

Item # 46

**SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM**

SUBJECT: State Road 15/600 (U.S. Highway 17/92) / State Road 436 Interchange

DEPARTMENT: PUBLIC WORKS **DIVISION:** ENGINEERING

AUTHORIZED BY: W. Gary Johnson **CONTACT:** Jerry McCollum, P.E. EXT. 5651
W. Gary Johnson, P.E., Director

Agenda Date 05-27-03 Regular Consent Work Session Briefing
Public Hearing – 1:30 Public Hearing – 7:00

MOTION/RECOMMENDATION:

Update -- Information Only.

BACKGROUND:

The Florida Department of Transportation (FDOT) has initiated a Project Development and Environment (PD&E) Study for the State Road 15/600 (U.S. Highway 17/92) / State Road 436 Interchange. The purpose of this study is to identify and evaluate viable alternatives for improving the existing intersection. The consultant for FDOT, Post, Buckley, Schuh & Jernigan, Inc., will present six alternatives that are being evaluated for this project.

(Districts 2 & 4 - Commissioner Morris & Commissioner Henley)

Reviewed by:
Co Atty: _____
DFS: _____
Other: _____
DCM: MM
CM: JS
File No. BPWE01



US 17-92 Interchange at SR 436 PD&E Study



**Presented to
Seminole County
Board of County Commissioners
May 27, 2003**



Presentation Outline

- **Project Schedule**
- **PD&E Study Process**
- **Alternatives Considered**
- **Results of Alternatives Analysis**

SR 15/600 (US17-92) Interchange at SR 436



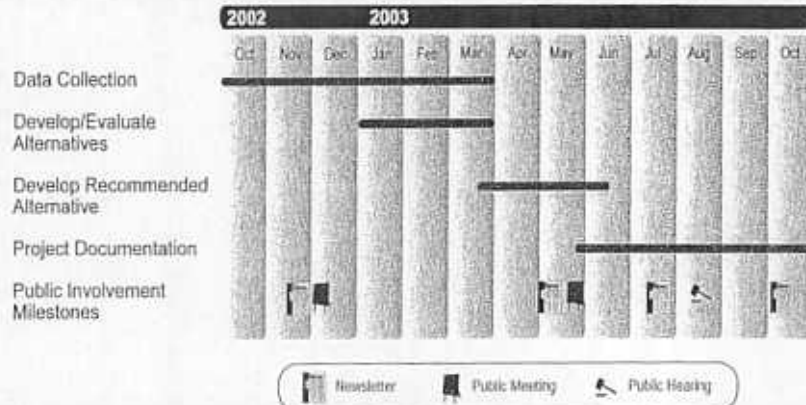
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SR 15/600 (US17-92) Interchange at SR 436



Project Schedule



SR 15/600 (US17-92) Interchange at SR 436



Presentation Outline

- Project Schedule
- PD&E Study Process
- Alternatives Considered
- Results of Alternatives Analysis

SR 15/600 (US17-92) Interchange at SR 436



PD&E Study Process

- **Data Collection**
- **Identification of Alternatives**
- **Engineering and Environmental Evaluations**
- **Public Involvement**
- **Engineering and Environmental Documentation**
- **Identification of the Preferred Improvement**

SR 15/600 (US17-92) Interchange at SR 436



Presentation Outline

- **Project Schedule**
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SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

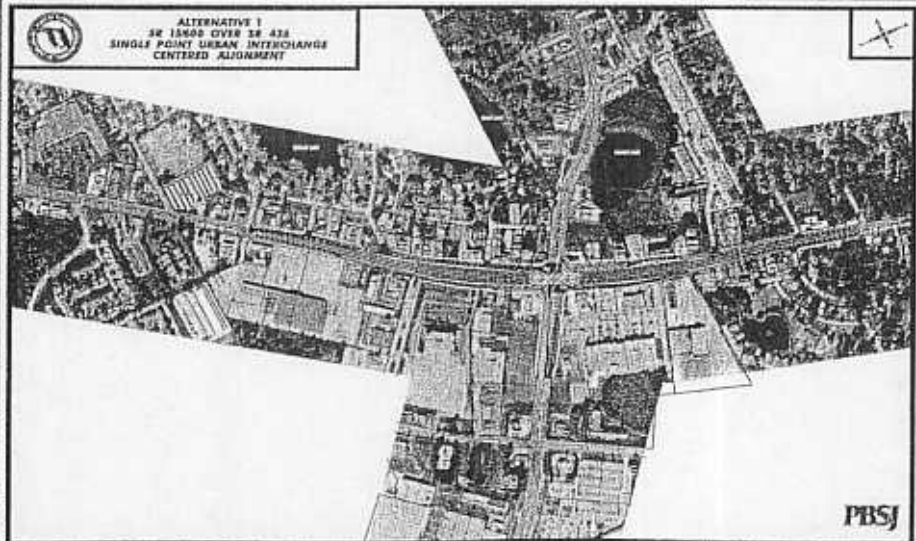
- No Build
- Tight Urban Diamond Interchange (TUDI)
 - SR 436 over US 17-92
 - US 17-92 over SR 436
 - Left, Right, Center
- Single Point Urban Interchange (SPUI)
 - SR 436 over US 17-92
 - US 17-92 over SR 436
 - Left, Right, Center
- Viaduct
 - US 17-92 over SR 436
 - Center

SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

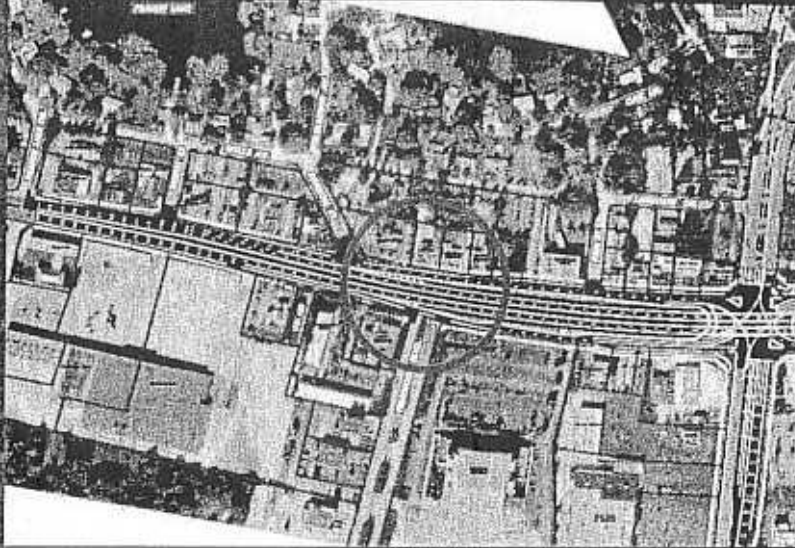
Single Point Urban Interchange (SPUI)





Alternatives Considered

Single Point Urban Interchange (SPUI)

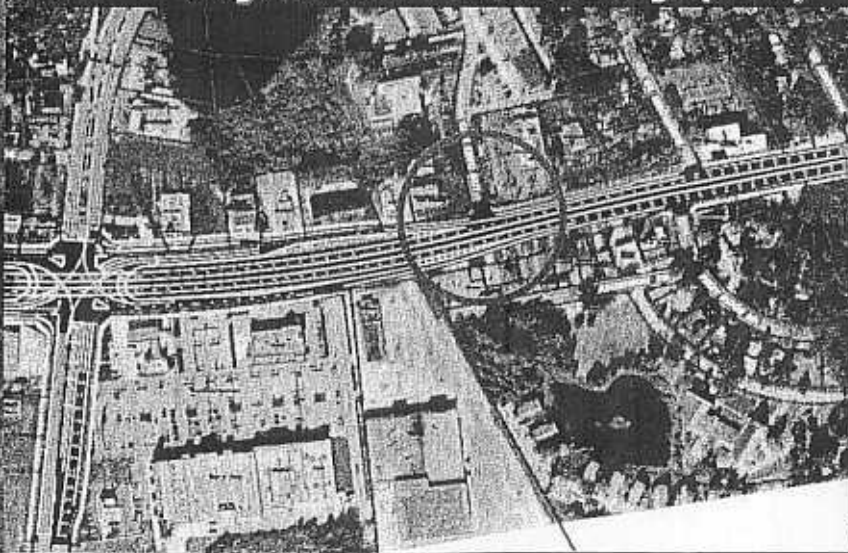


SR 436



Alternatives Considered

Single Point Urban Interchange (SPUI)



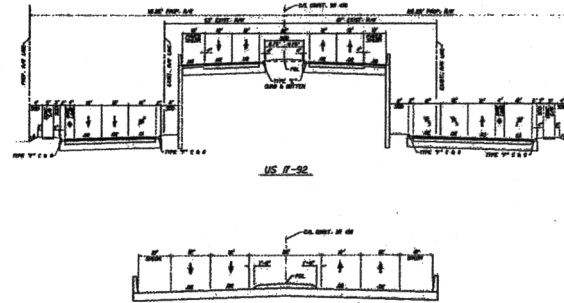
R 436



Alternatives Considered

Single Point Urban Interchange (SPUI)

ALTERNATIVE 1
SR 15/600 OVER SR 436
SINGLE POINT URBAN INTERCHANGE
CENTERED ALIGNMENT



BRIDGE TYPICAL SECTION
US 17-92 OVER SR 436

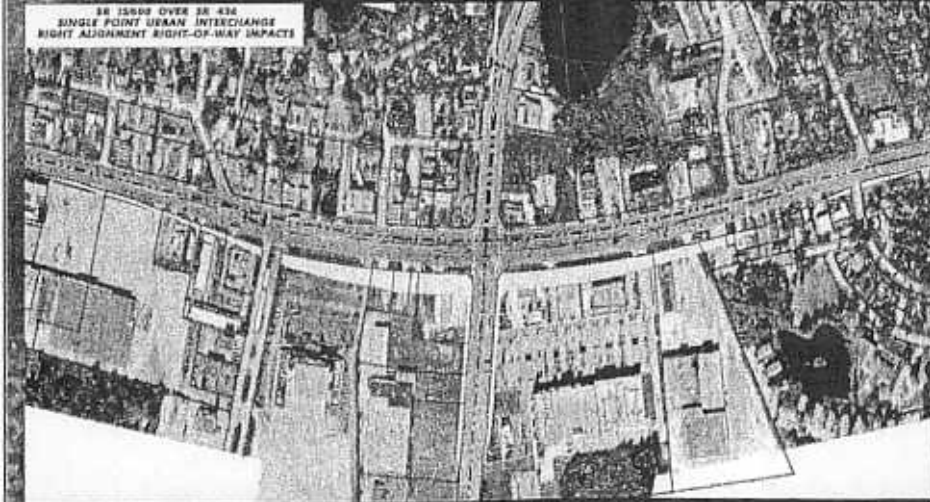
SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Single Point Urban Interchange (SPUI)

SR 15/600 OVER SR 436
SINGLE POINT URBAN INTERCHANGE
RIGHT ALIGNMENT RIGHT-OF-WAY IMPACTS



SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Single Point Urban Interchange (SPUI)

SR 1560 OVER SR 436
SINGLE POINT URBAN INTERCHANGE
CENTERED ALIGNMENT RIGHT-OF-WAY IMPACTS



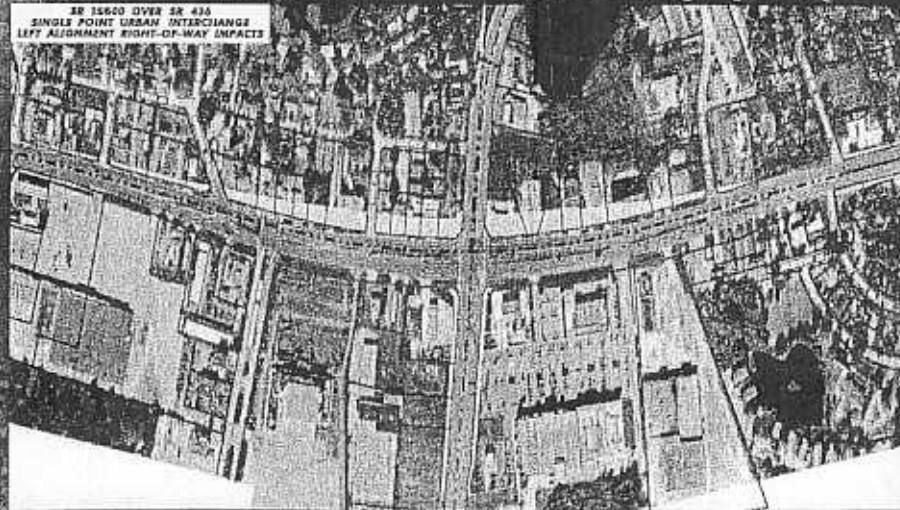
SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Single Point Urban Interchange (SPUI)

SR 1560 OVER SR 436
SINGLE POINT URBAN INTERCHANGE
LEFT ALIGNMENT RIGHT-OF-WAY IMPACTS

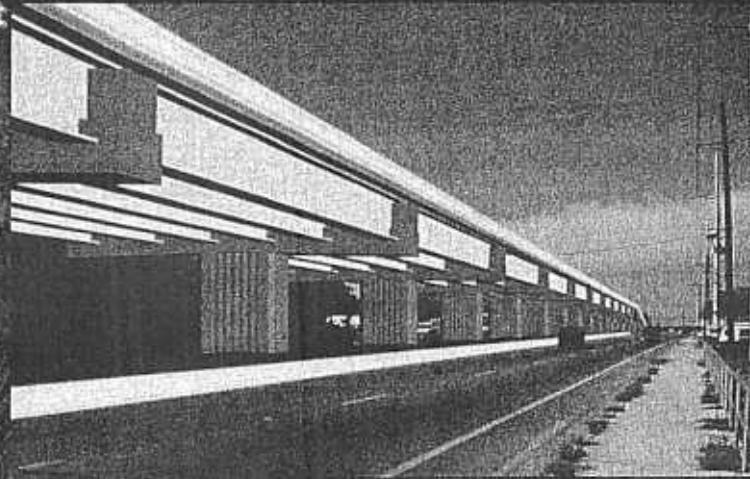


SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Viaduct

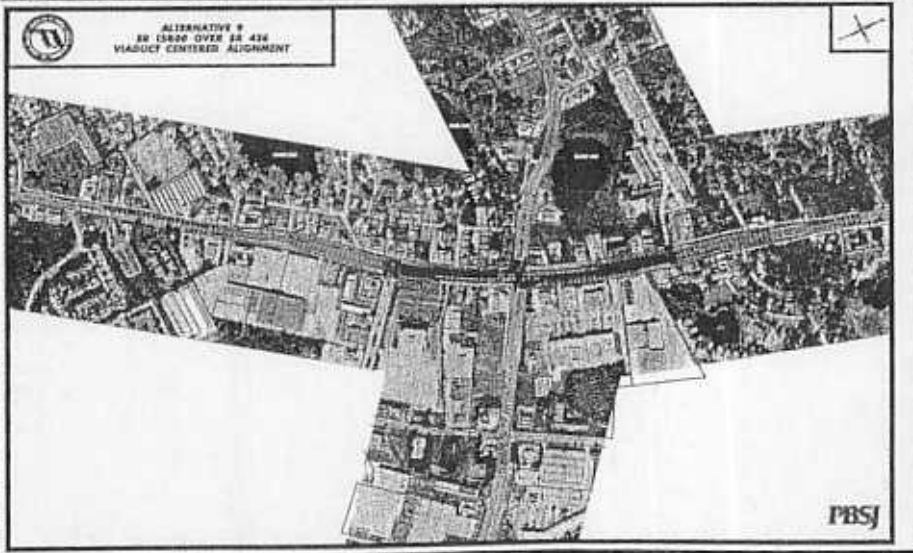


SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Viaduct





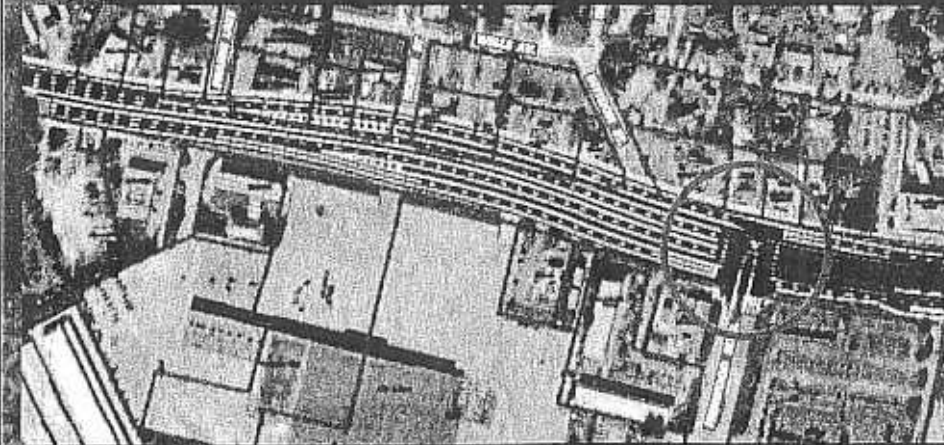
Alternatives Considered

Viaduct



Alternatives Considered

Viaduct

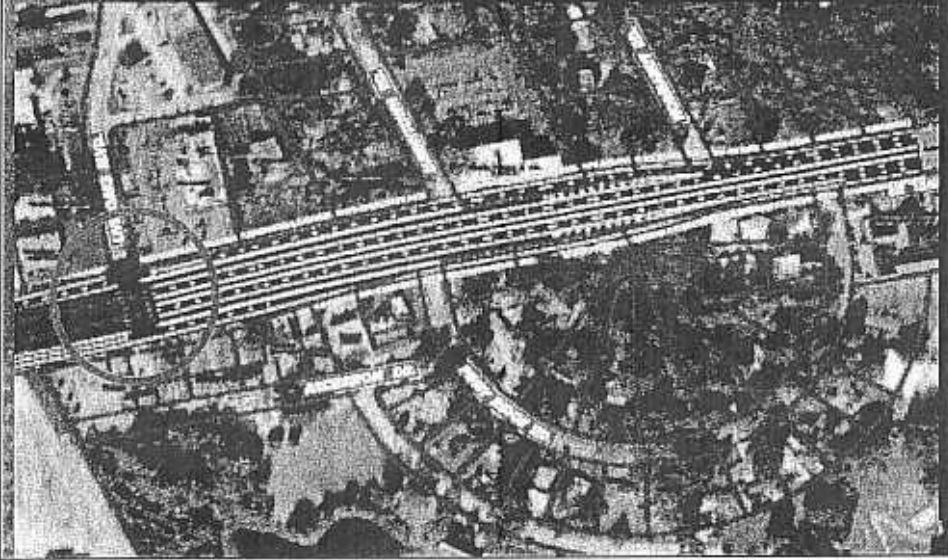


SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

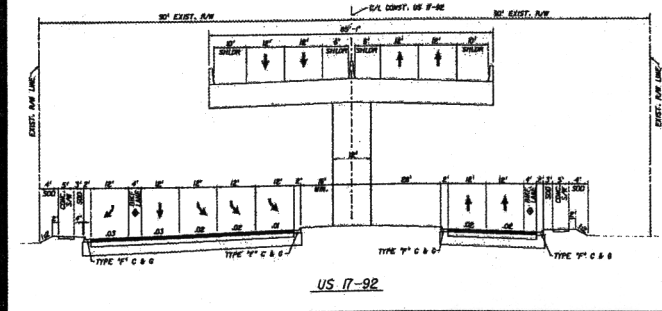
Viaduct



Alternatives Considered

Viaduct

ALTERNATIVE 9 SR 15/600 OVER SR 436 VIADUCT CENTERED ALIGNMENT



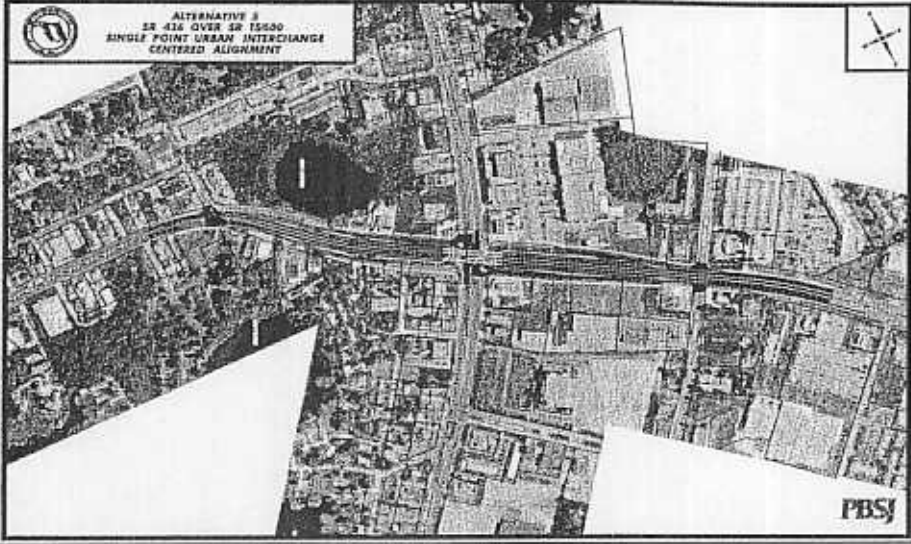
SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

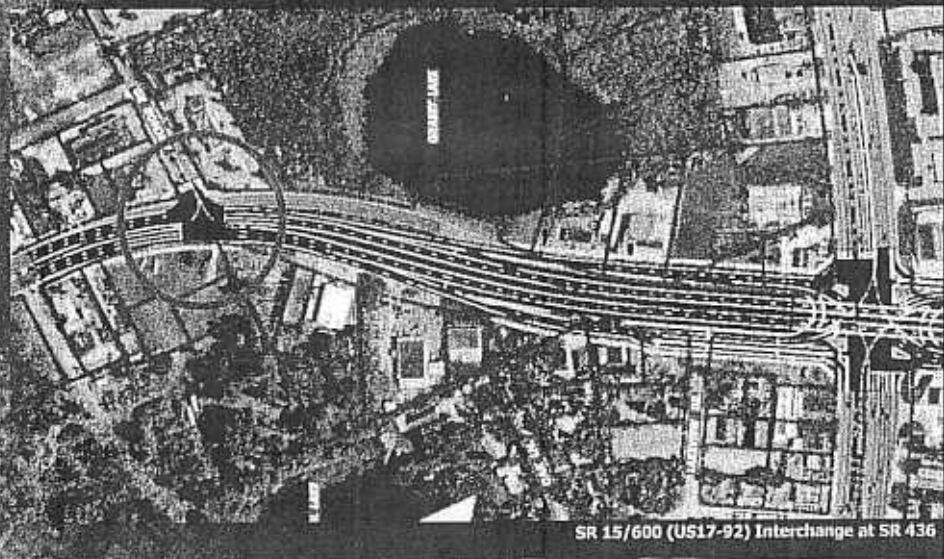
Single Point Urban Interchange (SPUI)

ALTERNATIVE 3
SR 436 OVER SR 15600
SINGLE POINT URBAN INTERCHANGE
CENTERED ALIGNMENT



Alternatives Considered

Single Point Urban Interchange (SPUI)



SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Single Point Urban Interchange (SPUI)



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Alternatives Considered

Single Point Urban Interchange (SPUI)



SR 15/600 (US17-92) Interchange at SR 436



Alternatives Considered

Single Point Urban Interchange (SPUI)



SR 15/600 (US17-92) Interchange at SR 436



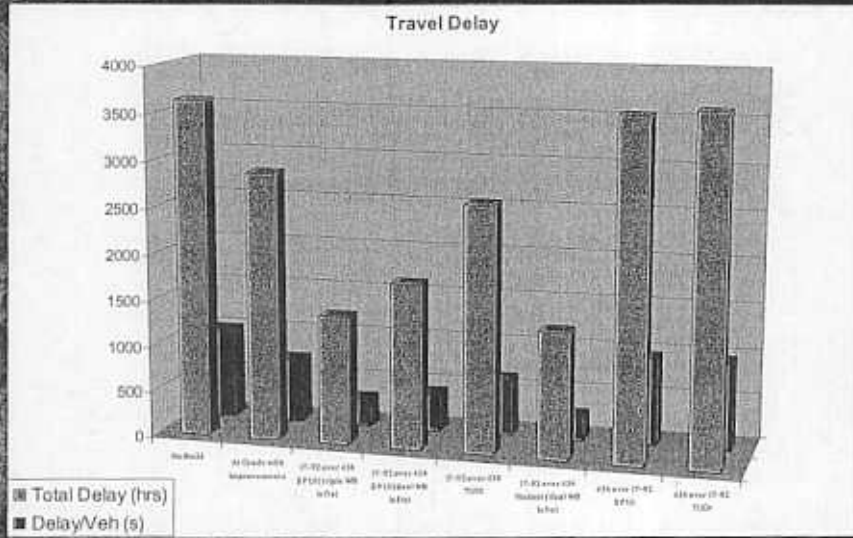
Presentation Outline

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- **Results of Alternatives Analysis**

SR 15/600 (US17-92) Interchange at SR 436



Results of Alternative Analysis



Results of Alternative Analysis

Alternatives Evaluation Matrix US 17-92/SR 436 PO&E

Impact Criteria	SPUS 17-92			TUP			Alternatives			At Grade with Improvements	No Build
	Center	Left	Right	US 17-92	Center	Left	Right	SPUS SR 436	TUP SR 436		
Engineering											
Triple Left Movement	○	○	○	○	○	○	○	○	○	○	●
Major Intersection Closures	○	○	○	○	○	○	○	○	○	○	○
Travel Delay	○	○	○	○	○	○	○	○	○	○	○
Control Signal Redundancy	○	○	○	○	○	○	○	○	○	○	○
Intersection Clearance Time	○	○	○	○	○	○	○	○	○	○	○
Access Management	○	○	○	○	○	○	○	○	○	○	○
RW Costs	○	○	○	○	○	○	○	○	○	○	○
Construction Costs (LSE)	○	○	○	○	○	○	○	○	○	○	○
MOT	○	○	○	○	○	○	○	○	○	○	○
Compatibility with Wetlands Protections	○	○	○	○	○	○	○	○	○	○	○
Environmental											
Contamination (No. of Panels)	9	7	7	9	6	4	4	6	5	2	0
Air Quality	○	○	○	○	○	○	○	○	○	○	○
Noise	○	○	○	○	○	○	○	○	○	○	○
Wetlands	○	○	○	○	○	○	○	○	○	○	○
Architect	○	○	○	○	○	○	○	○	○	○	○
Business Relocation	29	27	13	14	12	12	8	10	10	0	0
Business Impacts	64	54	48	60	43	38	30	49	53	8	0
Local Plans	○	○	○	○	○	○	○	○	○	○	○
Local 40100	○	○	○	○	○	○	○	○	○	○	○
Feasibility	○	○	○	○	○	○	○	○	○	○	○
Feasibility/CA	○	○	○	○	○	○	○	○	○	○	○

● Represents most favorable conditions
 ○ Represents least favorable conditions



Results of Alternative Analysis



Results of Alternative Analysis





Results of Alternative Analysis



Results of Alternative Analysis





Results of Alternative Analysis



Results of Alternative Analysis

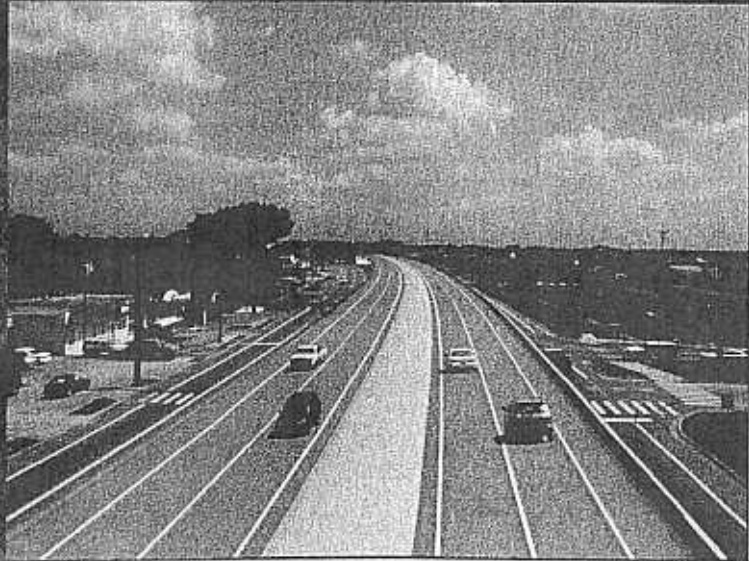




Results of Alternative Analysis



Results of Alternative Analysis





Project Contacts

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E-mail: lediaz@pbsj.com

On the Web at <http://interchange.pde.pbsjis.com>

SR 15/600 (US17-92) Interchange at SR 435