deputy Inspector General met with the sponsoring commissioner to discuss OIG past experiences having reviewed CEI services provided by consultants. The commissioner shared his reasoning behind the proposed resolution—certain contractors felt that CEI consultant inspectors were slowing down the pace of construction projects in order to bill more hours on the projects. By making their fees lump sum amounts, the consultant inspectors would be more efficient.

OIG personnel suggested that the fee structure of lump sum vs. hourly rates be reviewed prior to requiring that all County departments use the lump sum contracting methodology for CEI services. The OIG advised the commissioner that we would undertake such a review and the sponsoring commissioner agreed to pull the item from the agenda.¹

¹ Initially, the OIG suggested that this review be conducted jointly with the Commission Auditor. OIG personnel had several meetings with staff from the Commission Auditor's Office; however, due to other pressing engagements they were not able to participate in a joint review.

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Because the sponsoring commissioner anecdotally mentioned Department of Transportation and Public Works (DTPW) contractors and their projects as being adversely affected by the consultant inspectors, the OIG review focused on DTPW's CEI utilization.

Our objectives were to determine if outsourced CEI services contracted on a time and material basis are less efficient than if contracted on a lump sum basis, and how a requirement to only contract on a lump sum basis would affect project administration. We also wanted to determine the level of outsourced CEI services vs. the level of in-house resources.

This review was performed in accordance with the *Principles and Standards for Offices of the Inspector General, Quality Standards for Inspections, Evaluations, and Reviews*, as promulgated by the Association of Inspectors General.

III. OVERVIEW OF CEI SERVICES

The scope of CEI activities includes project administration, monitoring, and inspection of the construction work to ensure that the project is constructed in conformance with the plans, specifications, and any special provisions. Inspectors are tasked with observing contractor's work to determine the progress and quality of work. Inspectors prepare daily logs documenting labor forces, equipment, materials receipts, daily hours, weather conditions, and detailed schematics of the work accomplished. At the end of each week, the inspector's reports are rolled up into a weekly report that is sent to the main office. These weekly reports must accompany payment requisitions. Inspectors are also responsible for identifying, reporting, and directing the contractor to correct any observed discrepancies.

CEI is a budgeted item in all projects and can be performed in-house by County staff or can be sourced from established County contracts. For the latter, the method of compensation was the crux of the proposed resolution.

A. Time and Material (T&M) Contracting Method

T&M work is compensated at actual hourly rates multiplied by an agreed-to factor that accounts for overhead and profit. All work to be performed is contracted by individual work orders. Each work order sets forth the work to be performed, the timeframe for performance, and how the work will be compensated. Because the price for these services is not fixed, invoices for payment must be supported by time sheets identifying

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the person(s) providing the services, the level of service (i.e., number of hours worked) and the person(s) rate of pay.

B. Lump Sum Contracting Method

The lump sum method of compensation involves the consultant providing resources (labor) to accomplish the agreed upon scope of work for a fixed price. Lump sum work orders have a fixed amount of compensation for an agreed-to-level of service. Payments are typically made on a pro-rata basis, for example pro-rata monthly or based on a percentage of completion, and do not require detailed support, such as time sheets. Wages, overhead and profit are included in the fixed, lump-sum amount.

IV. DTPW's CURRENT CEI UTILIZATION

DTPW maintains in-house inspector personnel classified as either a DTPW Projects Inspector 1 or Road Construction Cost Estimator. As of October 31, 2023, DTPW had a total of 43 budgeted in-house inspector positions (41 filled and 2 vacant).² As part of their role, DTPW in-house inspectors observe everyone working on the project site, including contractors, and subcontractors.

To supplement DTPW's in-house inspectors, DTPW established four non-exclusive Professional Service Agreements (PSAs) that provide the department with extra capacity to source CEI services when its project workload exceeds in-house staff capacity. Contract No. 20190190 (Contract) (Project No. E19-DTPW-09) awarded on January 20, 2021, is comprised of four PSAs with a total combined maximum limiting amount not to exceed \$10 million over a term of five years.³ The four A/E consulting firms awarded the PSAs are:

Pinnacle Consulting Enterprises, Inc.
SRS Engineering, Inc.
R.J. Behar & Company Inc.
300 Engineering Group, PA.

² In the FY 2006-07 County Budget, 60 inspector positions were added to the Public Works Department (predecessor to DTPW). Prior to the massive infusion of new positions, Public Works had 16 employees occupying positions classified as Project Inspector 1 but were acquiring approximately 80 inspectors from the private sector utilizing CEI contracts on a regular basis to supplement its workload. This massive budget supplement was the result of a study performed by the County (see [Legislative File No. 062467, Information for the First Budget Hearing - FY 2006-07 Proposed Budget](#); see specifically pages 11 of 57 and 37 - 38 of 57 for the study's report). While current consultant CEI utilization by DTPW for recurring roadway and drainage is significantly lower than Public Works' utilization in the mid-2000s, the County could benefit from a similar study.

³ See [Legislative File No. 202478, Resolution No. R-50-21](#).

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As of October 18, 2023, 19 task orders have been issued under this project for a total amount of \$8,895,254 (see Table 1 on the next page).

While each of the four above-identified consultants (Pinnacle, SRS, R.J. Behar, and 300 Engineering) have been assigned to different projects, all four PSAs contain the same scopes of work that involve construction engineering and/or construction inspection services. (Exhibit 1) These PSAs are work order driven whereby the department tasks the consultant with project-specific work activities.

Issuing Work Orders to the CEI Consultant Firms Under Contract

DTPW will first contact CEI firms and share details regarding an upcoming project. DTPW selects a firm for a project based on factors such as expertise, current work assignments, and general availability. Upon notification from DTPW, the selected firm will then prepare a proposal that includes estimated work hours and the resumes of proposed inspector personnel. Upon acceptance of the proposal, DTPW will issue the work order, purchase order, and a Notice to Proceed. Each work order sets forth the project name and location (or reference multiple sites), the work to be performed (e.g., roadway inspections), and how the work will be compensated (in all cases as T&M). Each work/purchase order has a not-to-exceed dollar amount, which is tied to the consultant's proposal accepted by DTPW. The consultants are compensated at actual Contract hourly rates multiplied by an agreed upon factor that accounts for overhead and profit.

On a monthly basis, the CEI firm submits invoices to DTPW for payment. The invoices must be supported by required documentation including timesheets identifying the person(s) providing the services and receipts for any reimbursable expenses. All invoice packages are reviewed in detail by the DTPW project manager and the DTPW Contract Monitoring Group prior to payment. Once the invoice package is approved, the firm can be paid via INFORMS.

The OIG conducted a review of the work orders issued under the Contract since inception through October 18, 2023. Table 1, on the next page, identifies the total number of task orders awarded from the Contract, by firm, for the period noted.

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Table 1 – Work Orders Issued to Consultant Firms (1/20/2021 – 10/18/2023)

Consultant Firm Name	No. of Task Orders Awarded	Awarded Dollar Amounts	\$ Award Amount Percentage
Pinnacle Consulting Enterprises, Inc.	6	\$ 2,727,700	31%
R.J. Behar & Company, Inc.	5	\$ 2,492,715	28%
SRS Engineering, Inc.	4	\$ 972,279	11%
300 Engineering Group, PA.	4	\$ 2,702,560	30%
Total	19	\$ 8,895,254	100%

Source: DTPW provided support.

Note: One Pinnacle Work Order, WO#2, was cancelled in the amount of \$399,488.

DTPW contracts with the CEI firms to provide individuals with the requisite qualifications to perform the work. Our review of the DTPW issued work orders showed that DTPW was essentially using the CEI PSAs to obtain temporary staffing. Collectively, 25 individuals (mainly full-time, but some part-time) were sourced via the 19 work orders. Several of the work orders contained language stating “The inspector will be assigned full time at the Department of Transportation & Public Works – Construction Division office and will report directly to an assigned project manager(s) for the duration of this contract . . .” In addition to sourcing inspectors, DTPW used the CEI PSAs to acquire design/build coordinators, project administrative support, and plans reviewers.

V. INSPECTION ACTIVITY

During the course of the inspection, OIG auditors performed the following activities to obtain evidence to assess the proposed resolution’s potential impact:

A. CEI Consultant Interviews

OIG auditors interviewed principals at each of the four CEI consultant firms that were issued work orders under Contract No. 20190190. OIG auditors discussed the proposed resolution with each firm and asked for their feedback. During these interviews, consultants shared their opinion concerning the proposed resolution and general feedback concerning their experience in working on County projects.

CEI consultant firm principals each expressed concerns regarding the procurement of inspection work under the lump sum method. One consultant firm’s principal stated that if the County required them to perform work under a lump sum contract, they would not continue to submit proposals. All consultants agreed that lump sum work orders require

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a clear, well-defined scope and a straight-forward schedule. The consultants all agreed that contracting under lump sum work orders would not be appropriate where there are unknown field conditions and/or the contractor is not experienced. Lastly, the consultants stated that lump sum work orders are not suitable for projects that have high probabilities of experiencing utility issues or contain outdated as-built plans. The consultants shared several examples where FPL, Comcast, and ATT each contributed to project delays, especially during hurricane season in South Florida.

B. Contractor Interviews

OIG auditors interviewed principals of three contractors regarding their experience with DTPW project work. During the interviews, we informed each of the contractors of the proposed resolution and asked for their feedback. Two of the contractors cited examples where out-of-date as-built plans and utilities would present challenges to the CEI lump sum contracting method. One contractor noted that consultant inspectors are not as familiar with County policies and procedures as the county employee inspectors, and that there is clearly a learning curve. As a result, the consultant inspectors cannot make decisions as promptly as in the county inspectors.

The third contractor visited was under the impression that consultant inspectors contributed to project delays citing to a particular project. The contractor's general manager who attended that meeting opined that transitioning to a lump sum work order for CEI services would force inspectors to get the work done in a timely manner. The general manager added that under a CEI lump sum work order, there would be no benefit in delaying a project by the consultant inspector.

The interviews revealed that contractor personnel were not always aware if the assigned inspectors were in-house DTPW employees or consultant inspectors. For the above-cited project, the assigned inspector was actually a DTPW employee. Additionally, the project files showed that the circumstances that caused the project delays were outside of the inspector's control. These included utility conflicts, weather delays, and permitting issues related to municipal borders.

These interviews also revealed a divide between roadway resurfacing projects at various locations versus site-specific projects requiring unique design plans and earthwork. It is the latter type that gives rise to utility issues. The contractors all expressed frustration with having to rely on the utilities to resolve obstacles and while they attempt to work around utility issues, they frequently contribute to inefficiencies and project delays. The

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contractors each expressed appreciation for DTPW staff that often work with them on projects.

Another recurring theme of frustration among the contractors was the length of time it takes to process and approve maintenance of traffic (MOT) plans. The one contractor that believed consultant inspectors were contributing to project delays told OIG auditors that the issues involving the MOT process was worse.

C. DTPW Interviews

OIG auditors interviewed DTPW staff, including senior management, project managers, inspectors, as well as administrative support staff to gain an understanding of the current composition of CEI services, the contracting methodology, and the potential impact that changing to the lump contracting method would have on project administration. Additionally, OIG auditors conducted site visits to observe project managers and inspectors in the performance of their tasks related to CEI, as well as contractor work performance. Further, the OIG sought to observe the way DTPW inspectors documented daily project activities.

Interviews with DTPW senior management revealed concerns that transitioning consultant CEI to the lump sum contracting method would likely result in higher costs. This would be due to consultants proposing higher lump sum fees to compensate for project risk. Additionally, senior management stated that the CEI lump sum contracting method does not provide for flexibility. Specifically, the lump sum work order does not include holiday or weekends within the project's budget. Furthermore, senior management expressed concerns regarding a lack of control over the inspectors performing the work and ascertaining that the consultant's proposed personnel are actually active on the project site.

OIG auditors interviewed DTPW project managers and inspectors regarding their experience with DTPW project work and to gain an understanding of their roles concerning CEI tasks. Additionally, OIG conducted site visits to two road resurfacing projects and one sidewalk project to observe project managers and inspectors in the performance of their CEI work.

These interviews revealed that the inspectors, in their CEI role, perform duties such as checking the asphalt deliveries' temperature, ensuring there are no material substitutions, and that work is being performed as to the project's approved specifications. The inspectors stated that any issues experienced during project work are documented by the

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inspector in the project's yellow book or daily reports. If an issue arises that cannot be resolved in a timely fashion or concerns a safety issue, the inspector must first notify the project manager. The project manager stated that inspectors (both DTPW employees and CEI consultant inspectors) must consult a project manager before stopping project work. Our documentation review demonstrates that neither an in-house inspector nor a consultant inspector could expedite the resolution of these issues on his/her own without getting prior approval from a DTPW project manager.

D. DTPW Roadway Projects Review & Site Visits

OIG auditors examined project yellow books, time sheets, work orders, change orders, and project planning documentation for each of the 12 active roadway resurfacing projects identified by DTPW at the onset of our inspection. The yellow book and timesheet entries both revealed circumstances that contributed to temporary project delays. For example, OIG auditors noted entries that documented equipment breakdown or failure, weather conditions, refusal of materials, or material delays. However, none of the documentation revealed that these delays resulted from the inspector's actions.

OIG auditors visited three active project sites to meet with the project managers and inspectors. All three were road resurfacing projects in the southwest quadrant of the County. Only one project had a consultant inspector; the other two had DTPW inspectors. The inspectors described their job responsibilities, and the OIG auditors were able to get insight from the DTPW project managers. At one of the sites, the OIG auditors also spoke at length with the prime contractor's superintendent. In general, we learned that road resurfacing projects are very straight forward, seldomly with issues arising. On the other hand, site specific projects involving earthwork could often have utility issues.

During interviews with contractors, OIG auditors became aware of three DTPW construction projects that experienced significant delays that the contractors attributed to inspection work. OIG auditors requested these project files from DTPW and determined that two of the projects had been completed and one was ongoing.

- Project No. 2015069 - Roadway Improvements to SW 328th Street from US 1 to SW 162nd Avenue
CEI performed by DTPW in-house inspectors
- Project 20180014 - Roadway Improvements to SW 216th Street from SW 127th Avenue to SW 112th Avenue
CEI performed by both DTPW in-house and consultant inspectors

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- Project 20200098 - Roadway Improvements to NW 58th Street from NW 97th Avenue to NW 79th Avenue
CEI performed by DTPW in-house inspectors

These projects provided the OIG an opportunity to assess the activities of an inspector when confronting significant challenges on complex projects. Specifically, OIG auditors examined the documentation that demonstrated the delays and how the inspector memorialized the delays.

Interviews and an approved change order revealed that one of the three projects (Project No. 2015069) experienced over two years of delay. DTPW staff stated that these issues were primarily caused by utilities and conflicts with a municipality's infrastructure. Interviews with DTPW and a contractor revealed that the second project (Project No. 20180014) identified during field interviews experienced delays due to utility relocation requirements. The prime contractor worked around the utility issues; however, this change in plan created inefficiencies. The prime contractor stated that the project experienced about 60 days delay as a result of the utility work. OIG auditors learned that the third project (Project No. 20200098) had recently commenced and was still ongoing. Interviews with DTPW inspectors revealed that these delays could be attributed to the contractor or subcontractors not performing work on certain days. The inspectors added that sometimes the contractors take on too much work and therefore delay DTPW projects. While inspectors did document these experienced delays, it would not have been possible for an inspector to expedite these issues.

**E. Florida Department of Transportation (FDOT) Lump Sum Pilot Program for
CEI Services Contracts**

During this inspection, OIG auditors learned that FDOT has an active Lump Sum Pilot Program (LS Program) that bears resemblance to the proposed resolution. The OIG contacted FDOT and spoke to engineering personnel knowledgeable about the LS Program. According to the FDOT Construction Specialty Engineer (CS Engineer), the LS Program was first initiated in 2003 but was wound down after some time. (See Exhibit 2 for an FDOT "white paper" describing the 2003 pilot.)

The program started up again in 2019 due to interest from the Governor. There were also voiced concerns that FDOT was spending a lot of money on CEI consulting firms. The LS Program remains active, but use of the Program varies among the FDOT districts, each of which having the option to negotiate and issue LS contracts with the CEI firms

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contingent on approval from Tallahassee. (See Exhibit 3 for FDOT's current LS Program guidelines.)

According to the CS Engineer, the FDOT districts make use of the LS Program where projects are less complex and there is less likelihood of exceeding budgeted CEI costs. She noted that lump sum projects were almost exclusively relegated to roadway resurfacing contracts because they are "cut and dry, and not complex." She expounded that bridge replacement projects and new roadway projects are best suited to procuring CEI firms on a T&M basis due to higher risk of unforeseen conditions. FDOT does not have field inspectors on staff, so all CEI field work is outsourced to consultant firms. Further, it was explained that when FDOT contracts with a CEI firm for a particular construction project, that firm is FDOT's on-site representative and has as much authority as an FDOT employee. The CEI representative may authorize change orders, which may or may not be ultimately signed by the FDOT project manager and may stop project work depending on the conditions as outlined in FDOT's project manual.

As part of this inspection's fieldwork, OIG auditors interviewed the senior managers at both FDOT District 4 (Broward and surrounding counties north of Broward) and FDOT District 6 (Miami-Dade County). Based on LS Program information provided to the OIG, there were multiple LS Program projects in District 4; whereas, in District 6, there was only one project.

***FDOT District 4 (encompassing Broward, Indian River, Martin, Palm Beach,
and St. Lucie Counties)***

OIG auditors first visited FDOT District 4 where we met with a District 4 senior construction services engineer knowledgeable on the LS Program. He prefaced that while District 4 does have some lump sum CEI contracts, most are not. Lump sum is only used on low-risk, simple projects that have clear project schedules—such as resurfacing and milling projects. This is because changes to construction contract time by plus (+) or minus (-) 10 percent (not counting weather days or holidays) may trigger re-negotiation of the lump sum amount due to the CEI firm. Renegotiation is based on a prorated day rate (original contract lump sum amount divided by the original number of contract construction days).

The District 4 engineer also explained that—in District 4—each CEI contract comprises services of a vertically integrated team comprising of a senior project engineer (who must be a licensed engineer), a project administrator, inspection staff, and contract support specialist(s). The senior project engineer and project administrator have the authority to

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make decisions on behalf of FDOT. For example, extensions of construction time can be authorized by the CEI firm's senior project engineer and/or project administrator; however, compensable time must be approved by an FDOT project administrator. CEI field inspectors' authority over the construction contractors is limited to certain activities such as rejecting asphalt if not at the right temperature and refusing materials not meeting specifications. This field-level authority is the same for both lump sum contracts and T&M contracts.

The FDOT project manager oversees multiple projects at a time. S/he attends weekly progress meetings, approves the percentage of completeness, and signs invoices. Instances where there may be understaffing of the inspection forces by the CEI firm would be addressed by the FDOT project manager. Under lump sum, the CEI firms have much more flexibility in the field to move inspection personnel around on different projects with each project being its own lump sum contract. FDOT project managers need to closely monitor this flexibility given that firms could technically remove CEI staff from projects. The District 4 engineer explained that certain projects had agreed-upon staff counts and lump sum flexibility could lend itself to abuse and because the FDOT project managers are monitoring several projects at any given time, sometimes it is difficult to catch a reduction in staff and, thus, a reduction in services.

Last, OIG auditors were advised that two aspects of the lump sum contracting method enjoyed by the CEI firms is the ability to move staff around (from different projects) and not needing to submit staff timesheet as part of the payment requisition package. Nonetheless, FDOT does not want to shift too much risk onto the CEI firms and projects with the potential for utility conflicts would not be good candidates for the LS Program.

FDOT District 6 (encompassing Miami-Dade and Monroe Counties)

The sole project in District 6 identified as having LS CEI services was a bridge rehabilitation project along I-75 at 138 Street (FDOT Project #429996-1). OIG auditors met with a senior CEI plans review engineer that had been with FDOT for 30 years. He explained that the one project was not truly a lump sum contract as Tallahassee FDOT administrators changed their minds on project approach. He also shared that District 6 has more in-house project personnel—albeit not field inspectors—which allows them to supplement the CEI team. Given the size and complexity of the projects in Miami-Dade, the lump sum contracting method for CEI services is not suitable for the FDOT projects in District 6.

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The District 6 engineer cautioned that the risk associated with lump sum CEI contracts to all parties is too high given the many unknowns. When lump sum contracts were offered at District 6 to the CEI firms, they did not want it. And while there is an administrative benefit to the agency because timesheets are not required to be submitted with the invoices, there is a risk that CEI firms may not provide the required staffing level for projects under lump sum. While the LS Program's goal may be to expedite the project, CEI staff cannot push the contractor to complete a project. The FDOT engineer emphasized that FDOT District 6 was one of the top districts in Florida in terms of managing project costs and it will continue to do so by utilizing District 6's in-house staff while contracting CEI services using T&M contracts.

VI. INSPECTION CONCLUSIONS AND RECOMMENDATION FOR CLOSURE

Our review revealed that DTPW inspectors do not have the authority to stop or delay a project. If a project experiences circumstances that warrant a temporary stoppage, the inspector must first notify the project manager. This is the same regardless of whether the inspector is a DTPW employee or an employee of the CEI consultant firm. Our review did not reveal that any of the project delays were prolonged or caused by the inspectors. The most common reasons for project work stoppage included asphalt temperature issues, weather, equipment failure, and issues with utilities. In all these circumstances, the inspector is not autonomous and must inform the project manager of the situation.

Unlike FDOT, DTPW has a moderately-sized contingent of inspectors (43 budgeted positions). DTPW also has varying levels of project management and administrative support personnel in its construction division, albeit there are some vacancies. Based on the work orders reviewed by the OIG, DTPW contracts with CEI consultant firms to obtain extra inspectional and project support. These individuals work as an extension of DTPW staff and are often supervised by DTPW project managers.

Moreover, lump sum project-specific contracts/work orders are not immune to cost increases. As illustrated by FDOT's LS Program, CEI firms are entitled to a renegotiation if the construction contract time changes by 10 percent. However, construction contract time (whether compensable or not) is sometimes only resolved at or around substantial completion. If a change order is not contemporaneously approved adding time, the CEI firm may be left hanging with uncertainty over its compensation. This risk could result in the CEI firm providing less services under the lump sum contract. The T&M method that is currently in use for increasing CEI capacity provides a degree of transparency and control not seen in a lump sum CEI contract. The OIG supports the requirement of

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certified timesheets showing that the listed personnel actually worked the hours being billed.

Other than a perception that CEI firms would inspect more expeditiously under lump sum contracts, the OIG's review could not substantiate that projects would actually be completed more quickly. Even FDOT engineers conceded that lump sum contracts were only used for straightforward, less complicated projects that had a very clear project schedule without risk of utility conflicts. The proposed resolution would have required all county departments to solicit/procure/task CEI services on a lump sum basis. This directive would have hamstrung project administrators by denying them the flexibility of managing their construction projects—and the CEI component—with the appropriate level of resources.

The proposed resolution has been deferred indefinitely, and the sponsoring commissioner is no longer a member of the Board of County Commissioners due to term limits. While no further action is required and this review is apt for closure, it is recommended that a copy of this closure report be provided to DTPW management and the County's Strategic Procurement Department for informational purposes only.

EXHIBIT A

Scope of CEI Services for Various DTPW Projects

Consultant shall perform its obligations as follows: Construction Administration and Management Services:

A. Construction Management

1. Act as County's representative and provide project inspection
2. Assist the County with constructability and technical plan reviews, and "Value Engineering" as necessary for plan revisions during construction.
3. Analyze construction project requirements in terms of personnel required for observation/inspection of workmanship, materials onsite, and construction progress to determine reasonable conformance with the design intent of the plans and specifications. Assign field personnel to perform services for the project, once awarded and obtain approval of assignment from County
4. Deliver material samples to County's designated lab provider. Provide coordination with County's designated lab, assignment of testing/inspection personnel, review invoices to verify accuracy and coordinate shop drawing/submittal reviews and approvals process. Review testing-lab report results for compliance with the contract and notify the Design-Builder and County of failures.
5. Inspect the project to verify general compliance with the design intent of the plan and specification requirements.
6. Prepare, distribute and file project correspondences.
7. Review the Design-Builder's CPM schedule and verify general compliance with the specifications associated with the project.
8. Maintain complete, accurate records of all activities and events relating to the project and properly document project changes.
9. Produce an independent estimate in order to review and recommend the Design-Builder's monthly, pre-final and final pay estimates for construction of the project.
10. Review and recommend payment or rejection of the Design-Builder's monthly pay estimates of work performed associated with the project.
11. Prepare monthly progress report of construction activities with outstanding issues outlined for review. Report will include time expended, cost of work in place, anticipated completion date and other information as requested by County. Monthly progress information associated with the project will be submitted to County for review and approval.
12. Review Design-Builder's request for additional compensation for extra work and submit findings and recommendations to County.
13. Review the Design-Builder's request for time extensions and submit findings and recommendations to County.
14. Assist in the preparation and issuance of construction change orders and supplemental agreements. Forward recommendations associated with time and costs to County for approval prior to implementation. Coordinate with County and County's design.

15. Preparation of plans and specifications associated with above change orders and supplemental agreements will not be included in the scope of services for this agreement.
16. Review, make recommendations and/or coordinate the response to the Design-Builder's requests for information ("RFI") and submittals. Coordinate with County and County Design.
17. Provide oversight review on review of Design-Builder's claims for additional compensation for extra work and submit findings and recommendations to County for hearings or litigation as required. Assist County in preparation and documentation of factual evidence.
18. Maintain files for correspondences, change orders, submittals and RFI's.
19. Assist County with public outreach efforts to include attending necessary public meetings and coordinating with stakeholders and other entities during construction.
20. Coordinate and host a CPM baseline schedule review meeting with the Design-Builder and County.
21. Participate in the pre-construction meeting to establish appropriate lines of communication and pre-construction requirements associated with the project with the contractor.
22. Coordinate and host weekly construction meetings to address the current status of the Design-Builder's work schedule, outstanding issues, submittals, shop drawings, and change orders.
23. Coordinate and host month-ending construction meeting as part of weekly progress meeting to determine schedule changes and facility adjustments required to maintain the Design-Builder's schedule for project completion.
24. Prepare and distribute meeting minutes from all hosted meetings
25. Review project for final acceptance and coordinate final review with County personnel. Coordinate outstanding issues with County personnel to verify resolutions prior to final acceptance.
26. Coordinate final documentation processing, in accordance with County and FDOT standards, and submit to staff upon completion of the project.
27. Assist the County in the Construction Engineering Inspection of Emergency Contracts when required.
28. Assist in the preparation and issuance of construction work orders.
29. Review plans and construction documents and prepare cost estimates.

B. Field Observation / Inspection

1. Maintain project daily documenting daily construction activities, weather conditions, time charges and contractor's resources as well as project specific information associated with the project. This daily will also incorporate contract items of observation and decisions associated with the construction of the project.
2. Observe and monitor the Contractor's operation and determine, in general, compliance with the construction plans and specifications on each item of work underway and confirm that specified material is incorporated into the work.
3. Confirm that the Design-Builder has obtained necessary permits.
4. Review Design-Builder's daily quantities of work completed.
5. Complete daily construction activity reports.
6. Notify County immediately in the event of an on-site accident.

7. Consultant will coordinate and perform all Quality Assurance / Verification construction field materials sampling and testing. Design-Builder to perform Quality Control Testing.
8. Coordinate utility adjustment activities, utility installation verification, monitoring, record management, reporting and as-built drawings.
9. Monitor the Design-Builder's traffic control plan for compliance with plans and specifications and provide recommendations to County, if needed.
10. Coordinate material-testing needs with the Design-Builder's schedule and schedule required tests with the County designated lab. Verify test frequencies adhere to sampling frequencies outlined in the specifications.
11. Review test reports for accuracy and maintain filing system for test reports and material compliance as required.
12. Prepare photographic project documentation to include individual activities and overall progress as well as impacts to the public.
13. Review Design-Builder's videos and photographs taken in accordance with the construction contract.
14. Attend construction, utility coordination and scheduling meetings.
15. Upon receipt of the Design-Builder's Request for Substantial Completion Inspection, conduct substantial completion inspection, prepare the project punch list of discrepancies for the various construction items and monitor the completion and acceptance of the items as required by the specifications. The "Certificate of Acceptance for Substantial Completion" will be recommended when the project meets minimum requirement for substantial completion in accordance with the contract requirements.
16. Coordinate with County's maintenance department for input on substantial completion inspection and project punch list.
17. Ensure all closeout documentation is received from the Design-Builder, including but not limited to all guarantees, operating and maintenance manuals, releases of claims and certificate required and then deliver them to the County.
18. After satisfactory completion of the punch list, the Certificate of Final Acceptance and final payment will be recommended to the Design-Builder.

C. Additional Terms and Conditions

1. Consultant shall be represented by a registered professional engineer licensed to practice in the State of Florida at meetings of any official nature concerning the project, including but not limited to scope of meetings, review meetings, pre-bid meetings, and pre-construction meetings.
2. Consultant services must be performed with the same degree of care, skill and diligence as is ordinarily possessed and exercised by members of its same profession, currently practicing, under similar circumstances. No other warranty, express or implied, is included in this agreement or in any drawing, specification, report, opinion, or other instrument of service, in any form or media, produced in connection with the Services.
3. Consultant is responsible for:
 - A. Approve Design-Builder's construction means, methods, techniques, sequences, procedures, or safety precautions and programs
 - B. Notify the County of the failure of any contractor, subcontractor, vendor, or other project participant, not under contract to consultant, to fulfill contractual

responsibilities to County or to comply with federal, or local laws, regulations and codes

- C. Procuring permits, certificates, and licenses required for any construction unless those procurement responsibilities are specifically assigned to the Design Builder.
 - D. Request Design Builder changes and/or modifies project plans or specifications upon County's approval.
4. Consultant's performance of the Services does not relieve the Design Builder of their duties and obligations to County either by contract or by law. Consultant shall not have control over or charge of acts or omissions of the Design Builder, or any of its or their subcontractors, agents, or employees, or any other persons performing portions of the construction work; and any designers shall remain solely responsible for their design and for any errors, deficiencies, or omissions contained in any drawings, specifications or other instruments of the designer's services.

Subject: Lump Sum CCEI Contract Modifications

The Department issued the first LSCCEI contract in June of 2003 and currently the Department has executed over 50 LSCCEI contracts. The FHWA's preliminary review of LSCCEI contracts has resulted in concerns primarily with the negotiated estimate of manpower for LSCCEI contracts and methods for adjustments during the contract if changes are necessary.

To address the pre-award negotiation issues, the Department's CEI Managers have been tasked to develop staff hour estimates for the standard CEI scope. The development of the staff hour estimates should provide more consistent negotiations throughout the state and help the CEI project managers to tighten/improve negotiations. It needs to be understood that the services which the Department and CCEI are negotiating is the administration of the construction contract(s) pursuant to FDOT policies and procedures. Having said this, it needs to be understood that the negotiations should focus on the performance of the contract administration and not as much on the CCEI individuals or positions used by the CCEI to perform those services.

The purpose of this memo is to provide additional guidance regarding when or if the renegotiation of a LSCCEI contract is warranted and is intended to supplement already existing LSCCEI Guidelines. While not all circumstances can be anticipated ahead of time or covered in this memo, the basic philosophy regarding the need to renegotiate can be stated as follows. If the scope of the original contract changes then the contract must be analyzed to determine whether or not renegotiation is warranted.

The following guidance is given to clarify conditions that warrant renegotiation consideration. While this may appear obvious, there were some opinions voiced previously that since the contracts were lump sum there was no option to renegotiate. This is not the case.

The LSCCEI contract should be reviewed to determine if it should be renegotiated if the initial scope has multiple construction projects and one or more projects are deleted or changed. Grouped projects included in a LSCCEI contract per the existing guidelines should have individual projects negotiated separately and then the LSCCEI contract represent the summation of all of the individual projects. The negotiations for a LSCCEI contract, as with any CCEI contract, are based on certain assumptions about the construction project(s) on which the CCEI services will be provided. If the negotiated contract for LSCCEI services anticipates the need for a particular staffing level and the contractor's approach to the construction of the project changes from the assumptions used during CCEI contract negotiations, the contract should be reviewed to determine if it should be renegotiated.

If the analysis of the LSCCEI contract based on changes noted above differs significantly, as defined in the LSCCEI guidelines, from the original estimate, the contract should be renegotiated. A list of the LSCCEI contracts can be found on the

Department's State Construction Office website, located under the technical topic "Consultant CEI Issues" or by clicking on the following link:

<http://www.dot.state.fl.us/construction/DesignBuild/Consultant%20CEI/LumpSum/LumpSumCCEIContracts.pdf>

Also, as a reminder, prior FHWA approval is required for all LSCCEI contracts having federal funds. FHWA approval is not required for State Funded contracts that meet the LSCCEI statewide guidelines.

If there are any questions, please contact Stefanie Maxwell at 850-414-4314.

Lump Sum Construction Engineering Inspection (CEI) Pilot

The Chief Engineer has approved 12 projects for the Lump Sum CEI pilot (eight during the current fiscal year). The guidance provided herein is only applicable to the approved pilot projects.

The objective of the pilot, in keeping with the Governor's bold vision for transportation, is to achieve efficiencies in transportation infrastructure project delivery.

In the realm of CEI, the Department is evaluating ideas to incentivize the CCEI to partner with the contractor to complete the construction project faster, and empower the CCEI on the project. With the pilot lump sum projects, the intent is to incentivize the consultant to manage their resources (budget and staffing levels commensurate with construction activities and contractor operations), complete the project within budget, and finish the job early so as to maximize their profit on the lump sum job. For the pilot projects, the range of 6 to 9 percent of construction costs shall be used to establish the lump sum ceiling (budget). The lump sum ceiling is inclusive of CEI field office costs, such as field office rent, field office set-up/mobilization and de-mobilization costs. The lump sum maximum budget shall be published in the CEI advertisement. District Procurement should include the following statement in the advertisement: "Lump Sum CEI Pilot Project. The maximum budget available for this subject lump sum CEI project is \$ _____. Additionally, the contract shall include the following provision: The cost and method of compensation for this agreement is subject to re-negotiation if the original construction contract time changes + or – 10%, not counting weather days or holidays. The re-negotiation of the cost shall be limited in case of an increase only to the extent in excess of 110%, and in case of a decrease below 90%. In the event costs are re-negotiated as a result of changes in the construction contract time, adjustments to the compensation shall be made by contractual amendment. The daily rate for adjustments to contract time shall be prorated based on original negotiated CEI contract costs divided by original construction contract days." Consultant firms can then make the business decision to pursue the project, based on the advertised maximum budget. The Consultant is still required to submit an audit package during negotiation. However, the negotiated total "hours x rates" cannot exceed the advertised maximum lump amount which was established in the advertisement.

Services rendered after completion of scheduled project services, including but not limited to construction claims assistance will be negotiated as a supplemental amendment, and will not be included or subject to the lump sum maximum budget.

Contract negotiations for level of effort cannot exceed the maximum advertised budget. After negotiations, the consultant should be afforded the responsibility in the field and the flexibility to assign and manage their own resources, as long as the CCEI provides the necessary project oversight, inspection, and testing to CPAM standards. The Department will renegotiate the cost of compensation if construction contract days changes by plus or minus ten percent, excluding weather days and holidays.

Districts should record the performance metrics for each project using the internal spreadsheet provided for this purpose, and provide the feedback to the State Construction Office and the Chief Engineer.

EXHIBIT "B" METHOD OF COMPENSATION

1.0 PURPOSE

This exhibit defines the method and limits of compensation to be made to the Consultant for the services described in Exhibit "A", Scope of Services, and the method by which payments will be made.

2.0 COMPENSATION

For satisfactory completion of all services detailed in Exhibit "A", Scope of Services, of this Agreement, the Department will pay the Consultant a Total Lump Sum Amount of \$____.

2.1 Summary of Compensation

The Total Lump Sum Amount will include the elements defined in the Contract Compensation Summary Table below:

Contract Compensation Summary Table				
Financial Project Number 1				
Firm	Compensation Element Description	Method of Payment	Limit/Estimate	Amount
Basic Services		% of completion CEI contract time		
SUBTOTAL:				
Financial Project Number 2				
Firm	Compensation Element Description	Method of Payment	Limit/Estimate	Amount
Basic Services		% of completion CEI contract time		
SUBTOTAL:				
TOTAL LUMP SUM AMOUNT:				

The Consultant will receive progress payments for services based on the percentage of completion of CEI contract time that has been completed and accepted by the Department during the billing period.

This Agreement does not involve the purchase of Tangible Personal Property, as defined in Section 273.02, Florida Statutes.

The cost and method of compensation for this agreement is subject to re-negotiation if the original construction contract time changes + or – 10%, not counting weather days or holidays. The re-negotiation of the cost shall be limited in case of an increase only to the extent in excess of 110%, and in case of a decrease below 90%. In the event costs are re-negotiated as a result of changes in the construction contract time, adjustments to the compensation shall be made by contractual amendment. The daily rate for adjustments to contract time shall be prorated based on original negotiated CEI contract costs divided by original construction contract days.

[Next paragraph optional; to be used for multi-year funding contracts using Contract Funding Term 2. When Contract Funding Term is 2, also provide schedule for appropriations, as shown in next paragraph.]

The total amount of this agreement is expected to be funded by multiple appropriations. The State of Florida's performance and obligation to pay under this contract is contingent upon appropriation by the Legislature. Currently \$_____ of the total amount has been approved. Therefore, it is agreed that the Consultant will not be obligated to perform services nor incur costs which would result in exceeding the funding currently approved, nor will the Department be obligated to reimburse the Consultant for costs or make fee payments in excess of currently established funding. The Department will provide written authorization if and when subsequent appropriations are approved and encumbered for this contract, or when funding authorization decreases occur.

[For use when future year funding is clearly defined, with Contract Funding Term 2]

The anticipated schedule for appropriations is defined below:

FINANCIAL PROJECT NO.	FISCAL YEAR	AMOUNT

Please note that funds will not become available until the beginning of each fiscal year. The Department's fiscal year begins July 1st of each year, and ends June 30th of each succeeding year. Work that requires funding from a future fiscal year cannot begin/continue until the Funds have been approved and encumbered by the Department. The Department will provide written authorization when subsequent appropriations are approved and encumbered, or when funding authorization decreases occur.

The following firms are each subject to a contract fee limit up to but less than \$500,000 for the term of the Agreement:_____. This contract fee limitation may be removed at such time as the subconsultant firm submits an FDOT approved overhead audit performed by an independent CPA.

3.0 INVOICING PROCEDURE

The Consultant will be eligible for progress payments under this agreement at monthly

intervals, no later than the 20th of the month following when services were rendered for the invoicing period. If the monthly invoice cannot be timely submitted, notify the Department prior to the due date stating the reason for the delay and the planned submittal date. Once submitted, the Consultant Project Principal or Senior Project Engineer shall notify the Construction Project Manager via e-mail of the total delay in calendar days and the reason(s) for the delay(s).

Invoices for this agreement will be prepared by the Consultant and submitted through the Department's web-enabled Consultant Invoice Transmittal System (CITS) Internet application. The invoices will be supported by such information as may be required by Department procedures to substantiate the charges being invoiced. The Consultant will maintain for this purpose a job cost accounting system that is acceptable to the Department.

If requested by the Department, the final invoice for this agreement will be accompanied by a certified job cost summary report generated by the Consultant's accounting system. The report will include at a minimum the total number of hours and salary cost actually charged to the project, the total miscellaneous direct expense, and total sub-consultant cost charged to the project.

The Consultant will report sub-consultant payments through the Department's Equal Opportunity Compliance System on the Internet. Failure to submit sub-consultant payment information may be cause for rejection of the invoice. Within thirty days after receipt of final payment, the Consultant will report final sub-consultant payments through the Equal Opportunity Compliance System. The Consultant will pay all sub-consultants their proportionate share of payments received from the Department within thirty days of the Consultant's receipt of payment from the Department.

The Department will render a decision on the acceptability of services within 10 working days of receipt of either the services, invoice, or progress report, whichever is later. The Department reserves the right to withhold payments for work not completed, or work completed unsatisfactorily, or work that is deemed inadequate or untimely by the Department. Any payment withheld will be released and paid to the Consultant promptly when work is subsequently performed.

All charges to the individual project will end no later than thirty (30) calendar days following final acceptance; or where all items of work are complete and conditional/partial acceptance is issued; unless authorized in writing by the Department. A Final Invoice will be submitted to the Department no later than the 60th day following Final Acceptance of the individual project or as requested by the Department.

4.0 PROJECT CLOSEOUT

4.1 Final Audit

If requested, the Consultant will permit the Department to perform an audit of the records of the Consultant and any or all sub-consultants to support the compensation paid the Consultant. The audit will be performed as soon as practical after completion and acceptance of the contracted services. In the event funds paid to the Consultant under this Agreement are subsequently properly disallowed by the Department because of accounting errors or charges not in conformity with this Agreement, the Consultant agrees that such disallowed amounts are due to the Department upon demand. Further, the Department will have the right to deduct, from any payment due the Consultant under any other contract, any amount due the Department.