ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IM-95-1(157) Glynn County
P. I. No. 511325

OFFICE Preconstruction

DATE February 9, 2001

FROM C. Wayne Hutto, Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT **PROJECT CONCEPT REPORT APPROVAL**

Attached for your files is the approval for subject project.

CWH/cj

Attachment

DISTRIBUTION:

Tom Turner
David Mulling
Harvey Keepler
Jerry Hobbs
Herman Griffin
Michael Henry
Marion Waters
Marta Rosen
Paul Liles
Jimmy Chambers (ATTN: Ted Cashin)
Gary Priester
FHWA
Joe Palladi

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IM-95-1(157) Glynn County
P.I. No. 511325

OFFICE Preconstruction

DATE December 18, 2000

FROM Thomas L. Turner, P.E., Director of Preconstruction

TO J. Tom Coleman, Jr., Commissioner

SUBJECT PROJECT CONCEPT REPORT

This project is the installation of a fog detection and warning system on I-95 from just south of Exit 29 to north of Exit 36 for a total of 8.20 miles. I-95 is a major north-south interstate that runs from Florida to the northeastern states, through a portion of southeastern Georgia near the Atlantic coast. When combined with the correct atmospheric conditions, the moisture from these sources supports the formation of fog. When fog becomes sufficiently dense, motorists' vision becomes obstructed, making it difficult for them to see an object in the road or a slow-moving vehicle in time to avoid a collision. The GDOT has documented that fog has been a contributing factor in a number of collisions on I-95 in Georgia.

This project proposes to install a pilot fog detection and warning system on I-95. The system will be expandable so that in the future other fog prone areas of I-95 can be incorporated into the system. The system will be primarily for fog detection and warning, but changeable message signs (CMS) and highway advisory radio (HAR) can be used to notify motorists of other relevant events, such as hurricane evacuation.

Fog sensors, closed circuit television (CCTV) cameras, speed detectors, CMS, HAR and the necessary support hardware and software are proposed for installation in both directions of I-95 from just south of Exit 29 to just north of Exit 36. The system will detect the presence of fog, issue appropriate messages to the motorists approaching the area, and alert GDOT personnel in the Area Engineer's office and/or in the Savannah Transportation Control Center (TCC).

Environmental concerns include requiring a Categorical Exclusion be prepared; a public hearing is not required; time saving procedures are appropriate.

The estimated costs for this project are:

	PROPOSED	APPROVED	PROG DATE	LET DATE
Construction (includes E&C and inflation)	$3,170,000	$2,006,000	2001	01-03
Right-of-Way & Utilities	-----	-----		

See attached email from Jim Tolson.

This project is in the STIP. I recommend this project concept be approved.

TLT:JDQ/cj

Attachment

CONCUR _____
Frank L. Danchetz, P.E., Chief Engineer

APPROVE _____ 1/31/01
FOR Larry R. Dreihaup, Division Administrator, FHWA

APPROVE _____
J. Tom Coleman, Jr., Commissioner

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: IM-95-1(157) Glynn
P.I. Number 511325-

OFFICE: Atlanta, Georgia

DATE: November 28, 2000

FROM: David Mulling, Project Review Engineer DTM

TO: Wayne Hutto, Assistant Director of Pre-construction

SUBJECT: **CONCEPT REPORT**

We have reviewed the concept report submitted November 15, 2000 by the letter from Marion Waters dated November 14, 2000, and have no comment.

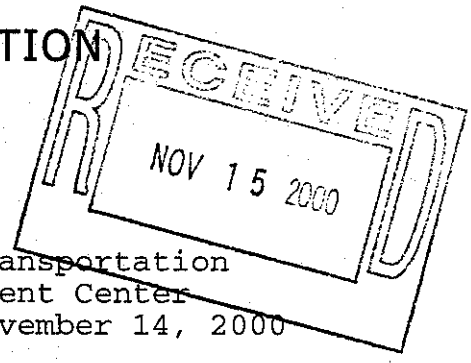
The costs for the project are:

Construction	$2,882,000
Inflation	$ 0
E&C	$ 288,000
Reimbursable Utilities	$ 0
Right of Way	$ 0

DTM

c: Marion Waters – Attention: Jim Tolson

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA



INTERDEPARTMENTAL CORRESPONDENCE

FILE IM-95-1(157)
Glynn County
P.I. 511325

OFFICE Transportation Management Center
DATE November 14, 2000

FROM MGW/JET
Marion Waters III, P.E., State Traffic Operations Engineer

TO Wayne Hutto, Assistant Director of Preconstruction

SUBJECT **PROJECT CONCEPT REPORT**

Attached is the original copy of the above mentioned project concept report for your further handling and approval in accordance with the Plan Development Process (PDP).

By copy of this letter, and in accordance with the PDP, additional copies are also being sent to the offices as listed below for review and comment.

If you have any further questions contact, Jim Tolson at (404) 635-8140.

MGW: JET
Attachments

Cc: Jim Kennerly, State Road and Airport Design Engineer
Joe Palladi, State Urban Design Engineer
Marta Rosen, State Transportation Planning Administrator
Paul Mullins, Director of Planning and Programming
Harvey Keepler, Environmental /Location Engineer
Gary Priester, District 5 Engineer
David Mulling, Project Review Engineer
Paul Liles, State Bridge and Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF TRAFFIC OPERATIONS
PROJECT CONCEPT REPORT SIGN OFF FORM

Project No. IM-95-1(157), Glynn County
I-95 Fog Detection System from SR 520/US 82 to SR 27/US 341
Federal Route Number: I-95 - 1
State Route Number: 405

G.D.O.T. P.I. Number: 511325

RECOMMENDATION FOR APPROVAL

1/19/00 Marion G. Waters III
Date State Traffic Operations Engineer

This project concept is contained in the Regional Transportation Improvement Program (RTIP) and in the State Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTIP and in the STIP.

Date State Road Design Engineer

Date State Urban Design Engineer

Date State Transportation Planning Administrator

Date State Transportation Programming Engineer

Date State Environmental/Location Engineer

Date District Engineer

Date Project Review Engineer

Date State Bridge and Structural Design Engineer

PROJECT CONCEPT REPORT

DATE: August 23, 2000

PROJECT NO.: IM-95-1(157), Glynn County P.I. NO.: 511325

PROJECT NAME: I-95 Fog Detection System

U.S. ROUTE: I-95 STATE ROUTE: 405

LOCATION: I-95 from south of Exit 29 (SR 520/US 82/US 17) to north of Exit 36 (SR 27/US 341/US 25) as shown in Exhibit 1.

PROJECT LENGTH ALONG I-95: 8.20 miles

TRAFFIC: (two-way ADT) 1998: 37,678 vpd

PDP CLASSIFICATION: Minor Project, Full Oversight Project

FOS(X) EXEMPT( ) S( ) F( )

FUNCTIONAL CLASSIFICATION: Principle Arterial (Interstate)

EXISTING CONDITIONS

TYPICAL SECTION: Four-lane divided (two-lanes each direction) with a grass median

POSTED SPEED LIMIT: 65 MPH

MAXIMUM DEGREE OF CURVATURE: N/A

MAXIMUM GRADE: N/A

EXISTING MAJOR STRUCTURES: Five Bridges - SR 520/US 82/US 17, South Brunswick River, SR 303, Turtle River, Gibson Creek and SR 27/US 341/US25

ACCIDENT HISTORY: Twenty fog related accidents were recorded over a ten year period (1988-1997) within the vicinity of this proposed project.

PROPOSED DESIGN

PROPOSED TYPICAL SECTION: Existing typical section will be maintained.

PROPOSED RIGHT-OF-WAY WIDTH: Existing right-of-way width will be maintained.

DESIGN SPEED: N/A

	Allowable	Used
MAXIMUM DEGREE OF CURVATURE:	N/A	N/A
MAXIMUM GRADE:	N/A	N/A

TYPE OF ACCESS: Limited access freeway.

TRAFFIC CONTROL DURING CONSTRUCTION: Shoulder closures and/or lane closures will be necessary during installation of camera poles, fog sensors, speed sensors and CMS. Traffic pacing will be necessary during installation of CMS structures.

PROPOSED STRUCTURES: Structures for CMS support, CCTV poles and hub building.

DESIGN VARIATIONS REQUESTED

CONTROLLING CRITERIA	UNDETERMINED	YES	NO
HORIZONTAL ALIGNMENT:	( )	( )	(X)
ROADWAY WIDTH:	( )	( )	(X)
SHOULDER WIDTH:	( )	( )	(X)
VERTICAL GRADES:	( )	( )	(X)
CROSS SLOPES:	( )	( )	(X)
STOPPING SIGHT DISTANCE:	( )	( )	(X)
SUPERELEVATION RATES:	( )	( )	(X)
HORIZONTAL CLEARANCE:	( )	( )	(X)
SPEED DESIGN:	( )	( )	(X)
VERTICAL CURVES:	( )	( )	(X)
BRIDGE WIDTH:	( )	( )	(X)
BRIDGE STRUCTURAL CAPACITY:	( )	( )	(X)

NUMBER OF PARCELS: 0

DISPLACEMENTS: N/A

PRELIMINARY COST ESTIMATE

Fog Sensors, 12 @ $7,000	$84,000
Microloop Detectors, 20 @ $3,180	$63,600
Changeable Message Signs (CMS), 4 @ $225,000	$900,000
CMS Support Structures, 4 @ $51,040	$204,160
Guardrail Anchorage, Type 12, 24 @ $1,800	$43,200
Guardrail, Type W, 756' @ $12.50	$9,450
CCTV Systems, 4 @ $9,800	$39,200
Fiber Optic Video/Data Transmitter, 4 @ $1500	$6000
Fiber Optic Video/Data Receiver, 4 @ $1500	$6000
Computers, 4 @ $4,000	$16,000
System Software, 1 @ $75,000	$75,000
System Integration, 1 @ $50,000	$50,000
Fiber Optic Cable, 24 fiber, 39,600' @ $5.62	$222,552
Fiber Optic Cable, 96 fiber, 39,300' @ $5.00	$196,500
Fiber Optic Drop/Closure Kits, 13 @ $975	$12,675
Fiber Optic Modem/Transceiver, 32 @ $980	$31,360
Hub Site Equipment, 1 @ $10,000	$10,000
Conduit, Rigid, 1", 3,000' @ $8	$24,000
Conduit, Rigid, 2", 800' @ $18	$14,400
Conduit, Nonmetal, 2", 61,400 @ $4.50	$276,300
Conduit, Rigid, 3" (Bored), 1,000' @ $100	$100,000
Type 2 Pull Box, 30 @ $300	$9,000
Type 5 Pull Box, 62 @ $2,000	$124,000
Fog Sensor Pole, 12 @ $850	$10,200
Fog Sensor Station Support, 12 @ $1,050	$12,600
Cabinet Assembly, 6 @ $5,000	$30,000
Hub Building, 1 @ $120,000	$120,000
Concrete Camera Poles, 4 @ $5,900	$23,600
Local Power Drops, 18 @ $5,400	$97,200
Telephone Junction Box, 1 @ $500	$500
Highway Advisory Radio, 2 @ $25,000	$50,000
Testing, 1 @ $20,000	$20,000
Subtotal Construction Cost	$2,881,497
10% E & C	$288,150
Grand Total	$3,169,647

COORDINATION AND SCHEDULING

CONCEPT TEAM MEETING DATE: 2 October 2000

CONFORMS TO TIP/STIP? Yes

MEETS LOGICAL TERMINI REQUIREMENTS? Yes

P.A.R. MEETING: Not required.

LEVEL OF ENVIRONMENTAL ANALYSIS: A Categorical Exclusion (CE) is anticipated.

PUBLIC INVOLVEMENT: N/A

PERMITS REQUIRED: None anticipated.

TIME SAVING PROCEDURES APPROPRIATE: Yes

SCHEDULING CONSIDERATIONS

TIME TO COMPLETE ENVIRONMENTAL: To be determined.

TIME TO COMPLETE PRELIMINARY RD/RW PLANS: To be determined.

TIME TO COMPLETE 404 PERMIT: N/A.

TIME TO COMPLETE FINAL CONSTRUCTION PLANS: To be determined.

TIME TO PURCHASE REQUIRED RIGHT-OF-WAY: N/A.

LOCAL GOVERNMENT COMMITMENTS: None.

OTHER PROJECTS IN AREA: Project NH-IM-95-1(118) / P.I. No.511090 Widening of roadway.

PROBABLE LOCATIONS OF USTs: N/A

PROBABLE LOCATION OF HAZARDOUS WASTE: None anticipated.

OTHER ALTERNATIVES CONSIDERED: No Build.

COMMENTS: Installation of Fog Sensors, Speed Detectors, CMS and HAR to detect fog, warn motorists and advise them to take appropriate action.

ATTACHMENTS: Need and Purpose Statement, Project Location Sketch.

NEED AND PURPOSE STATEMENT:

I-95, a major north-south interstate that runs from Florida to the northeastern states, runs through a portion of southeastern Georgia near the Atlantic coast. This area of Georgia has many rivers, streams, marshes and wetlands, in addition to being near the coast. When combined with the correct atmospheric conditions, the moisture from these sources supports the formation of fog.

When fog becomes sufficiently dense, motorists' vision becomes obstructed, making it difficult for them to see an object in the road or a slow-moving vehicle in time to avoid a collision. The Georgia Department of Transportation (GDOT), has documented that fog has been a contributing factor in a number of collisions on I-95 in Georgia.

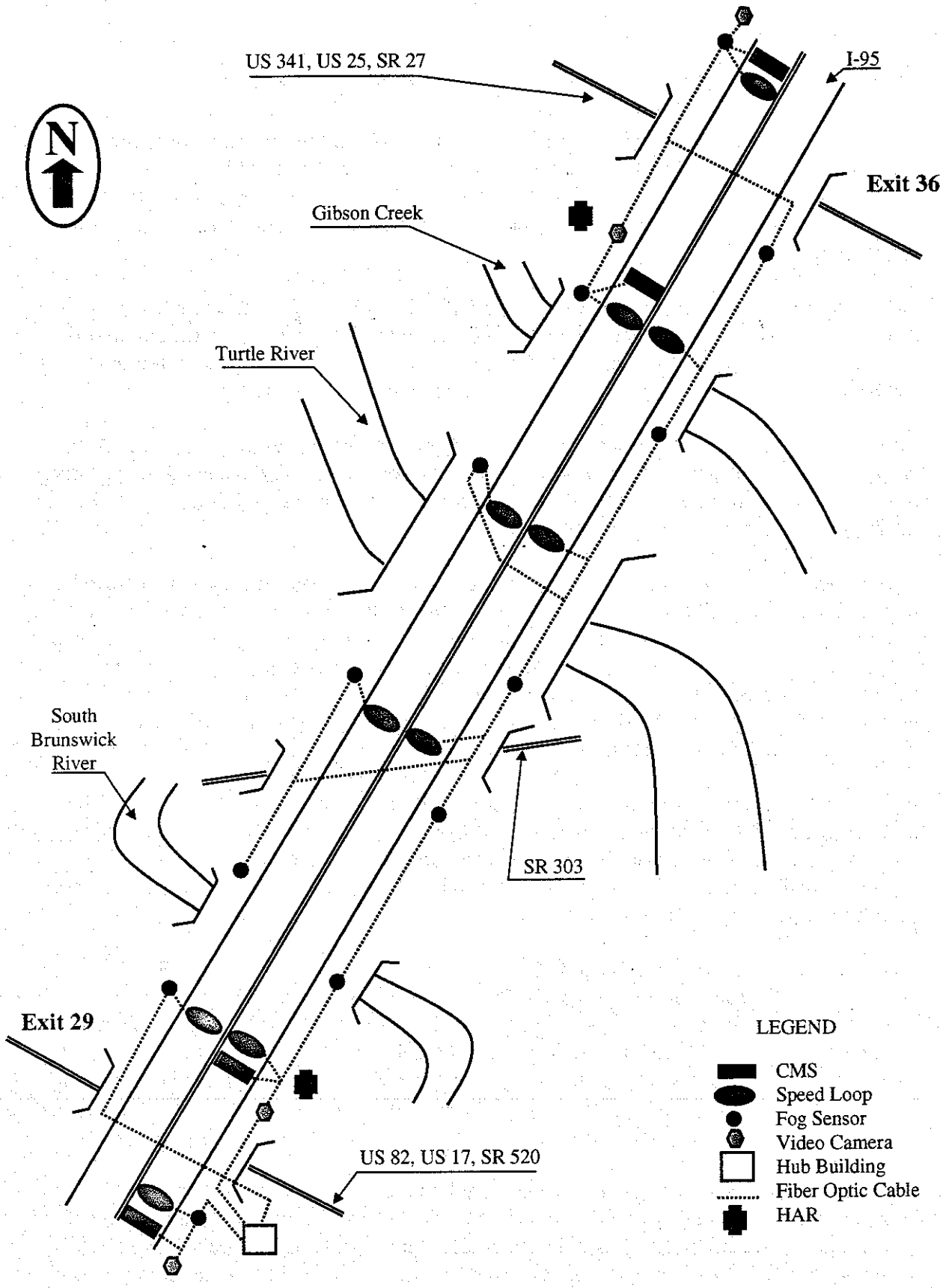
Systems have been developed that can detect the presence of fog, measure its density and issue warning messages to the motorists. Since the fog sensors can measure the density of the fog, different messages can be issued that reflect how much vision is obscured and advising motorists to take appropriate action.

The purpose of this project is to design a fog detection and warning system for a pilot installation on I-95. The system will be expandable, so that in the future, other fog-prone areas on I-95 can be incorporated into the system. Initially, the system will operate independently, but it will be designed so that it can be incorporated into the NaviGAtor system in the future, if desired. The system will be primarily for fog detection and warning, but the Changeable Message Signs (CMS) and Highway Advisory Radio (HAR) can be used to notify motorists of other relevant events, such as hurricane evacuation.

An earlier study analyzed the I-95 corridor in Georgia and concluded that the best location for a pilot installation was in Glynn County, from just south of Exit 29 to just north of Exit 36. This segment of I-95 had frequent occurrences of fog, numerous fog-related collisions and identifiable moisture sources that could be monitored by fog detection equipment.

Fog sensors, closed circuit television (CCTV) cameras, speed detectors, CMS, HAR and the necessary support hardware and software are proposed for installation on both directions of I-95 from just south of Exit 29 to just north of Exit 36. The system will detect the presence of fog, issue appropriate messages to the motorists approaching the area and alert GDOT personnel in the Area Engineer's office and/or in the Savannah Transportation Control Center (TCC). GDOT personnel will also have the ability to have the CMS and HAR issue other messages, such as hurricane evacuation information.

Fiber optic trunk cable and conduit will be installed along one side of I-95 throughout the length of the project. Fiber branch runs will be installed in conduit attached to bridges to gain access as needed to the other side of the interstate. The fiber will be used to connect the cameras, CMS, HAR, fog sensors and speed sensors to the hub for data collection and the issuance of commands.


US 341, US 25, SR 27
I-95
N
Exit 36
Gibson Creek
Turtle River
South
Brunswick
River
SR 303
Exit 29
US 82, US 17, SR 520
LEGEND
CMS
Speed Loop
Fog Sensor
Video Camera
Hub Building
Fiber Optic Cable
HAR

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G.D.O.T. P.I. Number: 511325

RECOMMENDATION FOR APPROVAL

11/14/00 Marion B. Waters III
Date State Traffic Operations Engineer

This project concept is contained in the Regional Transportation Improvement Program (RTIP) and in the State Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTIP and in the STIP.

Date State Road Design Engineer

Date State Urban Design Engineer

Date State Transportation Planning Administrator

Date State Transportation Programming Engineer

Date State Environmental/Location Engineer

Date District Engineer

Date Project Review Engineer

Nov. 20, 2000 Paul V. Liles Jr.
Date State Bridge and Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
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11/14/00 Marion G. Waters
Date State Traffic Operations Engineer

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Date State Road Design Engineer

Date State Urban Design Engineer

11/28/00 Martin V. Rozen
Date State Transportation Planning Administrator

Date State Transportation Programming Engineer

Date State Environmental/Location Engineer

Date District Engineer

Date Project Review Engineer

Date State Bridge and Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
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Date State Road Design Engineer

Date State Urban Design Engineer

Date State Transportation Planning Administrator

Date State Transportation Programming Engineer

Date State Environmental/Location Engineer

Gary W. Tuck
Date District Engineer

Date Project Review Engineer

Date State Bridge and Structural Design Engineer

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11/14/00 Marion G. Waters III
Date State Traffic Operations Engineer

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Date State Road Design Engineer

12/7/00
Date State Urban Design Engineer

Date State Transportation Planning Administrator

Date State Transportation Programming Engineer

Date State Environmental/Location Engineer

Date District Engineer

Date Project Review Engineer

Date State Bridge and Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
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RECOMMENDATION FOR APPROVAL

11/14/00 Marion B Waters III PE
Date State Traffic Operations Engineer

This project concept is contained in the Regional Transportation Improvement Program (RTIP) and in the State Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTIP and in the STIP.

Date State Road Design Engineer

Date State Urban Design Engineer

Date State Transportation Planning Administrator

Date State Transportation Programming Engineer

Date State Environmental/Location Engineer

Date District Engineer

11/28/00 C-L J. Mallej
Date Project Review Engineer

Date State Bridge and Structural Design Engineer

From: Jim.Tolson@dot.state.ga.us
To: Yung, Jessie <FHWA>
Date: 1/30/01 2:36PM
Subject: FW: IM-95-1(157) PI 551325

Jessie,

You have informed me that the concept report for this project is at your office for signature. You questioned the programmed amount in the STIP of 1.5 million and the cost estimate in the report of 3.1 million.

The attached e-mail is a notification I sent to the programming office requesting a cost revision to the project. I've talked to Percy and he informed me that he typically sends the STIP amendment request out when he receives work authorization and he will do so on this project.

In the future, on concept reports that are above the programmed amount I will include a comment in the "conforms to the STIP/TIP" section in the report.

Jim.

-----Original Message-----
From: Tolson, Jim
Sent: Tuesday, November 14, 2000 8:55 AM
To: Middlebrooks, Percy
Cc: Golden, Keith
Subject: IM-95-1(157) PI 551325

Project: IM-95-1(157)
P.I. No. 551325
Glynn County
I-95 Fog Detection System from SR 520/US 82 to SR 27/US 341

Percy,

This is a full oversight project that is currently funded for $2,006,000.
We have completed the concept report and are submitting for signatures. The cost estimate is $2,881,497 plus 10% E&C of $288,150 for a grand total of $3,169,647. Please update funding accordingly.

If you have any questions call me at 404-635-8140.

Jim Tolson.

CC: hubsmtp.gwhub("Keith.Golden@dot.state.ga.us","Derrick.Cameron@dot.state.ga.us")