

Schoodic Bridge Deck Membrane System Millinocket, Maine

PROJECT DATE 2017

ASSER

ADVANCED COATINGS TECHNOLOGY

SUBSTRATE Precast Concrete

OWNER Maine Department of Transportation

> **PROJECT** Bridge Deck Waterproofing

STRUCTURE Concrete Beam Bridge

SYSTEM Blastrac to CSP 4-6

1st coat Wasser Polyflex 111 @ 10 mils dft

2nd coat Wasser Polyflex 311 membrane @ 80 mils dft

3rd coat Wasser Polyflex 411 @ 40 mils dft with Bauxite aggregate

4th coat Maine DOT provided tack coat in paving operation

INTRODUCTION

Maine DOT traditionally used sheet applied membranes and straight bitumastic systems to waterproof and to protect the concrete substrate and the reinforcement steel embedded within. The aim is to waterproof the decking; preventing

moisture intrusion to the rebar averting its ultimate corrosion. Once the rebar corrodes it expands forcing the concrete to spall and begins the structural breakdown of the deck. The sheet applied membrane and bitumastic systems have helped in the protection of the decks however issues of splitting in the seams with the sheet applied system and brittleness of the bitumastics have resulted in a shortened lifespan. Maine DOT wanted to explore sprayed applied membrane systems that are monolithic and remain flexible throughout an estimated 25+ year life cycle: the Wasser

Polyflex bridge deck membrane system. Conditions were late in the season with temperatures in the high 20's and low 30's and need to accomplish it on time for asphalt paving operations. An accelerator was used in the Wasser Polyflex 111 to allow the material to cure in the low temps. Polyureas can be applied, without issue, in cold temperatures.







