



OFFICE OF INSPECTOR GENERAL

FLORIDA DEPARTMENT OF TRANSPORTATION

605 Suwannee Street • Tallahassee, FL 32399-0450
(850) 410-5800 • www.dot.state.fl.us/inspectorgeneral

Robert E. Clift
Inspector General

Snapper Creek
Materials Laboratory and CTQP Classroom
Advisory Report No. 12P-1008

August 9, 2012

EXECUTIVE SUMMARY

The Office of Inspector General (OIG) conducted an analysis of the current operational use and cost of Florida's Turnpike Enterprise (FTE) Materials Laboratory and Construction Training Qualifications Program (CTQP) Classroom located at the Snapper Creek exit (Snapper Creek). This analysis was initiated as a result of a previous OIG investigation and at the request of the FTE Executive Director. The objective of the analysis was to determine if the use of the Snapper Creek Materials Laboratory represented the most efficient method of materials testing for FTE projects and whether the frequency of CTQP training at Snapper Creek warranted continued use of the facility for this purpose. The scope of our analysis included the operating costs for the Materials Laboratory during calendar years 2009, 2010 and 2011, and the use of the CTQP Classroom for this same time period.

Based on the operating cost analysis performed by our office, the cost of operating the Materials Laboratory is significantly greater than if the materials tests performed at this facility had been outsourced to contracted private sector accredited laboratories. The number of tests performed by the Materials Laboratory has decreased by 36 percent over the past three years. In addition, our analysis demonstrated the CTQP Classroom was utilized an average of 15 percent of the available days. Using the Snapper Creek facility for materials testing and CTQP training in their current method of operation does not represent an efficient use of resources.

FTE management has suspended production of materials testing at Snapper Creek effective April 23, 2012. The FTE Materials Office has recently reached an agreement with the District Four/Six Materials Laboratory to provide testing on samples that would have previously been sent to Snapper Creek. This is being done without an increase in staffing. The District Four/Six Materials Laboratory is located 38 miles from Snapper Creek.

We recommend the Executive Director of FTE direct the closure of the Snapper Creek Materials Laboratory and CTQP Classroom.

TABLE OF CONTENTS

<u>BACKGROUND AND INTRODUCTION</u>	3
<u>PURPOSE, SCOPE AND METHODOLOGY</u>	4
<u>RESULTS OF REVIEW</u>	5
<u>APPENDIX</u>	
A. Management Response	8
B. Snapper Creek Floor Plan	9
C. Cost of Outsourcing	10
D. Construction Summary Schedule for South Florida	11
<u>DISTRIBUTION, PROJECT TEAM AND STATEMENT OF ACCORDANCE</u>	12

BACKGROUND AND INTRODUCTION

At the request of the FTE Executive Director, the OIG reviewed the use of the Snapper Creek Materials Laboratory and CTQP Classroom. This advisory report does not address the SunPass operations located at Snapper Creek.

The main building is approximately 5,776 square feet with approximately 1,000 square feet currently used by SunPass¹. The main building includes a classroom for thirty and testing equipment for asphalt, concrete and soil. There is also a 400 square foot classroom/meeting space in the adjoining building that includes an open lobby area with public access to restrooms and SunPass sales. A 420 square foot climate controlled trailer is also part of the materials testing facility (Appendix B). The building and equipment are owned by the FTE and the Materials Laboratory and the CTQP Classroom is operated by PB Americas, Inc.

Snapper Creek is a Materials Laboratory and CTQP Classroom located between the north and south bound lanes at Mile Post 19 on the Florida Turnpike. The facility was opened in 2000 to provide a location for materials laboratory testing and CTQP courses in South Florida. When Snapper Creek opened, it was the only location for CTQP training in the area and there was only one organization authorized to offer CTQP courses. Now there are several authorized providers of CTQP training in South Florida and some of these training courses use the Materials Laboratory equipment for proficiency testing. Until the recent suspension of materials testing, the main function of Snapper Creek had been to perform asphalt, concrete and soil tests for the FTE.

In a previous OIG investigation (Case #150-12059), it was determined that a consultant laboratory technician assigned to this location spent excessive time using the Internet for non-work related purposes. The consultant was released from employment. The results of this investigation and subsequent management discussions prompted our review of Snapper Creek.

¹In February 2011 a SunPass office opened at this location.

PURPOSE, SCOPE and METHODOLOGY

The **purpose** of this engagement was to provide management with an analysis of the current operational use and cost of the Snapper Creek facility.

The objectives of this engagement were to:

- determine if the Materials Laboratory represents the most efficient method of materials testing for FTE projects; and
- review the use of the CTQP Classroom to determine if continued use for CTQP training is warranted.

The **scope** of the advisory was to review the operational use and costs of Snapper Creek for the calendar years 2009, 2010 and 2011.

To achieve our objectives we used the following **methodology**:

- reviewed the contracts, revisions and amendments that are or were in effect with PB Americas, Inc.;
- interviewed personnel:
 - Snapper Creek Materials Laboratory Manager
 - Turnpike Materials and Research Engineer
 - Director, State Materials Laboratory
 - District Four/Six Concrete/Pre-cast Engineer
 - State CTQP Training Coordinator
 - District Four/Six Laboratory Manager
- examined the “Monthly Summaries” prepared by the Snapper Creek Materials Laboratory Manager and submitted to the Turnpike Materials and Research Engineer;
- inspected the Materials Laboratory and CTQP Classroom;
- calculated the cost of outsourcing the tests performed at Snapper Creek;
- determined the cost of operating the Materials Laboratory;
- confirmed the use of the CTQP Classroom at Snapper Creek for CTQP training;
- surveyed current CTQP providers; and
- compared the cost of outsourcing the materials tests performed to the costs of operating the Materials Laboratory.

RESULTS OF REVIEW

Using the Snapper Creek facility for materials testing and CTQP training in their current method of operation does not represent an efficient use of resources. The cost of operating Snapper Creek is significantly greater than the cost of outsourcing the materials tests to contracted private sector laboratories. In addition, the CTQP Classroom has been used an average of 15 percent of the available days.

Materials Laboratory – Net Cost of Operating

In determining the cost of operating the Materials Laboratory, we included the staffing expense, cost of laboratory accreditation, monthly lump sum expense for the Materials Laboratory, an allocation of the repairs and maintenance expenses and utilities. Based on discussions with the Turnpike Materials and Research Engineer, the Laboratory Manager had other duties in addition to managing the laboratory. For this reason, we have only included 50 percent of the Laboratory Manager's salary expense in the staffing portion of operating Snapper Creek. The expenses for the CTQP Classroom are minimal and not separately identifiable. We subtracted the CTQP Classroom rental income to determine the net cost of operating.

Table 1: Net Cost of Operating

	<u>2009</u>	<u>2010</u>	<u>2011²</u>
Staffing	\$214,917	\$174,877	\$151,539
Lab Accreditation	6,581	6,581	6,581
Monthly Lump Sum Expense	2,797	3,976	6,795
Repairs & Maintenance	14,136	24,243	24,890
Utilities Expense	<u>23,161</u>	<u>22,443</u>	<u>24,495</u>
Gross Cost of Operating	\$261,592	\$232,120	\$214,300
Less CTQP Classroom Income	<u>-8,800</u>	<u>-9,600</u>	<u>-4,800</u>
Net Cost of Operating	\$252,792	\$222,520	\$209,500

Materials Laboratory – Cost of Outsourcing

We calculated the cost of outsourcing the materials tests performed at Snapper Creek to private sector accredited laboratories. The number of each type of tests performed at Snapper Creek was obtained from the Laboratory Information Management System. The quantity of each test was multiplied by the costs specified in Contract C-8338 (ending in 2009) and C-8W64³ (2010-present) for each specific test. To ensure the cost

² The 2011 expenses were lower because they did not include a full year of laboratory technician expense.

³ The FTE currently has multiple outside accredited laboratories under contract to perform materials testing.

of outsourcing was not understated, the highest contracted cost for each of the various tests was used.

Table 2: Cost of Outsourcing

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total Cost	\$84,453	\$90,336	\$70,730
No. of Tests	1,261	924	810
Average Cost Per Test	\$66.97	\$97.77	\$87.32

Fluctuations in the average cost per test are due to the change in cost per test and mix of tests performed. Test prices currently range from \$13 to \$330 per test (Appendix C).

Comparison: Net Cost of Operating versus Cost of Outsourcing

The net cost of operating Snapper Creek was compared to the cost of outsourcing. The cost of outsourcing was subtracted from the net cost of operating to determine the potential savings if all tests had been outsourced.

Table 3: Net Cost of Operating versus Outsourcing

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Net Cost of Operating	\$252,792	\$222,520	\$209,500
Less Cost of Outsourcing	<u>-84,453</u>	<u>-90,336</u>	<u>-70,730</u>
Potential Savings	\$168,339	\$132,184	\$138,770

According to discussions with FTE management, the scheduled construction in the vicinity of Snapper Creek is expected to increase in the near future. Appendix D shows 17 construction projects scheduled to be let within the next five years. This construction summary schedule describes management's projection of the increased likelihood of testing. The Department of Transportation (department) does not have an established method to project the number of tests that would be generated by the Construction Summary Schedule; therefore, it was not possible to quantify how many tests would be sent to Snapper Creek as a result of this increased Construction Summary Schedule.

Based on our comparison, even if the volume of tests performed at Snapper Creek doubled, it would still be more cost effective to outsource the materials testing to contracted private sector laboratories than to perform the tests at the Snapper Creek Materials Laboratory.

Additional Cost Savings

The District Four/Six Materials Laboratory is located 38 miles from Snapper Creek. Based on discussions with the District Four/Six Laboratory Manager and the number of

samples processed and tests performed during the past three years, the District Four/Six Materials Laboratory has available capacity to absorb the tests that have been performed at Snapper Creek. With the recent decision to suspend materials testing at Snapper Creek, using the District Four/Six Materials Laboratory as the first choice for materials testing, with outside laboratories being used as needed, results in even greater savings to the department.

CTQP Classroom

A review of invoices demonstrated five organizations had rented the CTQP Classroom for a total of 116 days, generating rental revenues of \$23,200⁴ for the three year period reviewed. Questionnaires were sent to these organizations requesting information concerning their past use and future plans for the CTQP Classroom. Of the five organizations, three stated they plan to continue to use Snapper Creek for future CTQP course offerings. These organizations stated if the CTQP Classroom was not available, they would be unable to train students in CTQP courses that include a proficiency examination requirement.

Year	2009	2010	2011	Total
No. Days Classroom Rented	44	48	24	116
No. of Available Days	250	250	250	750
Occupancy Rate of Classroom	18%	19%	10%	15%

Based on discussions with the State Construction Training Administrator, CTQP proficiency testing must be performed at an accredited laboratory. At the present time, although the materials laboratory operations at Snapper Creek have been suspended, their accreditation remains valid and the CTQP Classroom is currently available for rental by CTQP providers. Due to the low classroom occupancy rate, we recommend the CTQP Classroom be closed. We propose management coordinate with the State Construction Training Administrator, the Director of the State Materials Laboratory, the District Four/Six Materials Laboratory Manager and the various CTQP providers to assess the most appropriate means of providing courses with a proficiency testing requirement.

⁴ The FTE charges a rental fee of \$200 per day.

APPENDIX A – Management Response

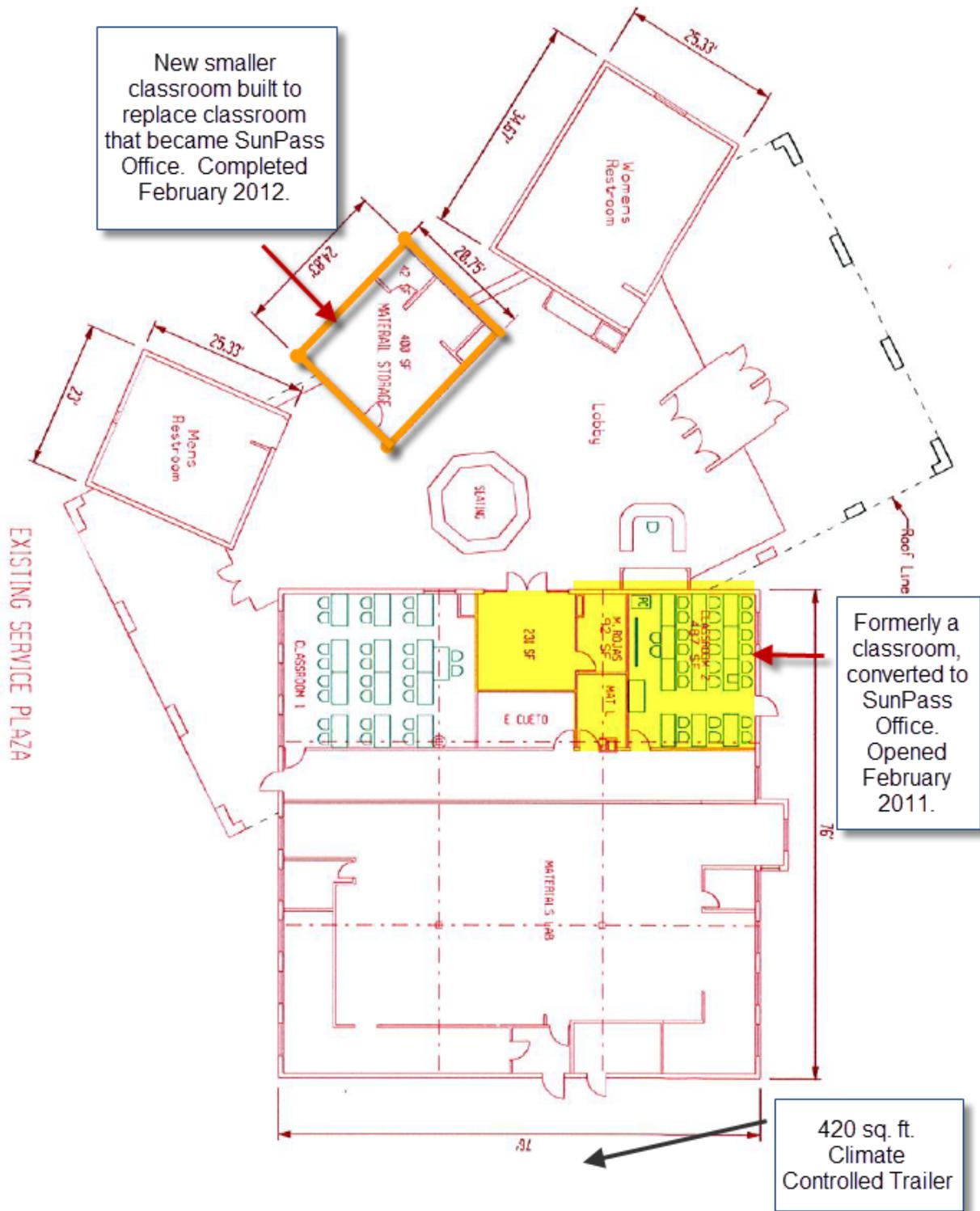
From: Gutierrez-Scaccetti, Diane
Sent: Wednesday, August 08, 2012 1:31 PM
To: Clift, Robert
Cc: Wai, Paul
Subject: Snapper Creek Materials Testing Laboratory and CTQP Classroom

Bob,

Florida's Turnpike Enterprise is generally in agreement with the audit results of the Snapper Creek Materials Laboratory and CTQP Classroom. Please note that the Snapper Creek Materials Laboratory was closed by FTE on April 23, 2012. The CTQP Classroom has been made available and used by contractors for the purposes of certification during the review process. As of this date, the CTQP Classroom has classes scheduled through the month of September and will honor those commitments. The concern remains that, at the present time, the CTQP Classroom facilities at D4/D6 are only open to internal FDOT staff. Thus, the contractors in the region will not have access to a certification facility. Staff is in discussions with Central Office regarding the long-term plan to provide CTQP training and will advise when a final determination is made.

Diane

APPENDIX B – Snapper Creek Floor Plan



APPENDIX C – Cost of Outsourcing

Type of Test	2009 Highest Cost	2009 # of Tests	2009 Total Cost	2010-11 Highest Cost	2010 # of Tests	2010 Total Cost	2011 # of Tests	2011 Total Cost
ASTM C-39	\$ 11.36	183	\$ 2,078.88	\$ 13.00	115	\$ 1,495.00	178	\$ 2,314.00
ASTM C-109	\$ 15.00	2	\$ 30.00	\$ 13.00	0	\$ -	0	\$ -
FM T-11/ T-11	\$ 36.04	6	\$ 216.24	\$ 46.35	4	\$ 185.40	7	\$ 324.45
FM T-27	\$ 32.77	6	\$ 196.62	\$ 60.00	4	\$ 240.00	7	\$ 420.00
FM 5-515	\$ 338.52	16	\$ 5,416.32	\$ 330.00	19	\$ 6,270.00	15	\$ 4,950.00
T-99	\$ 107.12	21	\$ 2,249.52	\$ 115.00	38	\$ 4,370.00	22	\$ 2,530.00
FM 5-521 / T-180	\$ 107.12	15	\$ 1,606.80	\$ 110.00	39	\$ 4,290.00	29	\$ 3,190.00
T-89	\$ 47.14	7	\$ 329.98	\$ 77.25	10	\$ 772.50	7	\$ 540.75
T -90	\$ 41.24	10	\$ 412.40	\$ 77.25	15	\$ 1,158.75	14	\$ 1,081.50
T-267	\$ 40.00	3	\$ 120.00	\$ 85.00	12	\$ 1,020.00	10	\$ 850.00
M-145	\$ 220.00	16	\$ 3,520.00	\$ 145.00	80	\$ 11,600.00	46	\$ 6,670.00
FM T-30	\$ 57.20	178	\$ 10,181.60	\$ 49.00	100	\$ 4,900.00	85	\$ 4,165.00
FM T-166	\$ 52.00	352	\$ 18,304.00	\$ 60.00	169	\$ 10,140.00	166	\$ 9,960.00
FM T-209	\$ 100.00	136	\$ 13,600.00	\$ 110.00	63	\$ 6,930.00	59	\$ 6,490.00
FM5-563	\$ 103.42	183	\$ 18,925.86	\$ 206.00	109	\$ 22,454.00	90	\$ 18,540.00
FM 5-550	\$ 33.00	0	\$ -	\$ 45.00	0	\$ -	3	\$ 135.00
FM 5-552	\$ 34.28	0	\$ -	\$ 45.00	1	\$ 45.00	0	\$ -
FM 5-551	\$ 33.00	0	\$ -	\$ 40.00	9	\$ 360.00	0	\$ -
FM 5-553	\$ 35.35	0	\$ -	\$ 75.00	2	\$ 150.00	0	\$ -
T-312	\$ 99.42	3	\$ 298.26	\$ 123.60	2	\$ 247.20	2	\$ 247.20
T-96	\$ 263.74	2	\$ 527.48	\$ 247.20	0	\$ -	1	\$ 247.20
T-85	\$ 68.63	3	\$ 205.89	\$ 70.00	2	\$ 140.00	1	\$ 70.00
T-84	\$ 73.68	2	\$ 147.36	\$ 95.00	2	\$ 190.00	2	\$ 190.00
ASTM C 1231*	\$ 11.36	91	\$ 1,033.76	\$ 13.00	37	\$ 481.00	8	\$ 104.00
ASTM C 617*	\$ 11.36	1	\$ 11.36	\$ 13.00	1	\$ 13.00	0	\$ -
ASHTO T88-97**	\$ 220.00	16	\$ 3,520.00	\$ 145.00	76	\$ 11,020.00	39	\$ 5,655.00
ASHTO T-87**	\$ 220.00	6	\$ 1,320.00	\$ 145.00	9	\$ 1,305.00	9	\$ 1,305.00
ASHTO T-168	\$ 66.95	3	\$ 200.85	\$ 66.95	2	\$ 133.90	2	\$ 133.90
AASHTO 27/T-11***	\$ -	0	\$ -	\$ 106.35	4	\$ 425.40	5	\$ 531.75
TSP 401****	\$ -	0	\$ -	\$ 13.00	0	\$ -	2	\$ 26.00
FM5-507	\$ -	0	\$ -	\$ 59.74	0	\$ -	1	\$ 59.74
TOTAL		1261	\$ 84,453.18		924	\$ 90,336.15	810	\$ 70,730.49

*Same as ASTM C-39 test.

**Same as M-145 test.

***FM T-27+FM T-11/T-11

****Same as ASTM C-109 test.

APPENDIX D – Construction Summary Schedule for South Florida (Updated 4/6/2012)

Projects in vicinity of Snapper Laboratory that will generate samples that need to be tested.
The potential of laboratory testing is a qualitative estimate based on volume of work and type of work.

Activity ID	Activity Description	Letting Date	Estimated Duration	Start	Finish	Budgeted Cost	Potential Volume of Laboratory Testing
4261551 52	Resurf HEFT-MIAM DADE.MP-17-MP 20.5-W / intersec	06/14/11	505	10/24/11	03/15/13	\$ 12,289,957	High
4061505 52	Mill & Resurf. Atlantic To Sawgrass	10/11/11	240	01/09/12	12/01/12	\$ 8,738,000	Medium
4310891 52	Sawgrass EXPWY Friction On-Off Resurf.MP-0 TO 8	05/08/12	170	07/16/12	01/01/13	\$ 3,800,000	Medium
4154622 52	AET PHASE-4A	05/22/12	785	07/09/12	09/01/14	\$ 20,624,000	Low
4312811 52	AET PHASE-5-B Sawgrass Expressway	09/20/12	885	10/29/12	04/01/15	\$ 33,906,560	Low
4154626 52	AET PHASE-4B	02/12/13	870	04/23/13	09/09/15	\$ 14,600,000	Low
4276851 52	HEFT AUXILARY LNS NW-74TH ST. TO NW-106TH ST.	05/14/13	377	07/30/13	08/10/14	\$ 7,752,000	Low
4310791 52	Resurf ML.Glades RD-S.Atlantic Ave.(76.4 -81.1)	04/09/13	380	06/26/13	07/10/14	\$ 9,633,000	Medium
4154881 52	HEFT-mainline Mill Dr(SW216)TO Eureka Dr.(PKG-A)	03/12/13	1,215	05/30/13	09/25/16	\$ 52,257,680	High
4060961 52	HEFT-From N.of Eureka To Kendall Dr (PKG-B)	02/13/13	1,840	08/01/13	08/14/18	\$ 187,677,000	Very High
4276891 52	HEFT / KENDALL Drv.Ramp Intersection MOD.	05/13/14	270	07/30/14	04/25/15	\$ 2,915,120	Medium
4293251 52	(HEFT MP-25) SW 8TH ST. MODIFICATIONS	08/13/13	365	10/31/13	10/30/14	\$ 5,520,000	Medium
4293291 52	(HEFT MP-23) BIRD RD INTERSECTION IMPROVEMENTS	05/13/14	265	07/30/14	04/20/15	\$ 4,210,090	Medium
4271461 52	Widen HEFT SW 60th St. Canal to Bird Rd. (D/B)	07/09/13	800	01/27/14	04/05/16	\$ 48,003,000	Very High
4150511 52	Widen HEFT From Kendall DR. to 60th St. Canal Br	07/09/13	1,360	09/25/13	06/15/17	\$ 108,158,745	Very High
4293391 52	AET PHASE-5-A (I-595 to Lantana) Presently this project is on hold*	12/10/13	865	02/04/14	06/17/16	\$ 40,000,000	Low
4061031 52	Sunrise Blvd.Interchange Modification (MP 58)	08/12/14	1,265	11/04/14	04/21/18	\$ 62,323,720	High
4060954 52	Widen-N of Johnson St to Griffin Rd (MP 50-53)	07/12/16	1,265	10/12/16	03/29/20	\$ 63,570,000	High
4150514 52	Widen HEFT From Bird Road to SR-836	09/06/16	1,260	12/06/16	05/18/20	\$ 208,588,000	Very High
Projects to be Let in 2017 and later							
4061501 52	Widen-Atlantic to N of Sawgrass Expwy (MP 66-71)	07/10/17	1,695	10/09/17	05/30/22	\$ 124,117,000	Very High
4233722 52	HEFT Widen - 288th St. to SW 216th (MP 5-11)	07/10/18	1,550	09/28/18	12/25/22	\$ 56,252,000	Very High
4060951 52	Widen-HEFT to N Johnson w/Hollywood I/C(MP 47-50)	07/09/19	1,080	09/24/19	09/07/22	\$ 40,707,380	High
4061441 52	Widen-N Boynton to Lake Worth Rd & I/C(MP 86-93)	07/15/20	1,600	10/22/20	03/09/25	\$ 101,360,995	Very High
4061431 52	Widen-Lake Worth Rd to Okeechobee Blvd (MP 93-99)	07/12/22	677	10/19/22	08/25/24	\$ 79,357,530	Very High
4159271 52	Widen From Sawgrass To Atlantic -PD&E	01/09/23	625	04/10/23	12/24/24	\$ 25,281,080	Medium

All project data is from the Construction Summary Schedule (CSS) Dated 4/06/2012
(Cells highlighted in yellow indicate a change from previous CSS dated 1/31/2012)

DISTRIBUTION, PROJECT TEAM AND STATEMENT OF ACCORDANCE

Action Official Distribution:

Diane Gutierrez-Scaccetti, Executive Director, Florida's Turnpike Enterprise

Information Distribution:

Ananth Prasad, P.E., Secretary

Timothy J. Ruelke, Director, Office of Materials

Project Team:

Engagement was conducted by Connie Davis, Audit Team Leader
and Patrick Craig, Auditor

Under the supervision of:

Sarah Hall, Audit Manager

Approved by: Robert E. Clift, Inspector General

Statement of Accordance

The mission of the department is to provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

The mission of the Office of Inspector General is to promote integrity, accountability and process improvement in the Department of Transportation by providing objective fact-based assessments to the DOT team.

This work product was prepared pursuant to Section 20.055, Florida Statutes, in accordance with the applicable Principles and Standards for Offices of Inspectors General as published by the Association of Inspectors General and the International Standards for the Professional Practice of Internal Auditing as published by the Institute of Internal Auditors, Inc.

This report is intended for the use of the agency to which it was disseminated and may contain information that is exempt from disclosure under applicable law. Do not release without prior coordination with the Office of Inspector General.

Please address inquiries regarding this report to the department's Office of Inspector General at (850) 410-5800.