

MICHIGAN  
STATE HIGHWAY DEPARTMENT  
Charles M. Ziegler  
State Highway Commissioner

"SEALZ" JOINT SEAL STUDY

By

E. A. Finney  
C. C. Rhodes

Research Project 36 G-4 (3)

Research Laboratory  
Testing and Research Division  
Report No. 49  
January 12, 1944



2

MICHIGAN  
STATE HIGHWAY DEPARTMENT  
LANSING

CHARLES M. ZIEGLER  
STATE HIGHWAY COMMISSIONER

January 12, 1944

Samuel P. Tauber  
Rockefeller Center  
1230 Sixth Avenue  
New York City, N.Y.

Dear Mr. Tauber:

Your letter of June 17, 1943, addressed to B. R. Downey, Maintenance Engineer, concerning the Sealz test installations on US-127 and M-43, has been turned over to this office for attention.

An inspection was made on December 2, 1943, of the section located on US-127 and the results of this examination are contained in the attached report.

Yours very truly

W. W. McLaughlin  
Testing and Research Engineer

EAF:EMN  
Enc.



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STATE HIGHWAY COMMISSIONER

June 23, 1943

Mr. S. P. Tauber  
1230 Sixth Avenue  
New York City, New York

Dear Mr. Tauber:

This will acknowledge and thank you for the photographs which you mailed in your letter of June 17.

Inasmuch as the joint installations on M-43 and US-127 were of an experimental nature, we are turning your letter over to the Research & Testing Division for disposition.

Very truly yours

B. R. Downey  
Maintenance Engineer

SWD:cv  
cc: Mr. W. W. McLaughlin

SEALZ

Sales Agent,  
Samuel P. Tabuer  
Rockefeller Center  
1230 Sixth Avenue  
New York

Mr. B. R. Downey, Maintenance Engineer  
Michigan State Highway Department  
Lansing, Michigan

Dear Mr. Downey:

I wish to thank you for the excellent photographs you sent me and consider they are excellent examples of pavement failures.

In examining our records here of older installations of our products, find that on May 29, 1940 we poured the joints on U.S. 127 at Robert Street, 2 1/2 miles south of Lansing believe you call this M-43, also on May 31, 1940 at Jolly Road about 20 joints all on this route, on the outer lane toward Mason, Michigan.

Believe that Mr. S.W. Dubee of Plymouth has a record of these. He was present during the pouring and cleaning operations. Do you believe there has been a recent inspection of these joints. A photograph of these on one side going south and a picture of the other joints in the same direction would show the value of proper sealing.

I am sending you a few photographs I recently secured from another Maintenance Engineer. These were installed in August 1941 - the photographs taken in April 1943.

Will appreciate your letting me know how the joints on U.S. 127 look today.

With best regards-

Very truly yours

S.P. Tauber

SPT:JC  
ENC.

"SEALZ" JOINT SEAL STUDY

In May 1940 two test installations of "Sealz" joint seal material were made at the following locations.

1. May 29, on M-43 at Robert Street about 2 1/2 miles west of Lansing
2. May 31, on US-127 south of Lansing at Jolly Road, 20 joints on the outer lane towards Mason.

These installations were put in under the supervision of the Maintenance Division. The joint sealing material was furnished by S. P. Tauber, Rockefeller Center, New York City.

On December 2, 1943, a visual examination was made of the test section located on US-127 by E. A. Finney, C. C. Rhodes of the Research Laboratory and S. W. Dubee of the Maintenance Division. At the time of inspection the joint seal material had been in place over three years without attention.

The most significant conditions revealed by the inspection are as follows: First, in general throughout the entire test installation of "Sealz" material, the joint seal material had begun to crack and develop bond failure at edge of concrete joint as illustrated in Figure 1. Second, where there was no curb section along the slab edge the joint material had failed completely in some instances for a distance of approximately one foot in from the edge of the slab. The joint opening had become filled with fine shoulder material. This condition is illustrated in Figure 2. Third, where there is a curb section it was noted that a large deposit of joint seal material had formed near the curb. See Figure 3. It is not known whether this condition was caused by poor workmanship in pouring the joint originally, or whether it developed subsequently due to high summer temperatures which caused the material to flow laterally to the curb.

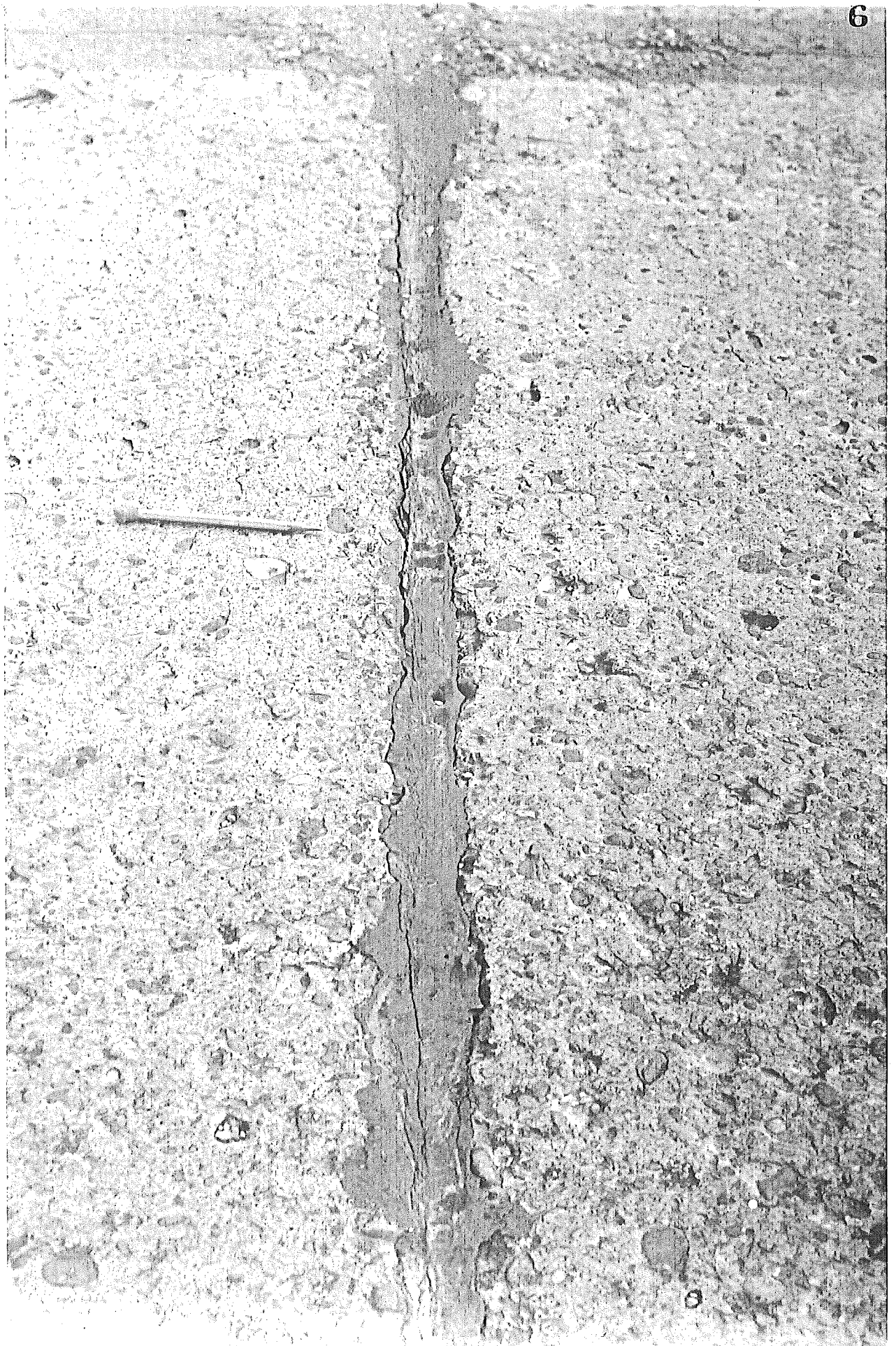


Figure 1. Typical condition of Sealz joint seal material December 2, 1943. Installed May 19, 1940.

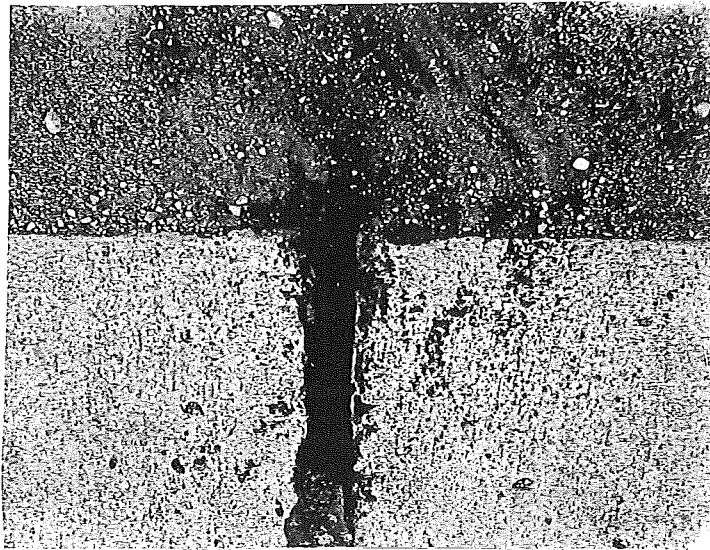


Figure 2. Failure of Sealz at joint edge  
Station 122+50.

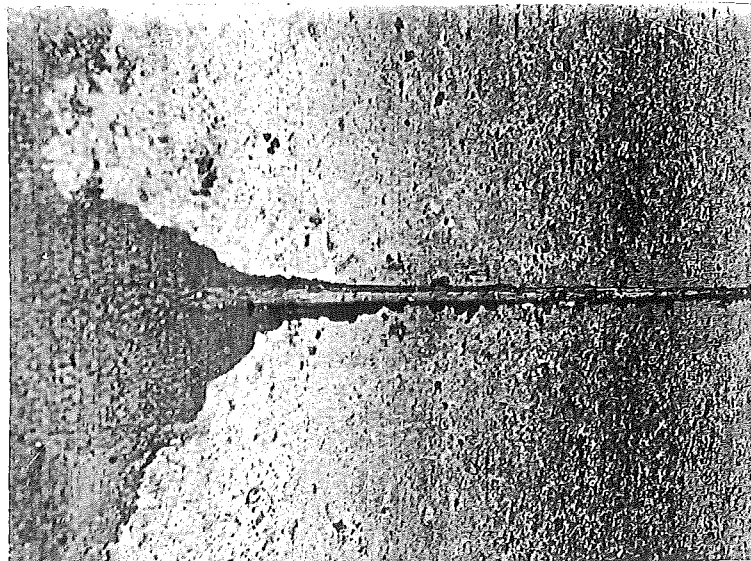


Figure 3. Excess material at gutter.