D.O.T. 66

ORIGINAL COPY TO FC GENERAL FILE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. No. 610740

OFFICE Preconstruction

DATE August 12, 1992

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/se

Attachment

DISTRIBUTION:

John Lively
Robert E. Humphrey
David Studstill
Herman Griffin
Roland Hinners
Darrell Elwell
George Boulineau
Ron Colvin
Felton Rutledge
FHWA

P.O.T. 65

GDOT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. 610740

OFFICE Preconstruction

DATE June 26, 1992

FROM Hoyt J. Lively, Director of Preconstruction

TO Wayne Shackelford, Commissioner

SUBJECT INTERCHANGE IMPROVEMENTS - PROJECT CONCEPT REPORT

This project will widen the bridge and approaches on SR 92 over I-75 and the ramps for increased capacity and safety. The existing SR 92 has 4 lanes with a 20' raised median and the bridge has 6 lanes, i.e., 2 thru lanes and left turn lane each direction and a 4' raised median. Existing ramps are single lane. Base year and design year traffic is 21,700 VPD (1995) and 36,900 VPD (2015).

The proposed project will widen the roadway approaches to have a rural/urban section with 6 lanes (3 each direction) and retain the 20' raised median. The bridge will be widened to 124' to accommodate 3 thru lanes and dual left turn lanes in each direction and 10' shoulders. The ramps will be widened to 3 lanes for dual left turns and the adjacent roads will be improved for better traffic circulation. Traffic will be maintained on existing roads during construction. There are three possible UST sites to be investigated. A public hearing will be held. The estimated cost of the project is:

	PROPOSED	APPROVED	PROG. DATE
Constr(Infl&E/C)	$2,374,000	$200,000	FY 94
Right-of-way	$2,495,000	No Est.	
Utilities	LGPA*		

*LGPA to be sent after concept approval

I recommend that we approve this project concept report, that the project be removed from Preprogram Status and added to the Construction Work Program for implementation.

HJL/CWH/se

CONCUR: G. C. Lewis
G. C. Lewis, State Highway Engineer

APPROVED: for James F. Corum 7/30/92
Charles J. Nemmers, Division Administrator, FHWA

APPROVED: Wayne Shackelford
Wayne Shackelford, Commissioner

D.O.T. 6

GDOT

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. 610740

OFFICE Preconstruction

DATE June 26, 1992

FROM Hoyt J. Lively, Director of Preconstruction

TO Wayne Shackelford, Commissioner

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Right-of-way	$2,495,000	No Est.	
Utilities	LGPA*		

*LGPA to be sent after concept approval

I recommend that we approve this project concept report, that the project be removed from Preprogram Status and added to the Construction Work Program for implementation.

HJL/CWH/se

CONCUR: G. C. Lewis
G. C. Lewis, State Highway Engineer

APPROVED: for 7/30/92
Charles J. Nemmers, Division Administrator, FHWA

APPROVED: Wayne Shackelford
Wayne Shackelford, Commissioner

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. 610740

OFFICE Preconstruction

DATE June 24, 1992

FROM C. Wayne Hutto, Assistant Director of Preconstruction

TO Roland Hinners, State Road and Airport Design Engineer

SUBJECT I-75 AT SR 92 INTERCHANGE IMPROVEMENTS

FHWA has returned the concept report for this project and attached a letter agreeing to the proposed improvements. The improvements described in their letter exceed the scope of the project described in the attached concept report. Your office is requested to revise and update the concept report and the cost estimate as agreed on with FHWA and then submit the report for approval.

CWH/se

Attachment

cc: John Lively

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. No. 610740

OFFICE Preconstruction

DATE October 9, 1991

FROM C. Wayne Hutto, Assistant Director of Preconstruction

TO Roland Hinners, State Road and Airport Design Engineer

SUBJECT PROJECT CONCEPT REPORT - SR 92 over I-75

The Federal Highway Administration has returned, unsigned, the concept report for this project. They have requested that a capacity analysis for the future interchange improvements be submitted with the concept report per the attached letter.

Please forward a copy of the capacity analysis to me for the completion of concept review process.

CWH/cj

Attachment

cc: Charles Lewis
John Lively

GDOT

U.S. Department
of Transportation
Federal Highway
Administration

Georgia Division Office

1720 Peachtree Road, N.W.
Suite 300
Atlanta, Georgia 30367

IN REPLY REFER TO:

HB-GA

September 30, 1991

Mr. Hal Rives, Commissioner
Department of Transportation
No. 2 Capitol Square
Atlanta, Georgia 30334

Subject: IR-75-3(188), Cherokee County
Interchange Improvements
SR-92 over I-75
Project Concept Report

Dear Mr. Rives:

We have received the subject Project Concept Report by your route slip dated September 11, 1991. We are returning the Project Concept Report unsigned. We are requesting that the Concept Report be accompanied by a capacity analysis of the future interchange improvement.

If there are any questions concerning this request, please contact Ms. Lori Kennedy at 347-3092.

Sincerely yours,

for Charles J. Nemmers, P.E.
Division Administrator

Enclosure

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

RECEIVED
AUG - 7 1991

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3 (188) Cherokee County
P.I. No. 610740
Interchange Improvements

OFFICE Atlanta, Georgia

DATE August 6, 1991

FROM Robert E. Humphrey, Project Review Engineer REHmp

TO Hoyt J. Lively, Director of Preconstruction

SUBJECT PROJECT CONCEPT REPORT

We have reviewed the attached Concept Report for this Minor project.

We have received signed cover sheets from the following offices:

Traffic and Safety

Environmental

District Engineer

This report is satisfactory for approval.

The estimated costs of this project are as follows:

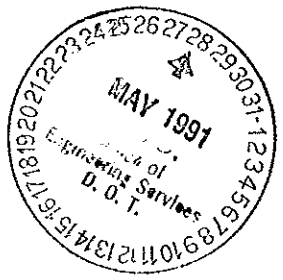
Construction	$1,615,000
Inflation (5% per year) x 2 yrs.	161,500
E & C (10%)	177,650
Preliminary Engineering (5%)	88,830
Right of Way	2,345,000
Utilities	31,452

MJB/jmf

Attachments

c: Roland W. Hinners

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN



PROJECT CONCEPT REPORT

IR 75-3(188) CHEROKEE COUNTY
SR 92 CORRIDOR
ACWORTH TO WOODSTOCK ROAD

FEDERAL ROUTE NO: I 75
STATE ROUTE NO: SR 92
GADOT P.I. NO: 610740

Date of Report: APR- 8-1991

RECOMMENDATION FOR APPROVAL	
May 24, 1991 DATE	Walter Woods State Road & Airport Design Engineer
DATE	State Environmental Engineer
DATE	State Traffic & Safety Engineer
DATE	District Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

IR 75-3(188) CHEROKEE COUNTY
SR 92 CORRIDOR
ACWORTH TO WOODSTOCK ROAD

FEDERAL ROUTE NO: I 75
STATE ROUTE NO: SR 92
GADOT P.I. NO: 610740

Date of Report: APR- 8-1991

RECOMMENDATION FOR APPROVAL

May 24, 1991 DATE	State Road & Airport Design Engineer
DATE	State Environmental Engineer
6/3/91 DATE	State Traffic & Safety Engineer
DATE	District Engineer

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE Project #IR-75-3 (188), Cherokee County
P.I. No. 610740

OFFICE Atlanta, GA

DATE May 30, 1991

FROM Ron Colvin, P.E., State Traffic & Safety Engineer

TO Robert E. Humphrey, P.E., Project Review Engineer

SUBJECT **Project Concept Report Review**

We have reviewed the concept report on the above projects for improvements to the I-75/S.R. 92 Interchange in Cherokee County. Design speed is 45 MPH. The length of project is 0.25 miles.

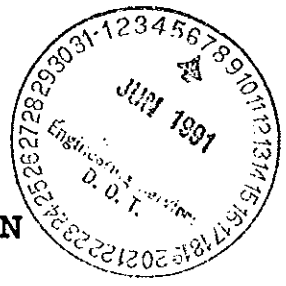
The existing four lane divided roadway would be widened to a six lane facility, three 12 ft. lanes in each direction with a 20 ft. raised median. The bridge typical section for S.R. 92 over I-75 will provide for a 24 ft. wide center turn lane. The total bridge width is 116 ft. Additional lanes would be constructed along the ramp and improvements made to adjacent roads.

A transportation study was conducted for southwest Cherokee County and it was recommended that improvements be made to the interchange at S.R. 92 and I-75 in Cherokee County. The proposed project would improve the capacity of S.R. 92 and provide a safety benefit for the traveling motorist.

Approval for this concept report is recommended.

RC:LEO:lw
Attachments (signature page)
cc: Walker W. Scott; Felton Rutledge - Cartersville

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN



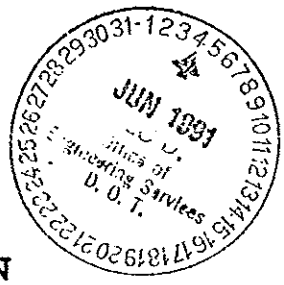
PROJECT CONCEPT REPORT

IR 75-3(188) CHEROKEE COUNTY
SR 92 CORRIDOR
ACWORTH TO WOODSTOCK ROAD

FEDERAL ROUTE NO: I 75
STATE ROUTE NO: SR 92
GADOT P.I. NO: 610740

Date of Report: APR- 8-1991

RECOMMENDATION FOR APPROVAL	
May 24, 1991 DATE	State Road & Airport Design Engineer
DATE	State Environmental Engineer
DATE	State Traffic & Safety Engineer
5-30-91 DATE	District Engineer



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

IR 75-3(188) CHEROKEE COUNTY
SR 92 CORRIDOR
ACWORTH TO WOODSTOCK ROAD

FEDERAL ROUTE NO: I 75
STATE ROUTE NO: SR 92
GADOT P.I. NO: 610740

Date of Report: APR- 8-1991

RECOMMENDATION FOR APPROVAL

May 24, 1991 DATE	State Road & Airport Design Engineer
May 31, 1991 DATE	State Environmental Engineer
DATE	State Traffic & Safety Engineer
DATE	District Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

IR 75-3(188) CHEROKEE COUNTY
SR 92 CORRIDOR
ACWORTH TO WOODSTOCK ROAD

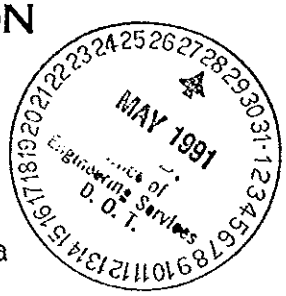
FEDERAL ROUTE NO: I 75
STATE ROUTE NO: SR 92
GADOT P.I. NO: 610740

Date of Report: APR- 8-1991

RECOMMENDATION FOR APPROVAL	
DATE	State Road & Airport Design Engineer
DATE 6/5/91	State Environmental Engineer
DATE	State Traffic & Safety Engineer
DATE	District Engineer

D.O.T.-66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA



INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. No. 610740

OFFICE Atlanta

DATE May 8, 1991

FROM Walker W. Scott, P.E., State Road & Airport Design Engineer

TO Robert Humphrey, Project Review Engineer

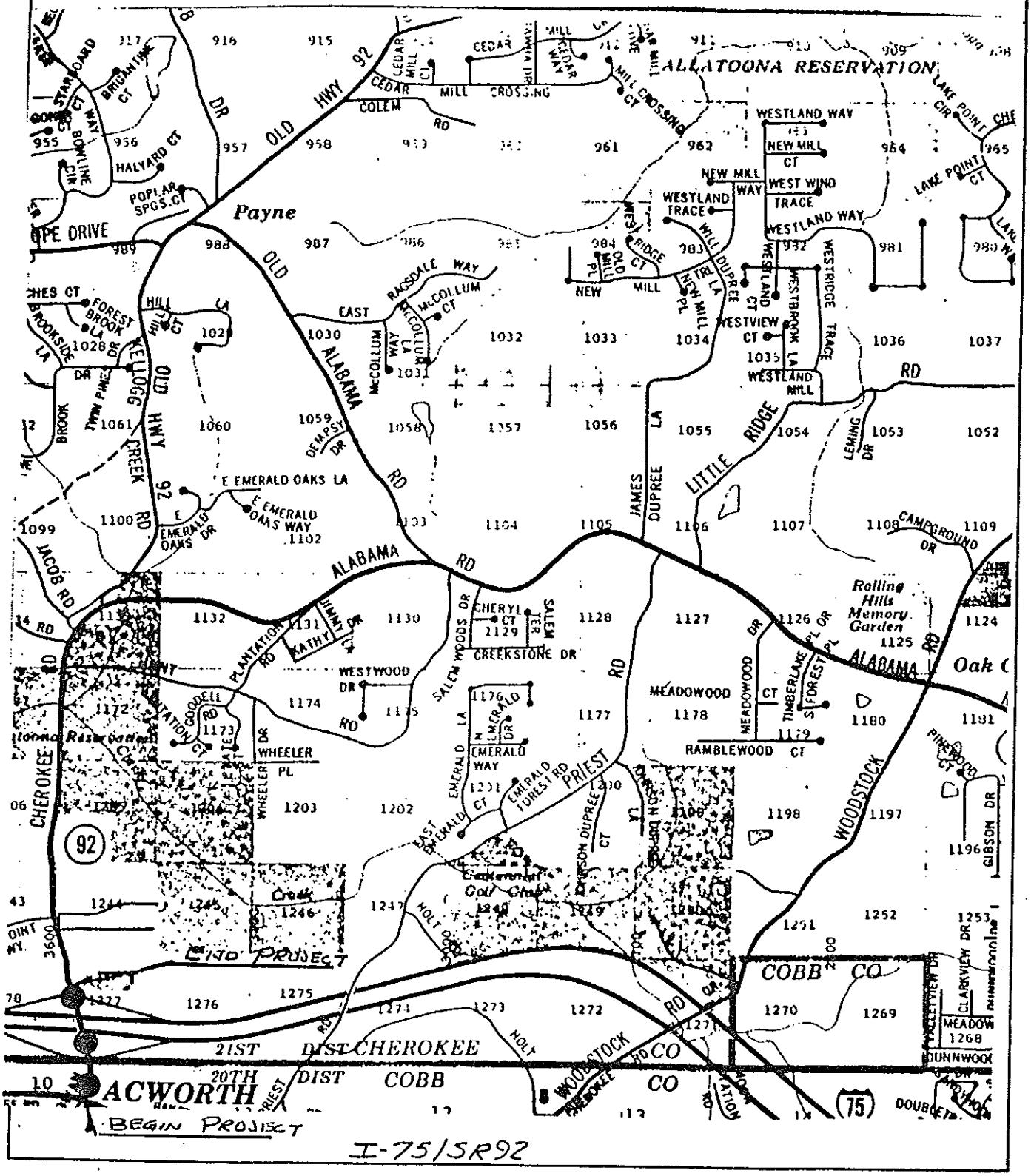
SUBJECT Request Approval for Concept Report

In accordance with the plan development process, the concept report for the above project is attached for your review and processing.

WWS:JPB:bc
Attachment

c: Juan Durrence
Ron Colvin
Felton Rutledge
Frank Danchetz
Wayne Hutto

PROJECT MAP - Project No. : IR-75-3(188)



PROJECT CONCEPT REPORT

PROJECT NUMBER: 3(188)

PROJECT LOCATION & DESCRIPTION

PROJECT IR-75-3(188) REFLECTS IMPROVEMENTS TO THE INTERCHANGE AT SR 92 AND I-75 IN CHEROKEE COUNTY. IT IS PROPOSED TO WIDEN SR 92 TO THREE (3) LANES IN EACH DIRECTION WITH A 20 FOOT RAISED MEDIAN. THE BRIDGE ON SR 92 OVER I-75 WILL BE WIDENED TO A TOTAL WIDTH OF 124 FEET TO ACCOMODATE PROPOSED ROADWAY SECTION, DUAL TURN LANES, AND 10 FOOT SHOULDERS. TWO (2) ADDITIONAL LANES WILL BE ADDED TO THE 4 EXISTING RAMPS TO ACCOMODATE DUAL LEFT-TURN MOVEMENTS, AND IMPROVEMENTS WILL BE MADE TO ADJACENT ROADS TO IMPROVE TRAFFIC CIRCULATION.

PROJECT LENGTH: 0.025 MILES

TRAFFIC

CURRENT		PROJECTED	
YEAR	AADT	YEAR	AADT
1995	21700	2015	36900

PDP CLASSIFICATION	FUNCTIONAL CLASSIFICATION
EXISTING MINOR	RURAL MINOR ARTERIAL

PROJECT NEED & PURPOSE

DUE TO THE RECENT GROWTH IN SOUTHWEST CHEROKEE COUNTY, A TRANSPORTATION STUDY WAS CONDUCTED TO ASSESS THE GROWTH POTENTIAL OF THE AREA. A PROGRAM FOR TRANSPORTATION IMPROVEMENTS TO MEET THE NEEDS OF THE GROWTH WAS A RESULT OF THIS STUDY. AMONG OTHER PROJECTS, THIS STUDY SUPPORTED THE RECOMMENDATION THAT IMPROVEMENTS BE MADE TO THE INTERCHANGE AT SR 92 AND I-75 IN CHEROKEE COUNTY. THE PROPOSED PROJECT WILL IMPROVE THE CAPACITY OF SR 92, PROVIDE A SAFER ENVIRONMENT FOR THE MOTORIST, AND REDUCE CONGESTION.

EXISTING ROADWAY

TYPICAL SECTION: 4 LANES DIVIDED/20 FOOT MEDIAN

R/W WIDTH: 100 FT

POSTED SPEED: 45 MPH

MAX DEGREE OF CURVE: 6.00 DEG.

MAX GRADE: 6.00 %

MAJOR STRUCTURES:

1. BRIDGE OVER I-75, 120' X 370'

2.

3.

PROPOSED ROADWAY

TYPICAL SECTION: SIX LANE URBAN DIVIDED SEC. THREE LANES EACH DIRECTION/20 FOOT RAISED MEDIAN

DESIGN SPEED: 45 MPH

MAX DEGREE OF CURVE; ALLOWABLE: 7.00 DEG. PROPOSED: 6.00 DEG.

MAX GRADE; ALLOWABLE: 5.50 % PROPOSED: 5.50 %

MAJOR STRUCTURES:BRIDGE OVER I-75

PROPOSED RIGHT OF WAY

R/W WIDTH: 120 FT

DISPLACEMENTS

RES.:0 BUS.:0 M.H.:0

TYPE OF ACCESS CONTROL: ACCESS BY PERMIT AND LIMITED ACCESS

COORDINATION

CONCEPT TEAM MEETING DATE: FEB 28, 1991

LOCATION INSPECTION DATE: NONE

PERMITS REQUIRED (4f,COE,404,etc.): NONE

LEVEL OF PUBLIC INVOLVEMENT: A PUBLIC HEARING WILL BE HELD

TIME SAVING PROCEDURES APPROPRIATE: NO

OTHER PROJECT IN THE AREA: FR-165-(42)

MISCELLANEOUS

TRAFFIC CONTROL DURING CONSTRUCTION: PROJECT WILL BE CONSTRUCTED UNDER TRAFFIC

LEVEL OF ENVIRONMENTAL ANALYSIS: EA

DESIGN VARIATIONS REQUIRED: NONE ANTICIPATED

UNDERGROUND STORAGE TANKS: 3 SITES WILL BE INVESTIGATED

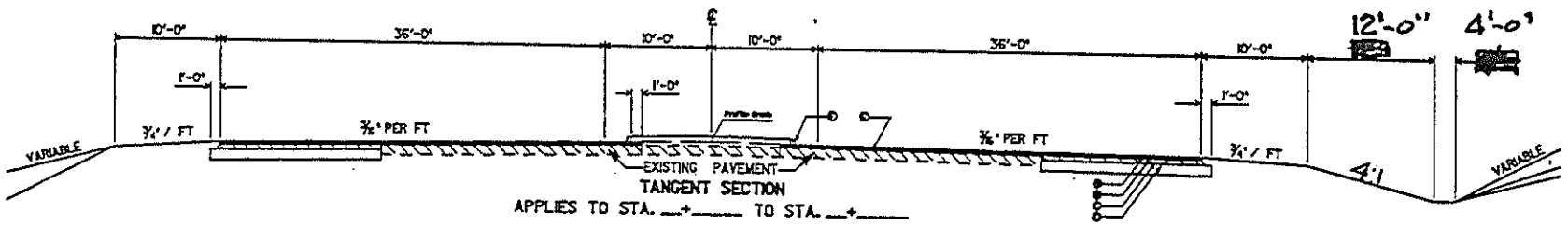
HAZARDOUS WASTE SITES: A SOIL SURVEY WILL BE REQUIRED

ALTERNATIVES CONSIDERED

1. NO BUILD.

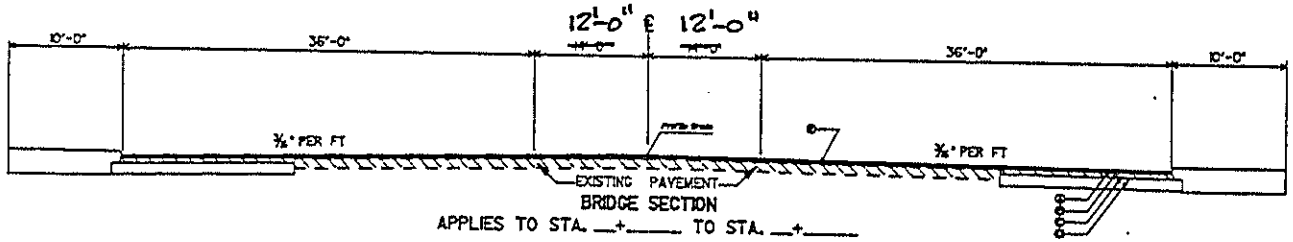
NO IMPROVEMENTS WILL BE MADE TO THE EXISTING FACILITY

R T5-3088) CHEROKEE CO.



TANGENT SECTION

APPLIES TO STA. ___+_____ TO STA. ___+_____



BRIDGE SECTION

APPLIES TO STA. ___+_____ TO STA. ___+_____

PAGE 54

ESTIMATED COST

CONSTRUCTION:	$ 1,961,343	RIGHT-OF-WAY:	$ 2,495,000
E & C (10) :	$ 196,134	ACQUIRED BY:	D.O.T.
INFLATION :	$ 215,748	UTITLITES :	$ 31,452
		ADJUSTED BY:	LGPA

TOTAL CONSTRUCTION COST: $ 2,373,225

COMMENTS:

ATTACHMENTS: SKETCH MAP;TYPICAL SECTION;COST ESTIMATES;CONCEPT MINUTES

PRELIMINARY COST ESTIMATE

PROJECT NUMBER: 3(188) COUNTY: CHEROKEE

DATE: JUN-25-1992 ESTIMATED LETTING DATE: MAR-18-1994

PREPARED BY: RAY METTS PROJECT LENGTH (MILES): 0.025

( ) PROGRAMMING PROCESS (X) CONCEPT DEVELOPMENT ( ) DURING PROJECT DEV.

PROJECT COST

A. RIGHT-OF-WAY:		
1. PROPERTY (land & easement)	$	1,556,000
2. DISPLACEMENTS:Res.0 Bus.0 M.H.0	$	0
3. OTHER COST (adm./court,inflation)	$	939,000
SUBTOTAL:A	$	2,495,000
B. REIMBURSABLE UTILITIES:		
1. RAILROAD	$	0
2. TRANSMISSION LINES	$	0
3. SERVICES	$	31,452
SUBTOTAL:B	$	31,452
C. CONSTRUCTION:		
1. MAJOR STRUCTURES:		
a. RETAINING WALLS	$	75,000
b. BRIDGES	$	548,000
c. DETOUR BRIDGES	$	0
d. BOX CULVERTS	$	40,000
SUBTOTAL:C-1	$	663,000

2. GRADING AND DRAINAGE:

a. EARTHWORK		$ 123,900
b. DRAINAGE:		
1) Cross Drain Pipe (exc.box culverts)		$ 29,500
2) Curb and Gutter		$ 50,950
3) Longitudinal System(incl.catch basins)		$ 97,350
	SUBTOTAL:C-2	$ 301,700

3. BASE AND PAVING:

a. AGGREGATE BASE (specify type of base)		$ 241,560
b. ASPHALT PAVING: Surface	$ 99,825	
Binder	$ 127,776	
Base	$ 307,582	
	SUBTOTAL:C-3.b	$ 535,183
c. CONCRETE PAVING		$ 15,000
d. OTHER		$ 0
	SUBTOTAL:C-3	$ 791,743

4. LUMP ITEMS:

a. TRAFFIC CONTROL		$ 40,000
b. CLEARING AND GRUBBING		$ 66,400
c. LANDSCAPING		$ 0
d. EROSION CONTROL		$ 25,000
e. DETOURS		$ 0
	SUBTOTAL:C-4	$ 131,400

5. MISCELLANEOUS:

a. LIGHTING		$ 0
b. SIGNING - STRIPING - SIGNAL		$ 50,000
c. GUARDRAIL		$ 10,000
d. SIDEWALK - MEDIAN BARRIER		$ 13,500
	SUBTOTAL:C-5	$ 73,500

6. SPECIAL FEATURES SUBTOTAL:C-6 $ 0

ESTIMATE SUMMARY

A. RIGHT-OF-WAY			$ 2,495,000
B. REIMBURSABLE UTILITIES			$ 31,452
C. CONSTRUCTION			
1. MAJOR STRUCTURES	$	663,000	
2. GRADING AND DRAINAGE	$	301,700	
3. BASE AND PAVING	$	791,743	
4. LUMP ITEMS	$	131,400	
5. MISCELLANEOUS	$	73,500	
6. SPECIAL FEATURES	$	0	
SUBTOTAL CONSTRUCTION COST .	$	1,961,343	
E. & C. (10%)	$	196,134	
INFLATION (5% PER YEAR) . .	$	215,748	
TOTAL CONSTRUCTION COST			$ 2,373,225
GRAND TOTAL PROJECT COST			$ 4,899,677

Donald E. [illegible]lch

DATE OF ESTIMATE: February 13, 1990 BY: John T. Lord

TYPE ESTIMATE: Preliminary R/W Cost

PROJECT: IR-75-3(188) Cherokee

P.I. 610740

EXISTING R/W Varying REQUIRED R/W Varying

ESTIMATED NUMBER OF PARCELS: 30±

PROJECT TERMINI: I-75/S.R. 92 Interchange

PROJECT DESCRIPTION: Widen S.R. 92 each side of I-75 to improve circulation to adjacent roads

TYPE OF LAND USE: Commercial VALUE APPLIED S.F. BASIS: $12.00

TOTAL LAND COST: $1,042,000.00

IMPROVEMENTS IMPACTED AND COST: (IF APPLICABLE) $ 190,000.00

Signs, Lights, Paving and Other yard improvements

RELOCATION COST: (IF APPLICABLE) N/A

CONSEQUENTIAL DAMAGES: (IF APPLICABLE) $ 174,000.00

Loss of Parking

NET COST $1,406,000.00

ADM./COURT COST FACTOR 45 % $ 633,000.00

INFLATION FACTOR 10 % $ 306,000.00

TOTAL COST $2,345,000.00

[illegible] 23 1990

[illegible]

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE IR-75-3(188) Cherokee County
P.I. No. 610740

OFFICE Atlanta

DATE March 21, 1991

FROM Walker W. Scott, P.E., State Road & Airport Design Engineer

TO SEE DISTRIBUTION

SUBJECT Minutes of Concept Team Meeting

A concept team meeting was held on February 28, 1991 in Road Design's conference room. People in attendance included: Walker Scott, Bill McVey, Herman Griffin, Bascombe Hughes, Frank Golder, John Lord, David Ford, Marie Piper, Rebecca Gifford, Louis Owen, Glenn Williams, Robert George, and John Bishop.

Project Description: Project IR-75-3(188) is for the improvements to the interchange at SR 92 and I-75 in Cherokee County. It is proposed to widen SR 92 to three (3) lanes in each direction with a 20 foot raised median. The bridge on SR 92 over I-75 will be widened to a total width of 112 feet. Additional lanes will be constructed along the ramps and improvements will be made to adjacent roads to improve traffic circulation.

Planning: "Need and purpose" statement was furnished.

Location: It was reported that the mapping will be furnished along with FR-165-1(40) and (42).

Environmental: No problems.

District Office UST: 3 Sites will be investigated.

Right of Way: Right of way cost estimate was furnished.

Utilities: A utility cost estimate was furnished.

Traffic and Safety: Furnished an accident report.

Programming: No schedule as yet.

WWS:JPB:bc
DISTRIBUTION

Juan Durrence, Wayne Hutto, David Kelley, Ron Colvin, Don Welch, Frank Danchetz, Felton Rutledge, Dudley, Ellis, Bill McVey, Herman Griffin, Bascombe Hughes, Frank Golder, John Lord, David Ford, Marie Piper, Rebecca Gifford, Louis Owen

(COVER)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

SR92 I75 SR92AM DISTRICT 7 12/19/90 RUN NO. 1

- PROGRESSION MODE..
- MIN."B" DIR. SPLIT. = 33 %

**** INPUT DATA SUMMARY ****

NUMBER OF INTERSECTIONS	LOWER CYCLE LENGTH	UPPER CYCLE LENGTH	CYCLE INCREMENT
3	60	90	5

MASTER INTERSECTION	REFERENCE INTERSECTION	REFERENCE POINT	SYSTEMWIDE LOST TIME
1	1	BEGIN	4

(EMBED.DAT)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

TRAFFIC CONTROL TYPE: PRETIMED OPERATION

LEFT TURN SNEAKERS: 1.0 VEHICLES

DELAY UNIT: STOPPED DELAY

IDEAL SATURATION FLOW: 1800 PCPHGPL

PHASE LOST TIME: 3.0 SECONDS

LOS DELAY CRITERIA:
A - 5.0 SECS/VEH
B - 15.0 SECS/VEH
C - 25.0 SECS/VEH
D - 40.0 SECS/VEH
E - 60.0 SECS/VEH
F - 60.0 SECS/VEH

ANALYSIS PERIOD: 300 MINUTES

LEFT TURN PHASING: APPROACH-BASED

PERMITTED LEFT TURN MODEL: (6) TTI MODEL

MODEL COEFFICIENTS:
SO = Opp Left Turn # (vph) = 1750
B = 1st Power Coefficient 4.5
C = 2nd Power Coefficient 2.5
D = 3rd Power Coefficient ****

(INPUT.DATA)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** INPUT DATA CONTINUED ****

****

**** INTERSECTION 1 NORTHRAMP

DISTANCE 0 TO 1	SPEED	DISTANCE 1 TO 0	SPEED
0. FT	0. MPH	0. FT	0. MPH

A SIDE QUEUE CLEARANCE
0 SECS

B SIDE QUEUE CLEARANCE
0 SECS

ARTERIAL PERMISSIBLE PHASE SEQUENCE

DUAL THRUS (2+6) WITH OVERLAP

LT 1 LEADS (1+6) WITH OVERLAP

CROSS ST PHASE SEQUENCE
LT 7 LEADS (4+7)
NO OVERLAP

		ARTERIAL STREET				CROSS STREET			
MOVEMENTS	(NEMA)	5[3]	6	1[5]	2	3[3]	4	7[5]	8
VOLUMES	(VPH)	0	870	300	1850	0	360	640	0
SAT FLOW RATE	(VPHG)	0	3600	1800	7200	0	1800	3600	0
MINIMUM PHASE	(SEC)	0	10	10	15	0	10	10	0

(INPUT.DATA)

**** INPUT DATA CONTINUED ****

**** INTERSECTION 2 SOUTHRAMP

DISTANCE 1 TO 2: 800. FT
SPEED: 35. MPH
DISTANCE 2 TO 1: 800. FT
SPEED: 35. MPH

A SIDE QUEUE CLEARANCE
0 SECS

B SIDE QUEUE CLEARANCE
0 SECS

ARTERIAL PERMISSIBLE PHASE SEQUENCE

DUAL THRUS (2+6) WITH OVERLAP
LT 5 LEADS (2+5) WITH OVERLAP

CROSS ST PHASE SEQUENCE
LT 3 LEADS (3+8)
NO OVERLAP

		ARTERIAL STREET				CROSS STREET			
MOVEMENTS	(NEMA)	5[5]	6	1[3]	2	3[5]	4	7[3]	8
VOLUMES	(VPH)	540	1190	0	1680	270	0	0	300
SAT FLOW RATE	(VPHG)	1800	5400	0	5400	1800	0	0	1800
MINIMUM PHASE	(SEC)	10	10	0	10	10	0	0	10

(INPUT.DATA)

**** INPUT DATA CONTINUED ****

**** INTERSECTION 3 CR4398

DISTANCE 2 TO 3: 800. FT
SPEED: 35. MPH
DISTANCE 3 TO 2: 800. FT
SPEED: 35. MPH

A SIDE QUEUE CLEARANCE
0 SECS

B SIDE QUEUE CLEARANCE
0 SECS

ARTERIAL PERMISSIBLE PHASE SEQUENCE

DUAL THRUS (2+6) WITH OVERLAP
LT 5 LEADS (2+5) WITH OVERLAP

CROSS ST PHASE SEQUENCE
LT 3 LEADS (3+8)
WITH OVERLAP

		ARTERIAL STREET				CROSS STREET			
MOVEMENTS	(NEMA)	5[5]	6	1[5]	2	3[5]	4	7[5]	8
VOLUMES	(VPH)	325	385	300	1460	690	200	25	200
SAT FLOW RATE	(VPHG)	1800	3600	1800	5400	3600	1800	1800	1800
MINIMUM PHASE	(SEC)	10	10	10	10	10	10	10	10

(ERROR.MSG)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** CODING ERROR MESSAGES ****

NO APPARENT CODING ERRORS

(ART.SUMY)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** PASSER-87 BEST PROGRESSION SOLUTION SUMMARY ****
SR92 I75 SR92AM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE LENGTH = 90 SECS (MAXIMIN CYCLE = 88 SECS)
EFFICIENCY = .28 (GOOD PROGRESSION)
ATTAINABILITY = 1.00 (INCREASE MIN. THROUGH PHASE)

BAND A = 31 SECS AVERAGE SPEED = 35 MPH
BAND B = 20 SECS AVERAGE SPEED = 35 MPH

NOTE: ARTERIAL PROGRESSION EVALUATION CRITERIA

EFFICIENCY	0.00 - 0.12	"POOR PROGRESSION"
	0.13 - 0.24	"FAIR PROGRESSION"
	0.25 - 0.36	"GOOD PROGRESSION"
	0.37 - 1.00	"GREAT PROGRESSION"
ATTAINABLITIY	1.00 - 0.99	"INCREASE MIN THRU PHASE"
	0.99 - 0.70	"FINE-TUNING NEEDED"
	0.69 - 0.00	"MAJOR CHANGES NEEDED"

(INT.SUMY)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** INTERSECTION PERFORMANCE SUMMARY ****

CYCLE LENGTH = 90 SECS SYSTEM MAXIMIN CYCLE = 88 SECS

INT NO	CROSS STREET INTERSECTION	PHASE ART	PHASE CRS	MIN. DELAY CYCLE (SECS)	INTERSECTION V/C RATIO	AVERAGE DELAY (SECS/VEH)	INT NO
1	NORTHRAMP	4	4	54	.78	16.8	1
2	SOUTHRAMP	3	3	65	.85	17.1	2
3	CR4398	2	3	88	.95	31.2	3

NOTE: PHASE SEQUENCE CODE FOR ARTERIAL (ART) CROSS STREET (CRS)

1 - LEFT TURN FIRST	OR DUAL LEFTS LEADING	OR DUAL LEFTS (1+5)
2 - THROUGH FIRST	OR DUAL THRUS LEADING	OR DUAL THRUS (2+6)
3 - LEADING GREEN	OR NO. 5 LEADING	OR LT 5 LEADS (2+5)
4 - LAGGING GREEN	OR NO. 1 LEADING	OR LT 1 LEADS (1+6)

(BEST.SOLN)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** BEST SOLUTION.... NEMA PHASE DESIGNATION ****

*** INT. 1 .0 SEC OFFSET ART ST PHASE SEQ IS LT 1 LEADS (1+6)

NORTHRAMP .0 % OFFSET CROSS ST PHASE SEQ IS LT 7 LEADS (4+7)

	ARTERIAL STREET				CROSS STREET			
CONCURRENT PHASES	1+6	2+6	2+5	TOTAL	4+7	4+8	3+8	TOTAL
PHASE TIME (SECS)	25.2	37.0	.0	62.2	27.8	.0	.0	27.8
PHASE TIME (%)	28.0	41.1	.0	69.1	30.9	.0	.0	30.9
MEASURES OF EFFECTIVENESS								
PHASE (NEMA)	5[3]	6	1[5]	2	3[3]	4	7[5]	8
PHASE DIRECTION	SBLTPP	NBTHRU	NBLTPR	SBTHRU	EBLTPP	WBTHRU	WBLTPR	EBTHRU
PHASE TIME (SEC)	.0	62.2	25.2	37.0	.0	27.8	27.8	.0
V/C-RATIO	.00	.37	.68	.67	.00	.73	.65	.00
LEVEL OF SERVICE		A	B	B		C	B	
DELAY (SECS/VEH)	.0	3.3	26.5	17.5	.0	26.6	23.1	.0
LEVEL OF SERVICE		A	D	C		D	C	
QUEUE (VEH/LANE)	.0	.8	2.2	9.0	.0	2.7	4.1	.0
STOPS (STOPS/HR)	0.	249.	261.	1373.	0.	318.	521.	0.

TOTAL INTERSECTION DELAY 16.8 SECS/VEH MINIMUM DELAY CYCLE 54 SECS

(BEST.SOLN)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** BEST SOLUTION CONTINUED.... NEMA PHASE DESIGNATION ****

*** INT. 2 34.8 SEC OFFSET ART ST PHASE SEQ IS LT 5 LEADS (2+5)

SOUTHRAMP 38.7 % OFFSET CROSS ST PHASE SEQ IS LT 3 LEADS (3+8)

	ARTERIAL STREET				CROSS STREET			
CONCURRENT PHASES	2+5	2+6	1+6	TOTAL	3+8	4+8	4+7	TOTAL
PHASE TIME (SECS)	38.1	29.2	.0	67.3	22.7	.0	.0	22.7
PHASE TIME (%)	42.3	32.4	.0	74.8	25.2	.0	.0	25.2
MEASURES OF EFFECTIVENESS								
PHASE (NEMA)	5[5]	6	1[3]	2	3[5]	4	7[3]	8
PHASE DIRECTION	SBLTPR	NBTHRU	NBLTPP	SBTHRU	EBLTPR	WBTHRU	WBLTPP	EBTHRU
PHASE TIME (SEC)	38.1	29.2	.0	67.3	22.7	.0	.0	22.7

V/C-RATIO	.7	.74	.00	.44	.69	.00	.00	.76
LEVEL OF SERVICE	C	C		A	B			C
DELAY (SECS/VEH)	22.3	27.3	.0	3.8	28.4	.0	.0	31.8
LEVEL OF SERVICE	C	D		A	D			D
QUEUE (VEH/LANE)	3.3	9.0	.0	1.8	2.1	.0	.0	2.6
STOPS (STOPS/HR)	459.	1062.	0.	592.	242.	0.	0.	286.

TOTAL INTERSECTION DELAY 17.1 SECS/VEH

MINIMUM DELAY CYCLE 65 SECS

(BEST.SOLN)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** BEST SOLUTION CONTINUED.... NEMA PHASE DESIGNATION ****

*** INT. 3 59.0 SEC OFFSET ART ST PHASE SEQ IS DUAL THRUS (2+6)

CR4398 65.6 % OFFSET CROSS ST PHASE SEQ IS LT 3 LEADS (3+8)

	ARTERIAL STREET				CROSS STREET			
CONCURRENT PHASES	2+6	2+5	1+5	TOTAL	3+8	4+8	4+7	TOTAL
PHASE TIME (SECS)	20.2	10.9	20.6	51.7	23.1	5.2	10.0	38.3
PHASE TIME (%)	22.4	12.1	22.9	57.4	25.7	5.8	11.1	42.6
MEASURES OF EFFECTIVENESS								
PHASE (NEMA)	5[5]	6	1[5]	2	3[5]	4	7[5]	8
PHASE DIRECTION	SBLTPR	NBTHRU	NBLTPR	SBTHRU	EBLTPR	WBTHRU	WBLTPR	EBTHRU
PHASE TIME (SEC)	31.5	20.2	20.6	31.1	23.1	15.2	10.0	28.3
V/C-RATIO	.57	.56	.85	.87	.86	.82	.18	.40
LEVEL OF SERVICE	A	A	E	E	E	D	A	A
DELAY (SECS/VEH)	20.7	26.1	43.0	31.0	33.4	46.1	29.8	20.4
LEVEL OF SERVICE	C	D	E	D	D	E	D	C
QUEUE (VEH/LANE)	1.9	2.8	3.6	12.6	6.4	2.6	.2	1.1
STOPS (STOPS/HR)	252.	321.	335.	1401.	676.	229.	22.	148.

TOTAL INTERSECTION DELAY 31.2 SECS/VEH

MINIMUM DELAY CYCLE 88 SECS

(ART.MOE)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** TOTAL ARTERIAL SYSTEM PERFORMANCE ****

SR92 I75 SR92AM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE LENGTH = 90 SECS BAND A = 31 SECS BAND B = 20 SECS

AVERAGE PROGRESSION SPEED - BAND A = 35 MPH BAND B = 35 MPH

.28 EFFICIENCY 1.00 ATTAINABILITY

AVERAGE INTERSECTION DELAY	TOTAL SYSTEM DELAY	TOTAL NUMBER VEHICLES
21.4 SECS/VEH	68.8 VEH-HR/HR	11585.

TOTAL SYSTEM FUEL CONSUMPTION	TOTAL SYSTEM STOPS	MAXIMIN CYCLE
115.92 GAL/HR	8747. STOPS	88 SECS

(ART.MOE)

EFFICIENCY VERSUS CYCLE LENGTH

	CYCLE LENGTH	CUMMULATIVE EFFICIENCY
	60	.28
	65	.28
	70	.28
	75	.28
	80	.28
	85	.28
	90	.28
BEST SOLUTION	90	.28

(PIN.SET)

**** SUMMARY OF PASSER II-87 BEST SIGNAL TIMING SOLUTION ****

SR92 I75 SR92AM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE = 90. SECONDS (A) BAND COORDINATE (B)

DEFAULT(1) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF MAIN STREET GREEN
MAST INT = 1 REF INT = 1 REF OFFSET = .0 REF MOVMNT = 0 REF PNT = BEGIN

*-[MASTER AND REFERENCE INTERSECTION]

INTRSC 1 OFFSET	1+6	2+6	2+5	4+7	4+8	3+8	BEGIN	END	BEGIN	END
PIN (SEC) .0	25.2	37.0	.0	27.8	.0	.0	28.0	59.1	90.0	110.2
PIN (%) .0	28.0	41.1	.0	30.9	.0	.0	31.1	65.7	100.0	122.4
PIN SET (SEC) .0	25.2	62.2	62.2	.0	.0		28.0	59.1	90.0	110.2
PIN SET (%) .0	28.0	69.1	69.1	.0	.0		31.1	65.7	100.0	122.4

INTRSC 2 OFFSET	2+5	2+6	1+6	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 34.8	38.1	29.2	.0	22.7	.0	.0	43.5	74.6	74.5	94.7
PIN (%) 38.7	42.3	32.4	.0	25.2	.0	.0	48.3	82.9	82.8	105.2
PIN SET (SEC)	34.8	72.9	12.1	12.1	34.8	34.8	43.5	74.6	74.5	94.7
PIN SET (%)	38.7	81.0	13.4	13.4	38.7	38.7	48.3	82.9	82.8	105.2

(PIN.SET)

DEFAULT(1) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF MAIN STREET GREEN

INTRSC 3 OFFSET	2+6	2+5	1+5	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 59.0	20.2	10.9	20.6	23.1	5.2	10.0	59.0	90.1	59.0	79.2
PIN (%) 65.6	22.4	12.1	22.9	25.7	5.8	11.1	65.6	100.1	65.6	88.0
PIN SET (SEC)	59.0	79.2	.1	20.7	43.8	49.0	59.0	90.1	59.0	79.2
PIN SET (%)	65.6	88.0	.1	23.0	48.7	54.4	65.6	100.1	65.6	88.0

(PIN.SET)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** SUMMARY OF PASSER II-87 BEST SIGNAL TIMING SOLUTION ****

SR92 I75 SR92AM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE = 90. SECONDS (A) BAND COORDINATE (B)

DEFAULT(2) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF NEMA PHASE 2

MAST INT = 1 REF INT = 1 REF OFFSET = .0 REF MOVMNT = 0 REF PHT = BEGIN

*-[MASTER AND REFERENCE INTERSECTION]

INTRSC 1 OFFSET	1+6	2+6	2+5	4+7	4+8	3+8	BEGIN	END	BEGIN	END
PIN (SEC) .0	25.2	37.0	.0	27.8	.0	.0	28.0	59.1	90.0	110.2
PIN (%) .0	28.0	41.1	.0	30.9	.0	.0	31.1	65.7	100.0	122.4
PIN SET (SEC) .0	25.2	62.2	62.2	.0	.0	28.0	59.1	90.0	110.2	
PIN SET (%) .0	28.0	69.1	69.1	.0	.0	31.1	65.7	100.0	122.4	

INTRSC 2 OFFSET	2+5	2+6	1+6	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 34.8	38.1	29.2	.0	22.7	.0	.0	43.5	74.6	74.5	94.7
PIN (%) 38.7	42.3	32.4	.0	25.2	.0	.0	48.3	82.9	82.8	105.2
PIN SET (SEC) 34.8	72.9	12.1	12.1	34.8	34.8	43.5	74.6	74.5	94.7	
PIN SET (%) 38.7	81.0	13.4	13.4	38.7	38.7	48.3	82.9	82.8	105.2	

(PIN.SET)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

DEFAULT(2) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF NEMA PHASE 2

INTRSC 3 OFFSET	2+6	2+5	1+5	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 59.0	20.2	10.9	20.6	23.1	5.2	10.0	59.0	90.1	59.0	79.2
PIN (%) 65.6	22.4	12.1	22.9	25.7	5.8	11.1	65.6	100.1	65.6	88.0
PIN SET (SEC) 59.0	79.2	.1	20.7	43.8	49.0	59.0	90.1	59.0	79.2	
PIN SET (%) 65.6	88.0	.1	23.0	48.7	54.4	65.6	100.1	65.6	88.0	

(TS.DIAGM)

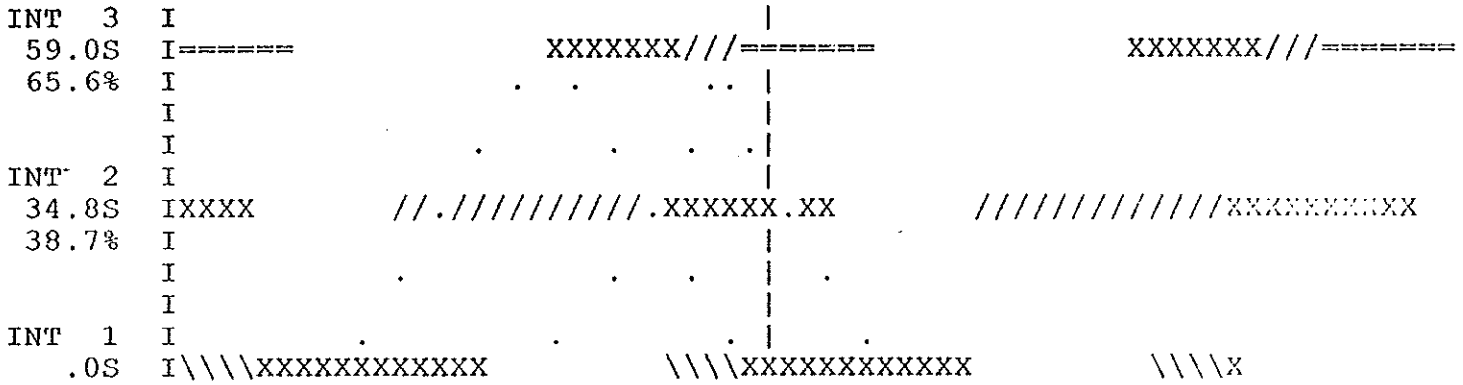
TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

RUN NO 1 DISTRICT 7 SR92AM 12/19/90 CYCLE = 90 SECONDS

HORIZONTAL SCALE 1 INCH = 30 SECS (1 inch = 10 characters)

VERTICAL SCALE 1 INCH = 1000 FEET (1 inch = 6 lines)



/A/
35 MPH
31 SECOND BAND

B
35 MPH
20 SECOND BAND

=== DUAL LEFTS (1+5)
/// LT 5 LEADS (2+5)

XXX DUAL THRUS (2+6)
\ LT 1 LEADS (1+6)

(COVER)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

SR92 I75 SR92PM DISTRICT 7 12/19/90 RUN NO. 1

- PROGRESSION MODE.
- MIN."B" DIR. SPLIT. = 33 %

**** INPUT DATA SUMMARY ****

NUMBER OF INTERSECTIONS	LOWER CYCLE LENGTH	UPPER CYCLE LENGTH	CYCLE INCREMENT
3	60	90	5

MASTER INTERSECTION	REFERENCE INTERSECTION	REFERENCE POINT	SYSTEMWIDE LOST TIME
1	1	BEGIN	4

(EMBED.DAT)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

TRAFFIC CONTROL TYPE:	LEFT TURN SNEAKERS:	DELAY UNIT:
PRETIMED OPERATION	1.0 VEHICLES	STOPPED DELAY

IDEAL SATURATION FLOW:	PHASE LOST TIME:	LOS DELAY CRITERIA:
1800 PCPHGPL	3.0 SECONDS	A - 5.0 SECS/VEH
		B - 15.0 SECS/VEH
ANALYSIS PERIOD:	LEFT TURN PHASING:	C - 25.0 SECS/VEH
		D - 40.0 SECS/VEH
300 MINUTES	APPROACH-BASED	E - 60.0 SECS/VEH
		F - 60.0 SECS/VEH

PERMITTED LEFT TURN MODEL: (6) TTI MODEL

MODEL COEFFICIENTS:
SO = Opp Left Turn # (vph) = 1750
B = 1st Power Coefficient 4.5
C = 2nd Power Coefficient 2.5
D = 3rd Power Coefficient ****

(INPUT.DATA)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** INPUT DATA CONTINUED ****

****

**** INTERSECTION 1 NORTHRAMP

DISTANCE 0 TO 1	SPEED	DISTANCE 1 TO 0	SPEED
0. FT	0. MPH	0. FT	0. MPH

A SIDE QUEUE CLEARANCE
0 SECS

B SIDE QUEUE CLEARANCE
0 SECS

ARTERIAL PERMISSIBLE PHASE SEQUENCE

DUAL THRUS (2+6) WITH OVERLAP

LT 1 LEADS (1+6) WITH OVERLAP

CROSS ST PHASE SEQUENCE
LT 7 LEADS (4+7)
NO OVERLAP

		ARTERIAL STREET				CROSS STREET			
MOVEMENTS	(NEMA)	5[3]	6	1[5]	2	3[3]	4	7[5]	8
VOLUMES	(VPH)	0	1310	450	1230	0	540	430	0
SAT FLOW RATE	(VPHG)	0	3600	1800	7200	0	1800	3600	0
MINIMUM PHASE	(SEC)	0	10	10	15	0	10	10	0

(INPUT.DATA)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** INPUT DATA CONTINUED ****

****

**** INTERSECTION 2 SOUTHRAMP

DISTANCE 1 TO 2	SPEED	DISTANCE 2 TO 1	SPEED
800. FT	35. MPH	800. FT	35. MPH

A SIDE QUEUE CLEARANCE
0 SECS

B SIDE QUEUE CLEARANCE
0 SECS

ARTERIAL PERMISSIBLE PHASE SEQUENCE

DUAL THRUS (2+6) WITH OVERLAP
LT 5 LEADS (2+5) WITH OVERLAP

CROSS ST PHASE SEQUENCE
LT 3 LEADS (3+8)
NO OVERLAP

		ARTERIAL STREET				CROSS STREET			
MOVEMENTS	(NEMA)	5[5]	6	1[3]	2	3[5]	4	7[3]	8
VOLUMES	(VPH)	360	2130	0	890	270	0	0	300
SAT FLOW RATE	(VPHG)	1800	5400	0	5400	1800	0	0	1800
MINIMUM PHASE	(SEC)	10	10	0	10	10	0	0	10

(INPUT.DATA)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** INPUT DATA CONTINUED ****

****

**** INTERSECTION 3 CR4398

DISTANCE 2 TO 3	SPEED	DISTANCE 3 TO 2	SPEED
800. FT	35. MPH	800. FT	35. MPH

A SIDE QUEUE CLEARANCE
0 SECS

B SIDE QUEUE CLEARANCE
0 SECS

ARTERIAL PERMISSIBLE PHASE SEQUENCE

DUAL THRUS (2+6) WITH OVERLAP
LT 5 LEADS (2+5) WITH OVERLAP

CROSS ST PHASE SEQUENCE
LT 3 LEADS (3+8)
WITH OVERLAP

		ARTERIAL STREET				CROSS STREET			
MOVEMENTS	(NEMA)	5[5]	6	1[5]	2	3[5]	4	7[5]	8
VOLUMES	(VPH)	200	790	175	1045	680	325	45	315
SAT FLOW RATE	(VPHG)	1800	3600	1800	5400	3600	1800	1800	1800
MINIMUM PHASE	(SEC)	10	10	10	10	10	10	10	10

(ERROR.MSG)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** CODING ERROR MESSAGES ****

NO APPARENT CODING ERRORS

(ART.SUMY)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** PASSER-87 BEST PROGRESSION SOLUTION SUMMARY ****
SR92 I75 SR92PM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE LENGTH = 80 SECS (MAXIMIN CYCLE = 82 SECS)
EFFICIENCY = .28 (GOOD PROGRESSION)
ATTAINABILITY = 1.00 (INCREASE MIN. THROUGH PHASE)

BAND A = 20 SECS AVERAGE SPEED = 35 MPH
BAND B = 24 SECS AVERAGE SPEED = 35 MPH

NOTE: ARTERIAL PROGRESSION EVALUATION CRITERIA

EFFICIENCY	0.00 - 0.12	- "POOR PROGRESSION"
	0.13 - 0.24	- "FAIR PROGRESSION"
	0.25 - 0.36	- "GOOD PROGRESSION"
	0.37 - 1.00	- "GREAT PROGRESSION"
ATTAINABLITIY	1.00 - 0.99	- "INCREASE MIN THRU PHASE"
	0.99 - 0.70	- "FINE-TUNING NEEDED"
	0.69 - 0.00	- "MAJOR CHANGES NEEDED"

(INT.SUMY)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** INTERSECTION PERFORMANCE SUMMARY ****

CYCLE LENGTH = 80 SECS SYSTEM MAXIMIN CYCLE = 82 SECS

INT NO	CROSS STREET INTERSECTION	PHASE ART	PHASE CRS	MIN. DELAY CYCLE (SECS)	INTERSECTION V/C RATIO	AVERAGE DELAY (SECS/VEH)	INT NO
1	NORTHRAMP	4	4	72	.91	16.7	1
2	SOUTHRAMP	3	3	82	.95	17.8	2
3	CR4398	2	3	76	.91	26.1	3

NOTE: PHASE SEQUENCE CODE FOR ARTERIAL (ART) CROSS STREET (CRS)

1 - LEFT TURN FIRST OR DUAL LEFTS LEADING OR DUAL LEFTS (1+5)
2 - THROUGH FIRST OR DUAL THRUS LEADING OR DUAL THRUS (2+6)
3 - LEADING GREEN OR NO. 5 LEADING OR LT 5 LEADS (2+5)
4 - LAGGING GREEN OR NO. 1 LEADING OR LT 1 LEADS (1+6)

(BEST.SOLN)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** BEST SOLUTION.... NEMA PHASE DESIGNATION ****

*** INT. 1 .0 SEC OFFSET ART ST PHASE SEQ IS LT 1 LEADS (1+6)
NORTHRAMP .0 % OFFSET CROSS ST PHASE SEQ IS LT 7 LEADS (4+7)

	ARTERIAL STREET				CROSS STREET			
CONCURRENT PHASES	1+6	2+6	2+5	TOTAL	4+7	4+8	3+8	TOTAL
PHASE TIME (SECS)	28.2	20.6	.0	48.8	31.2	.0	.0	31.2
PHASE TIME (%)	35.2	25.8	.0	61.0	39.0	.0	.0	39.0
MEASURES OF EFFECTIVENESS								
PHASE (NEMA)	5[3]	6	1[5]	2	3[3]	4	7[5]	8
PHASE DIRECTION	SBLTPP	NBTHRU	NBLTPR	SBTHRU	EBLTPP	WBTHRU	WBLTPR	EBTHRU
PHASE TIME (SEC)	.0	48.8	28.2	20.6	.0	31.2	31.2	.0
V/C-RATIO	.00	.64	.79	.76	.00	.85	.34	.00
LEVEL OF SERVICE		B	C	C		E	A	
DELAY (SECS/VEH)	.0	4.2	25.1	23.0	.0	27.4	14.7	.0
LEVEL OF SERVICE		A	D	C		D	B	
QUEUE (VEH/LANE)	.0	1.5	3.1	7.9	.0	4.1	1.8	.0
STOPS (STOPS/HR)	0.	515.	419.	1052.	0.	533.	286.	0.

TOTAL INTERSECTION DELAY 16.7 SECS/VEH
MINIMUM DELAY CYCLE 72 SECS

(BEST.SOLN)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** BEST SOLUTION CONTINUED.... NEMA PHASE DESIGNATION ****

*** INT. 2 41.7 SEC OFFSET ART ST PHASE SEQ IS LT 5 LEADS (2+5)
SOUTHRAMP 52.1 % OFFSET CROSS ST PHASE SEQ IS LT 3 LEADS (3+8)

	ARTERIAL STREET				CROSS STREET			
CONCURRENT PHASES	2+5	2+6	1+6	TOTAL	3+8	4+8	4+7	TOTAL
PHASE TIME (SECS)	21.6	39.3	.0	60.9	19.1	.0	.0	19.1
PHASE TIME (%)	27.0	49.1	.0	76.1	23.9	.0	.0	23.9
MEASURES OF EFFECTIVENESS								
PHASE (NEMA)	5[5]	6	1[3]	2	3[5]	4	7[3]	8
PHASE DIRECTION	SBLTPR	NBTHRU	NBLTPP	SBTHRU	EBLTPR	WBTHRU	WBLTPP	EBTHRU
PHASE TIME (SEC)	21.6	39.3	.0	60.9	19.1	.0	.0	19.1

V/C-RATIO	.8(	.85	.00	.23	(75	.00	.00	.83
LEVEL OF SERVICE	E	E		A	C			D
DELAY (SECS/VEH)	37.6	17.5	.0	1.0	29.3	.0	.0	36.1
LEVEL OF SERVICE	D	C		A	D			D
QUEUE (VEH/LANE)	3.8	10.3	.0	.2	2.2	.0	.0	3.0
STOPS (STOPS/HR)	403.	1903.	0.	106.	261.	0.	0.	325.

TOTAL INTERSECTION DELAY 17.8 SECS/VEH

MINIMUM DELAY CYCLE 82 SECS

(BEST.SOLN)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** BEST SOLUTION CONTINUED.... NEMA PHASE DESIGNATION ****

*** INT. 3 59.2 SEC OFFSET ART ST PHASE SEQ IS DUAL THRUS (216)

CR4398 74.0 % OFFSET CROSS ST PHASE SEQ IS LT 3 LEADS (318)

	ARTERIAL STREET				CROSS STREET			
CONCURRENT PHASES	2+6	1+6	1+5	TOTAL	3+8	4+8	4+7	TOTAL
PHASE TIME (SECS)	24.5	.0	14.2	38.7	20.9	10.4	10.0	41.3
PHASE TIME (%)	30.6	.0	17.8	48.4	26.1	13.0	12.5	51.6
	MEASURES OF EFFECTIVENESS							
PHASE (NEMA)	5[5]	6	1[5]	2	3[5]	4	7[5]	8
PHASE DIRECTION	SBLTPR	NBTHRU	NBLTPR	SBTHRU	EBLTPR	WBTHRU	WBLTPR	EBTHRU
PHASE TIME (SEC)	14.2	24.5	14.2	24.5	20.9	20.4	10.0	31.3
V/C-RATIO	.79	.82	.69	.72	.84	.83	.29	.50
LEVEL OF SERVICE	C	D	B	C	D	D	A	A
DELAY (SECS/VEH)	38.7	25.3	31.2	21.7	29.5	34.8	26.6	16.1
LEVEL OF SERVICE	D	D	D	C	D	D	D	C
QUEUE (VEH/LANE)	2.1	5.6	1.5	6.3	5.6	3.1	.3	1.4
STOPS (STOPS/HR)	223.	726.	172.	880.	664.	347.	39.	227.

TOTAL INTERSECTION DELAY 26.1 SECS/VEH

MINIMUM DELAY CYCLE 76 SECS

(ART.MOE)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** TOTAL ARTERIAL SYSTEM PERFORMANCE ****

SR92 I75 SR92PM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE LENGTH = 80 SECS BAND A = 20 SECS BAND B = 24 SECS

AVERAGE PROGRESSION SPEED - BAND A = 35 MPH BAND B = 35 MPH

.28 EFFICIENCY 1.00 ATTAINABILITY

AVERAGE INTERSECTION DELAY	TOTAL SYSTEM DELAY	TOTAL NUMBER VEHICLES
20.0 SECS/VEH	63.9 VEH-HR/HR	11485.

TOTAL SYSTEM FUEL CONSUMPTION	TOTAL SYSTEM STOPS	MAXIMIN CYCLE
114.83 GAL/HR	9082. STOPS	82 SECS

(ART.MOE)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

EFFICIENCY VERSUS CYCLE LENGTH

	CYCLE LENGTH	CUMMULATIVE EFFICIENCY
	60	.28
	65	.28
	70	.28
	75	.28
	80	.28
	85	.28
	90	.28
BEST SOLUTION	80	.28

(PIN.SET)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** SUMMARY OF PASSER II-87 BEST SIGNAL TIMING SOLUTION ****
SR92 I75 SR92PM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE = 80. SECONDS (A) BAND COORDINATE (B)

DEFAULT(1) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF MAIN STREET GREEN
MAST INT = 1 REF INT = 1 REF OFFSET = .0 REF MOVMNT = 0 REF PNT = BEGIN

*-[MASTER AND REFERENCE INTERSECTION]

INTRSC 1 OFFSET	1+6	2+6	2+5	4+7	4+8	3+8	BEGIN	END	BEGIN	END
PIN (SEC) .0	28.2	20.6	.0	31.2	.0	.0	28.2	48.8	90.2	114.7
PIN (%) .0	35.2	25.8	.0	39.0	.0	.0	35.3	61.0	112.8	143.4
PIN SET (SEC) .0	28.2	48.8	48.8	.0	.0	28.2	48.8	90.2	114.7	
PIN SET (%) .0	35.3	61.0	61.0	.0	.0	35.3	61.0	112.8	143.4	

INTRSC 2 OFFSET	2+5	2+6	1+6	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 41.7	21.6	39.3	.0	19.1	.0	.0	43.7	64.3	74.7	99.2
PIN (%) 52.1	27.0	49.1	.0	23.9	.0	.0	54.6	80.4	93.4	124.0
PIN SET (SEC) 41.7	63.3	22.6	22.6	41.7	41.7	43.7	64.3	74.7	99.2	
PIN SET (%) 52.1	79.1	28.2	28.2	52.1	52.1	54.6	80.4	93.4	124.0	

(PIN.SET)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

DEFAULT(1) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF MAIN STREET GREEN

INTRSC 3 OFFSET	2+6	1+6	1+5	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 59.2	24.5	.0	14.2	20.9	10.4	10.0	59.2	79.8	59.2	83.7
PIN (%) 74.0	30.6	.0	17.8	26.1	13.0	12.5	74.0	99.8	74.0	104.6
PIN SET (SEC) 59.2	3.7	3.7	17.9	38.8	49.2	59.2	79.8	59.2	83.7	
PIN SET (%) 74.0	4.6	4.6	22.4	48.5	61.5	74.0	99.8	74.0	104.6	

(PIN.SET)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

**** SUMMARY OF PASSER II-87 BEST SIGNAL TIMING SOLUTION ****

SR92 I75 SR92PM DISTRICT 7 12/19/90 RUN NO. 1

CYCLE = 80. SECONDS (A) BAND COORDINATE (B)

DEFAULT(2) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF NEMA PHASE 2

MAST INT = 1 REF INT = 1 REF OFFSET = .0 REF MOVMNT = 0 REF PNT = BEGIN

*-[MASTER AND REFERENCE INTERSECTION]

INTRSC 1 OFFSET	1+6	2+6	2+5	4+7	4+8	3+8	BEGIN	END	BEGIN	END
PIN (SEC) .0	28.2	20.6	.0	31.2	.0	.0	28.2	48.8	90.2	114.7
PIN (%) .0	35.2	25.8	.0	39.0	.0	.0	35.3	61.0	112.8	143.4
PIN SET (SEC) .0	28.2	48.8	48.8	.0	.0	28.2	48.8	90.2	114.7	
PIN SET (%) .0	35.3	61.0	61.0	.0	.0	35.3	61.0	112.8	143.4	

INTRSC 2 OFFSET	2+5	2+6	1+6	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 41.7	21.6	39.3	.0	19.1	.0	.0	43.7	64.3	74.7	99.2
PIN (%) 52.1	27.0	49.1	.0	23.9	.0	.0	54.6	80.4	93.4	124.0
PIN SET (SEC) 41.7	63.3	22.6	22.6	41.7	41.7	43.7	64.3	74.7	99.2	
PIN SET (%) 52.1	79.1	28.2	28.2	52.1	52.1	54.6	80.4	93.4	124.0	

(PIN.SET)

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

DEFAULT(2) : SAME MASTER & REF INT, OFFSET TO BEGINNING OF NEMA PHASE 2

INTRSC 3 OFFSET	2+6	1+6	1+5	3+8	4+8	4+7	BEGIN	END	BEGIN	END
PIN (SEC) 59.2	24.5	.0	14.2	20.9	10.4	10.0	59.2	79.8	59.2	83.7
PIN (%) 74.0	30.6	.0	17.8	26.1	13.0	12.5	74.0	99.8	74.0	104.6
PIN SET (SEC) 59.2	3.7	3.7	17.9	38.8	49.2	59.2	79.8	59.2	83.7	
PIN SET (%) 74.0	4.6	4.6	22.4	48.5	61.5	74.0	99.8	74.0	104.6	

(TS.DIAGM)

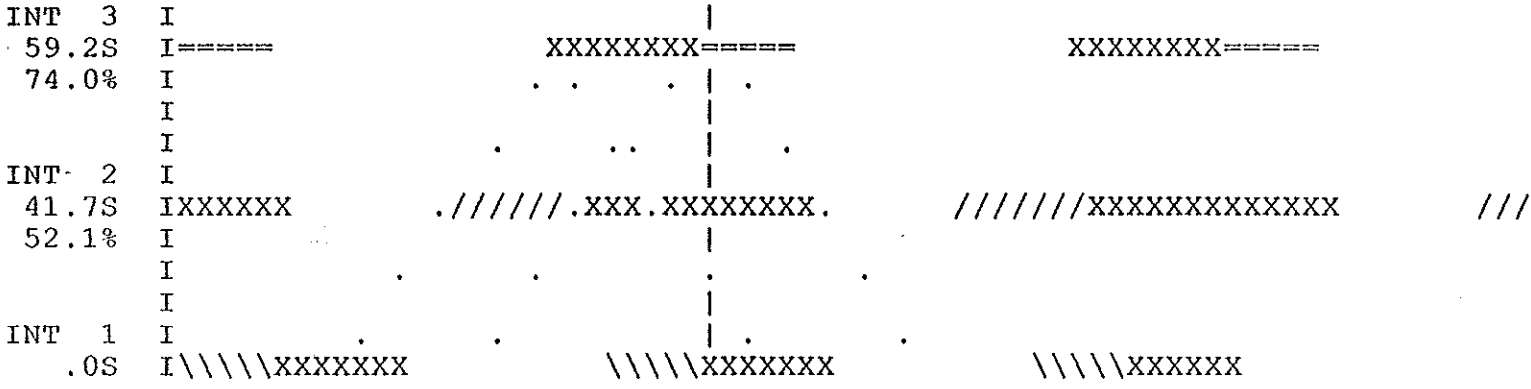
TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

PASSER II-87 MULTIPHASE ARTERIAL PROGRESSION - 145101 VER 1.0 JUL 88

RUN NO 1 DISTRICT 7 SR92PM 12/19/90 CYCLE = 80 SECONDS

HORIZONTAL SCALE 1 INCH = 30 SECS (1 inch = 10 characters)

VERTICAL SCALE 1 INCH = 1000 FEET (1 inch = 6 lines)



/A/
35 MPH
20 SECOND BAND

B
35 MPH
24 SECOND BAND

=== DUAL LEFTS (1+5)
/// LT 5 LEADS (2+5)

XXX DUAL THRUS (2+6)
\ LT 1 LEADS (1+6)