

DEPARTMENTAL RESEARCH

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A REPORT ON ACCIDENTS
ON TEST SECTIONS OF
A PLANT MIX SEAL OVERLAY
ON FORT WORTH FREEWAYS

TEXAS HIGHWAY DEPARTMENT

A REPORT ON ACCIDENTS ON TEST SECTIONS
OF A PLANT MIX SEAL OVERLAY
ON FORT WORTH FREEWAYS

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A REPORT ON ACCIDENTS ON TEST SECTIONS
OF A PLANT MIX SEAL OVERLAY
ON FORT WORTH FREEWAYS

During the summer of 1973, a plant mix seal overlay was placed on sections of I-35W (South Freeway), I-30 (West Freeway) and I-820, I-20 (Southwest Loop). The location of these sections is shown in Figure 1.

Various aggregates were used on each freeway. Crushed rhyolite from the Allamoore Pit in Van Horne, Texas, was used on I-820-I-20. Texas Industries' Eastland lightweight was used on I-30. Two aggregates were used on I-35W. General Portland & Co. furnished aggregate from Stringtown, Oklahoma, and Superock furnished Superock lightweight.

The overlay was placed on I-35W and I-30 during August, 1973. The I-820 overlay was completed in September, 1973. Work was resumed in April, 1974, and the entire project was completed in August, 1974.

At this time, only an analysis of the accidents on the sections placed in 1973 can be obtained. Thus, the accidents occurring for six months (Sept. 1, 1973 - March 1, 1974) after the overlay was placed were compared to the same six month period during the previous year (Sept. 1, 1972 - March 1, 1973) for I-35W and I-30. For I-820, only a five month comparison could be made (Oct. 1 - March 1).

Accident data was tabulated by direction, thus giving six study sections. Of these six sections, five had a reduction in the total number of accidents. Only the eastbound I-30 section had an increase. Table 1 shows the % change in total accidents as compared to the period before the overlay was placed. There was a total of 94 accidents during the study period

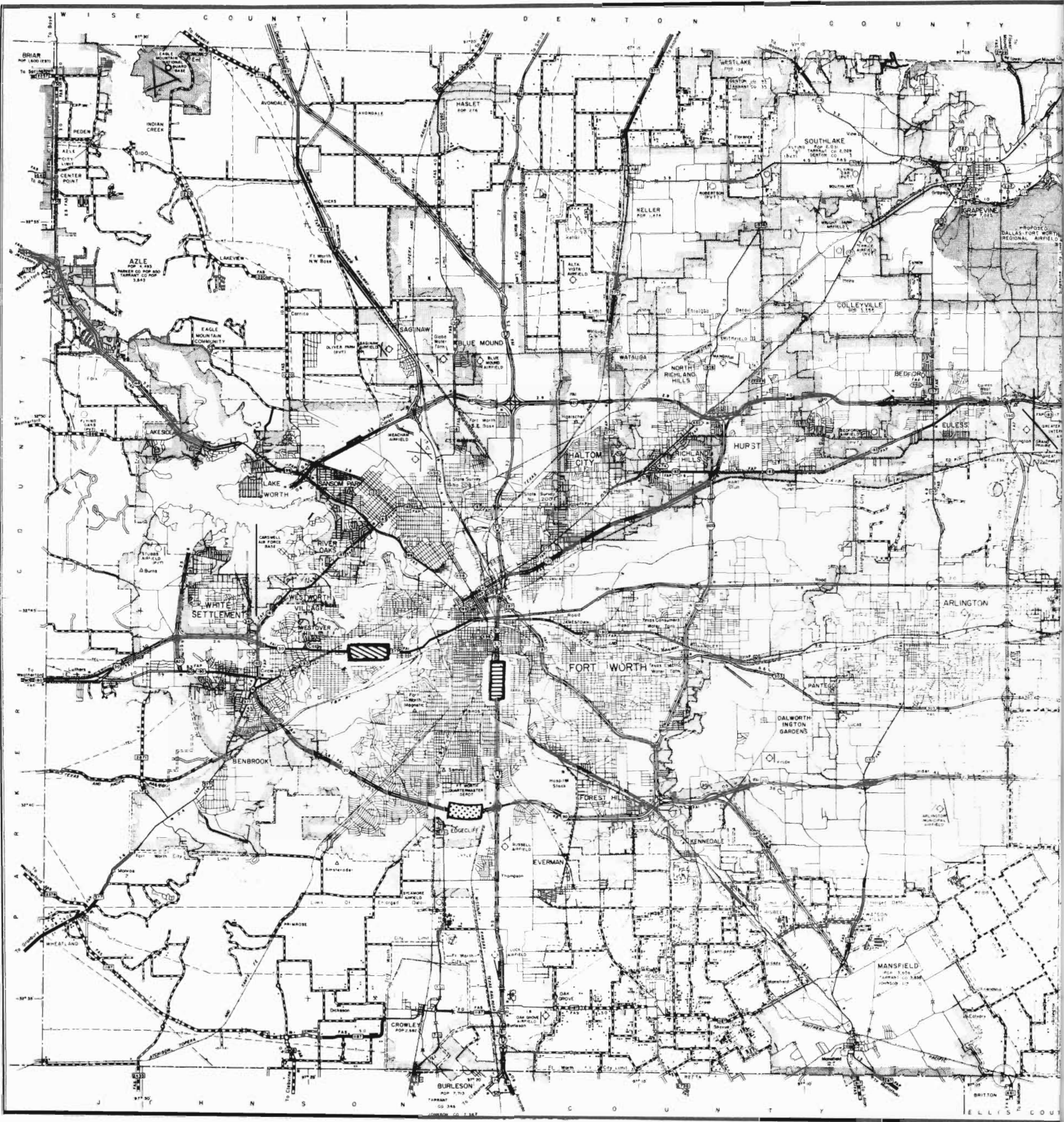





FIGURE 1

-  I-30-W. Freeway (68,000 ADT)
-  I-35W-S. Freeway (68,000 ADT)
-  I-20-S.W. Loop (38,000 ADT)

prior to the overlay. There were 77 accidents during the study period after the overlay. This was an 18% reduction in the total number of accidents. There was an 8% reduction in the total number of personal injury accidents. No fatalities were recorded during the study period after the overlay was applied.

TABLE 1

Percent Change in Total Accidents as Compared
to a Period Before the Plant Mix Seal Overlay

	% Change
I-35W, Northbound	-12%
I-35W, Southbound	-68%
I-30, Westbound	-50%
I-30, Eastbound	+74%
I-820, Westbound	-60%
I-820, Eastbound	-33%

I-30
WEST FREEWAY

Accident Review
(6 Months)

Sept. 1, 1972 to Mar. 1, 1973
(Before Overlay)

ACCIDENT TYPE	DIRECTION	
	EB*	WB**
Property Damage	15	10
Personal Injury	3	0
Fatality	1	0

Sept. 1, 1973 to Mar. 1, 1974
(After Overlay)

ACCIDENT TYPE	DIRECTION	
	EB*	WB**
Property Damage	26	5
Personal Injury	7	0
Fatality	0	0

*Begin Sta. 28+00 5000 Block 6,000 Feet
End Sta. 88+00 4000 Block

**Begin Sta. 68+00 4300 Block 2,000 Feet
End Sta. 48+00 4600 Block

I-20
SOUTHWEST LOOP

Accident Review
(Approx. 5 Months)

Oct. 4, 1972 to March 1, 1973
(Before Overlay)

ACCIDENT TYPE	DIRECTION	
	EB*	WB*
Property Damage	9	4
Personal Injury	0	1
Fatality	0	0

Oct. 4, 1973 - March 1, 1974
(After Overlay)

ACCIDENT TYPE	DIRECTION	
	EB*	WB*
Property Damage	5	2
Personal Injury	1	0
Fatality	0	0

*Begin Sta. 380+00
End Sta. 437+00

800 Block 5,700 Feet
1900 Block

I-35W
SOUTH FREEWAY

Accident Review
(6 Months)

Sept. 1, 1972 to March 1, 1973
(Before Overlay)

ACCIDENT TYPE	DIRECTION	
	NB*	SB*
Property Damage	20	22
Personal Injury	6	3
Fatality	0	0

Sept. 1, 1973 to March 1, 1974
(After Overlay)

ACCIDENT TYPE	DIRECTION	
	NB*	SB*
Property Damage	19	8
Personal Injury	4	0
Fatality	0	0

*Begin Sta. 268+00
End Sta. 322+00

1600 Block
2700 Block

5,400 Feet