

# PlusRide<sup>®</sup> Asphalt Concrete Pavement

---

WA-RD 130.2

Final Evaluation Report  
January 1990

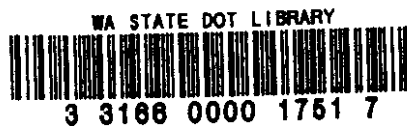


**Washington State Department of Transportation**

Planning, Research and Public Transportation Division

in cooperation with the  
United States Department of Transportation  
Federal Highway Administration

25.7609  
CLISON  
90



wal

WASHINGTON STATE DEPT.  
OF TRANSPORTATION LIBRARY  
OLYMPIA, WASHINGTON

CI

**PLUSRIDE<sup>TM</sup> ASPHALT CONCRETE PAVEMENT**

SR-405, Contract 2768  
S Curve/Cedar River Bridge and RR Bridge

by  
R. E. Allison  
Special Projects Section

Experimental Feature WA-84-01  
Final Evaluation Report

Prepared for  
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
and in cooperation with  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

January, 1990

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
**TECHNICAL REPORT STANDARD TITLE PAGE**

1. REPORT NO.  WA-RD 130.2	2. GOVERNMENT ACCESSION NO.	3. RECIPIENT'S CATALOG NO.	
4. TITLE AND SUBTITLE  Plusride Asphalt Concrete Pavement		5. REPORT DATE January 1990	
		6. PERFORMING ORGANIZATION CODE	
7. AUTHOR(S)  R. E. Allison		8. PERFORMING ORGANIZATION REPORT NO.	
9. PERFORMING ORGANIZATION NAME AND ADDRESS  Washington State Department of Transportation Transportation Building, KF-01 Olympia, WA 98504		10. WORK UNIT NO.	
		11. CONTRACT OR GRANT NO. WA-84-01	
		13. TYPE OF REPORT AND PERIOD COVERED  Final Evaluation Report	
12. SPONSORING AGENCY NAME AND ADDRESS  U.S. Department of Transportation Federal Highway Administration		14. SPONSORING AGENCY CODE	
15. SUPPLEMENTARY NOTES			
16. ABSTRACT  The performance of an experimental installation of PlusRide <sup>tm</sup> ACP as a bridge deck overlay is summarized in this report. Visual inspections, friction tests, noise readings, and rut depth measurements were taken on both the PlusRide <sup>tm</sup> and a rubberized ACP control section. No evidence of better frictional properties, noise reduction or increased service life could be attributed to the PlusRide <sup>tm</sup> in comparison with the rubberized ACP control section.			
17. KEY WORDS  PlusRide, Rubberized, Friction Resistance, Noise Reduction		18. DISTRIBUTION STATEMENT  No restrictions. This document is available to the public through the National Technical Information Service, Springfield, VA 22616.	
19. SECURITY CLASSIF. (of this report)  None	20. SECURITY CLASSIF. (of this page)  None	21. NO. OF PAGES  5	22. PRICE

## DISCLAIMER

The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Washington State Department of Transportation or the Federal Highway Administration. This report does not constitute a standard, specification or regulation.

FINAL REPORT  
PLUSRIDE<sup>TM</sup> ASPHALT CONCRETE PAVEMENT

SUMMARY

An experimental installation of PlusRide<sup>TM</sup> ACP was placed on 0.30 miles of SR-405, M.P. 3.51 to M.P. 3.81, on the northbound lanes of the S Curve/Cedar River & RR Bridge located in the City of Renton, Washington. A rubberized ACP was placed on the southbound lanes within the same limits for use as a comparative control section. This section of Interstate 405 has an ADT of approximately 110,000 with 10% truck traffic.

The project was placed in September, 1984. All paving operations were done at night with mild temperatures of 60° to 69°F by Hi-Line Paving Asphalt Co. Inc. of Seattle. Bob Linden of All Seasons Surfacing Corp., Bellevue, Washington, was the technical representative for PlusRide<sup>TM</sup> and was present for both plant and street operations. The ACP mix designs were as recommended by All Seasons for the PlusRide<sup>TM</sup> and by Arizona Refining for the rubberized ACP. Both materials were placed in one 0.08' lift. The design density for the PlusRide<sup>TM</sup>, as recommended by the Technical Representative from All Seasons, was 95% to 98% of Rice density (maximum density) as determined by WSDOT Test Method 705. The contractor was only able to obtain 88% density as monitored by Nuclear Densometer. Density was not monitored on the rubberized ACP because it was an open graded mix which does not have a density requirement under WSDOT specifications.

large areas of the PlusRide<sup>TM</sup> had debonded or raveled throughout the northbound lanes. Rut depth measurements were 3/8 inch. The rubberized ACP showed only one small area of minor raveling and had rut depth measurements of 3/16".

The site was revisited in October, 1989. At that time, the PlusRide<sup>TM</sup> was almost totally gone in the wheelpaths having been patched back with standard WSDOT Class B ACP. The rubberized ACP is wearing considerably better. There is evidence of minor raveling and flushing, and one small area of debonding, but the pavement appears to be sound.

#### CONCLUSIONS

It appears the PlusRide<sup>TM</sup> product does not stand up to its' developers claims. There is no evidence of better frictional properties, noise reduction or increased service life on this experimental project.