



# District 7 Pasco County ATMS Update

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District ITS Program Manager

Presented by Fred Heery, P.E. TransCore

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# Pasco County ATMS Presentation Outline

- ❑ Pasco County Location in Tampa Bay Region
- ❑ Where Are the Deployments?
- ❑ What is Adaptive Signal Control?
- ❑ What is SCATS?
- ❑ Stage I Deployment Overview
- ❑ What Are the Results?
- ❑ Next Steps



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Gulf of Mexico

Herrando

Cortez Blvd./US 98



Lake

Ora

Pasco

S.R. 52

U.S. 41

S.R. 54

U.S. Hwy. 98

M. Mullen-Booth Rd

N. SINCOAS

US HWY 301

SR 39



Polk Pkwy

U.S. Hwy 27

Polk



SR 60

S.R. 60

Hillsborough

U.S. Hwy 17

U.S. Hwy 41



Pinellas

Legend:

- Thick blue line: Interstate
- Thick green line: State Road
- Thin black line: Local Road
- Thin grey line: Other

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# Pasco County ATMS Event Timeline

- Feasibility Study Conducted in 1999
- Requirements Document Delivered in 2000
- Selection of Traffic Adaptive Technology
- Stage I Design 2001 – Mid 2002



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# Pasco County ATMS Event Timeline (cont.)

- Stage I ITS Device Procurement by FDOT 2002
- Stage I Field Construction 2003
- Stage I Integration and System Start-up – Spring 2004
- Fall 2004 – Begin Design of Stage II & III



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# What is Adaptive Control?

- Adaptive Control is Real-time Signal Timing Optimization
- This Can be Accomplished in Several Ways:
  - Responding to Variations in Traffic
  - Predicting Variations in Traffic
  - Communicating Traffic Volumes to Downstream Signals



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# Sydney Coordinated Adaptive Traffic System (SCATS)

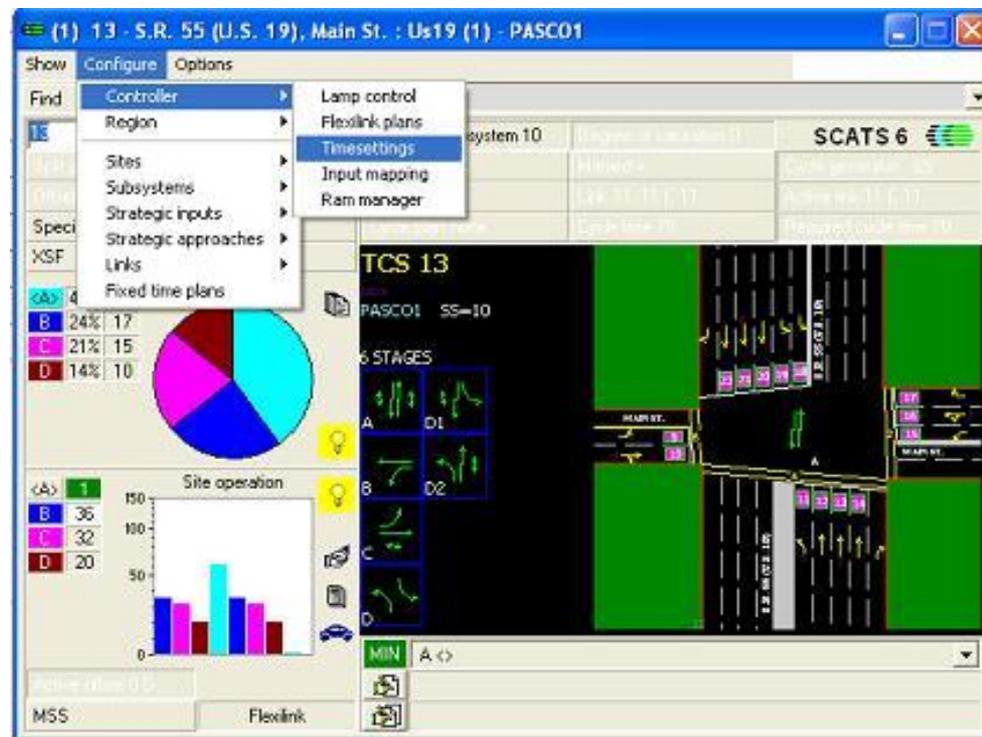
- 25 Years of Empirical Observation
- Developed by RTA (Australia)
- Uses Stop-line Detectors
- Detectors May Double as System and Actuated
- Currently Installed in Over 80 Metropolitan Areas Around the World



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# SCATS Adaptive Traffic Control Objectives

- ❑ Minimize Stops (Light Traffic)
- ❑ Minimize Delay (Heavy Traffic)
- ❑ Minimize Travel Time



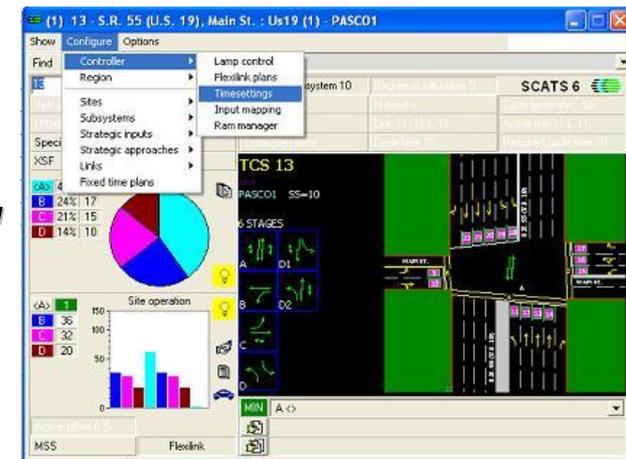
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# SCATS Adaptive Traffic Control Objectives (cont.)

□ By Selecting the Most Appropriate Real Time:

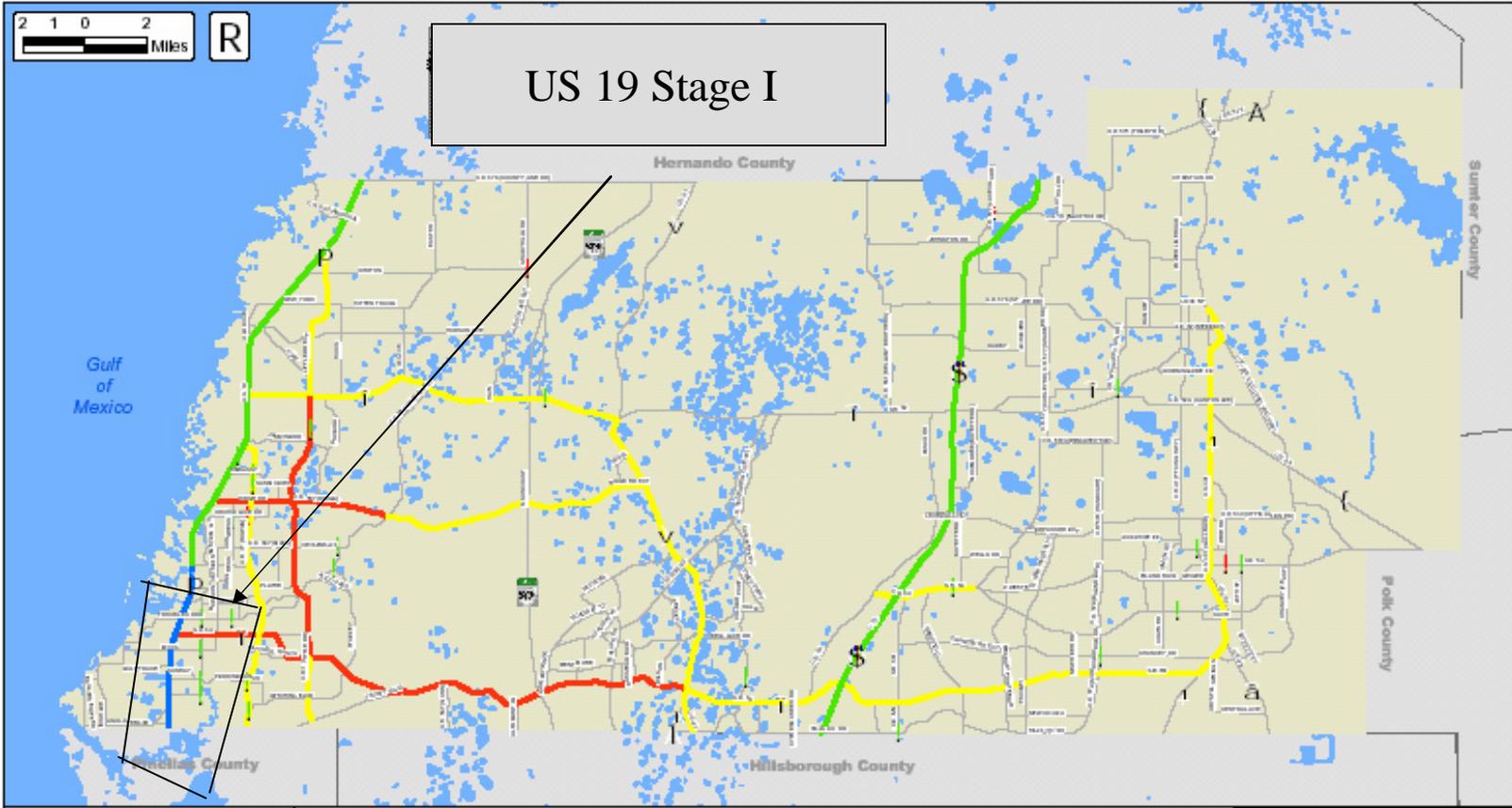
- Cycle Length
- Splits (that is the phase, or green splits)
- Links (or Offsets)



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# Pasco County ATMS Stage I Deployment




 Tindale-Oliver & Associates, Inc.  
 Planning and Engineering

**Pasco County**  
 2025 LRTP Update

-  Intersection Improvements (2005 - 2009)
-  Intersection Improvements (2010 - 2015)
-  Existing ITS
-  ITS (2005-2009)
-  ITS (2010-2015)
-  ITS (Conceptual)

**Map 3-10**  
 Intelligent Transportation System/  
 Intersection Improvement Projects  
 2025 Cost Affordable Plan



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# Pasco County ATMS-Stage I Deployment

## □ Stage I Included:

- 13 SCATS Intersections With New 2070 LN Controllers
- 2 CCTV and Central CCTV System
- New TMC
- CCTV Feed Into Pasco County EOC



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# Pasco County ATMS-Costs

## □ Phase I

- Design \$400,000
- CEI & FDOT Contract Admin. \$240,000
- Construction \$1,000,000
- **TOTAL \$1,640,000**



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# Pasco County ATMS Stage I Deployment



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# Pasco County ATMS Stage I Deployment



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# SCATS Adaptive Traffic Control

## □ Evaluation of Results

- Before and After Study to Determine the Change in Travel-time After Implementation of SCATS
- Travel-time Improvements for Both Directions in Peak and Non-peak Times Noticed
- Cycle Lengths Dropped Up to 20 Seconds After Implementation Resulting in Increased Intersection Throughput From All Approaches



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# Stage I Results

PUBLISHED TWICE A WEEK BY THE TAMPA TRIBUNE

## THE SUNCOAST NEWS

SATURDAY, JUNE 12, 2004 • WEST PASCO EDITION

VOLUME 47, NUMBER 63  
2 SECTIONS, 36 PAGES

### FLAG DAY



**Is Monday**  
JUNE 14, 2004  
Honor Old Glory



**40% rain chance**

### SEEING GREEN



Drivers on U.S. 19 might see more green lights with smart traffic signals now in operation

system on U.S. 19 in West Pasco is True Blue, mate.

For the benefit of people not up on their Down Under slang, that means the great software running the swell new traffic signal network is Australian to its core.

County officials chose the premier Australian system because it

BY CARL ORTH  
SUNCOAST NEWS BUREAU CHIEF

NEW PORT RICHEY—The ace computer program regulating the bonzer new "smart" traffic signal

**TRAFFIC CONTROLLERS** practice operating the newly installed "intelligent" traffic signal system on U.S. 19 in West Pasco. Bob Reek, left, the county's traffic operations manager, tries the controls of traffic division headquarters at the West Pasco Government Center with technicians Dave Long and Paul Mayers, seated. *Get the SUNCOAST*

Please see **SIGNALS, 10**

### Next stop!



Some travelers prefer someone else to do the driving on their over-the-road trips



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# Stage I Results

- "The difference was really amazing," (Bob) Reck said Thursday.
- "The system is smart. It learns and adapts from past traffic patterns."
- "Pasco bus drivers say they already have noticed the difference", Reck noted.

The Suncoast News, June 12, 2004 Edition

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# Pasco County ATMS-Next Steps

- Stage II and Stage III Deployment Will Include:
  - 18 More SCATS Intersections
  - Replace Original 13 NEMA Signal Cabinets With New Type 332 Cabinets
  - 25 More CCTV
  - 2 Full Matrix LED Signs
  - 61" DLP Video Screen in TMC
  - IP/Ethernet Network
  - Full Fiber Optic Communications Trunk Line to All Devices

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# Pasco County ATMS Costs

## □ Phase II

■ Design	\$395,000
■ CEI & FDOT Contract Admin.	\$340,000
■ Construction	\$2,800,000
■ <b>TOTAL</b>	<b>\$3,535,000</b>

## □ Phase III

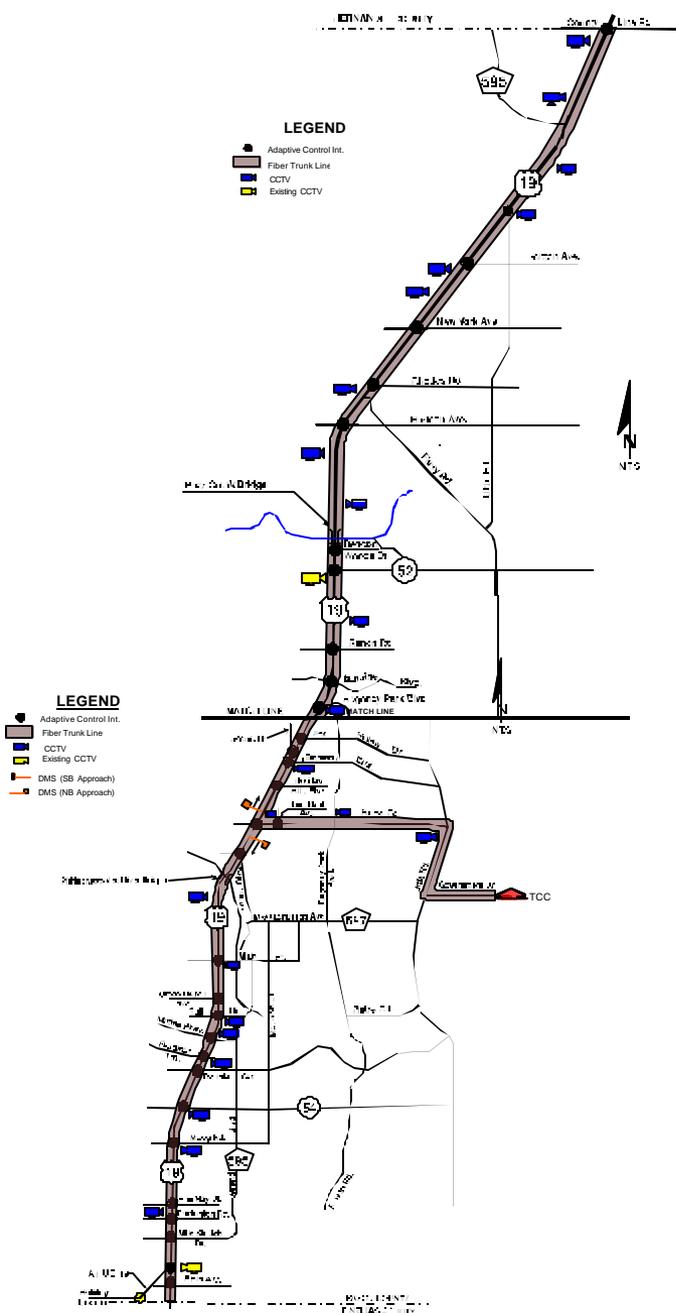
■ Design	\$400,000
■ CEI & FDOT Contract Admin.	\$350,000
■ Construction	\$2,765,000
■ <b>TOTAL</b>	<b>\$3,515,000</b>

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# Pasco County ATMS

## Next Steps



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# QUESTIONS?

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