



National Bridge Deck Preservation Working Group Update

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Richard Dunne, Michael Baker Intl.

MICHIGAN STATE
UNIVERSITY



National Bridge Deck Working Group

Each of the Four Regional Bridge Preservation Partnerships have several Working Groups - the following have become National Working Groups:

- Bridge Deck Preservation
- Bridge Coatings
- Performance Specifications
- Social Media

This is an update on the National Bridge Deck Working Group



National Bridge Deck Working Group

Western Bridge Preservation Partnership



Bridge Deck Overlay Product Matrix

2014

PRODUCT NAME	PRODUCT SUPPLIER & WEB-SITE	PRIMARY BASE COMPONENT (MMA, EPOXY, etc.)	WEATHER RESTRICTIONS	DECK PREPARATION	SET-UP TIME	PATCH MATL COMPATABILITY	DECK AGE & CONDITION WHEN APPLIED	EXPECTED SERVICE LIFE	STATED DOT APPROVAL	ASTMA/ASHTO (etc.) TEST PROCEDURES	THICKNESS
VESLMC	www.rapidset.com	RS Cement SB Latex	Normal Concrete	Scarified	3 hours to open	Not Gypsum	New or Repaired	25-30 years	most	Normal Concrete	
Very Early Strength Latex Modified Concrete											
PMCC - Polymer Modified Cement Concrete	www.rapidset.com	Low P Cement	Normal Concrete	Scarified	3 hours to open	Not Gypsum	New or Repaired	25-30 years	some	Normal Concrete	
PPC 1121	Kwik Bond Polymers. Product data sheet: http://www.kwikbondpolymers.com/products/pecsheets/KBP_PDS_PP1121EC.pdf	polyester resin mixed with aggregates, HMW primer	Dry	clean surface, shot blast is typical	2 hour traffic return	no known incompatibility	sound concrete, any age	20+ years	Placed by special provision/specification in AK, WA, OR, CA, NV, ID, MT, WY, UT, AZ, CO, NM, MN, MO, FL, PA, DE, NJ, NY, VT.	Meets requirements of AASTHO T34 Guide Specification for Polymer Bridge Deck Overlays, Pre-Mixed Chapter, Polyester binder section. Resin viscosity 2500 cps, tensile strength ASTM D638 > 2500 psi, tensile elongation ASTM D638 > 35% min. Complete system (mixed with aggregates): tensile strength ASTM C307 800 psi, compressive strength ASTM C39 7000 psi, adhesion saturated surface dry > 500 psi	3/4 in. - 1 1/2 in. in single lift

PRODUCT NAME	PRODUCT SUPPLIER & WEB-SITE	PRIMARY BASE COMPONENT (MMA, EPOXY, etc.)	WEATHER RESTRICTIONS	DECK PREPARATION	SET-UP TIME	PATCH MATL COMPATABILITY	DECK AGE & CONDITION WHEN APPLIED	EXPECTED SERVICE LIFE	STATE DOT APPROVAL	ASTMA/ASHTO (etc.) TEST PROCEDURES	THICKNESS
PPC 1111	Kwik Bond Polymers. Product data sheet: http://www.kwikbondpolymers.com/products/pecsheets/KBP_PDS_PP1111C.pdf	polyester resin mixed with aggregates, HMW primer	Dry	clean surface, shot blast is typical	2 hour traffic return	no known incompatibility	sound concrete, any age	20+ years	Placed by special provision/specification in AK, WA, OR, CA, NV, ID, MT, WY, UT, AZ, CO, NM, MN, MO, FL, PA, DE, NJ, NY, VT.	Meets requirements of AASTHO T34 Guide Specification for Polymer Bridge Deck Overlays, Pre-Mixed Chapter, Polyester binder section. Resin viscosity 1200 cps, tensile strength ASTM D638 > 2500 psi, tensile elongation ASTM D638 35% min. Complete system (mixed with aggregates): tensile strength ASTM C307 800 psi, compressive strength ASTM C39 7000 psi, adhesion saturated surface dry > 500 psi	3/4 in to 1 1/2 in in single lift
Poly-Carb Mark-452 FLEXGRD	www.poly-carb.com	Epoxy Urethane	50 degree F, 5% Deck Moisture	Shot Blast	2-4 hrs temperature dependent/coat	No Magnesium Phosphate	Any age, substrate must be sound	15+ years	PA, NH, MA, MD, ME, VT, NY, NJ, DE, and supplemental specs		
Poly-Carb Mark-452 LT (low temp)	www.poly-carb.com	Epoxy Urethane	30 degree F, 5% Deck Moisture	Shot Blast	2-4 hrs temperature dependent/coat	No Magnesium Phosphate	Any age, substrate must be sound	15+ years	supplemental specs		
Poly-Carb Mark-451	www.poly-carb.com	Epoxy	50 degree F, 5% Deck Moisture	Shot Blast	2-3 hrs temperature dependent/coat	No Magnesium Phosphate	Any age, substrate must be sound	15-20+ years	PA, NY and supplemental specs		
Poly-Carb Mark-455 UREGRD	www.poly-carb.com	Polyurea	40 degree F, 5% Deck Moisture	Shot Blast	2-4 hrs temperature dependent (multi-system)	No Magnesium Phosphate	Any age, substrate must be sound	15+ years	supplemental specs	CS36	





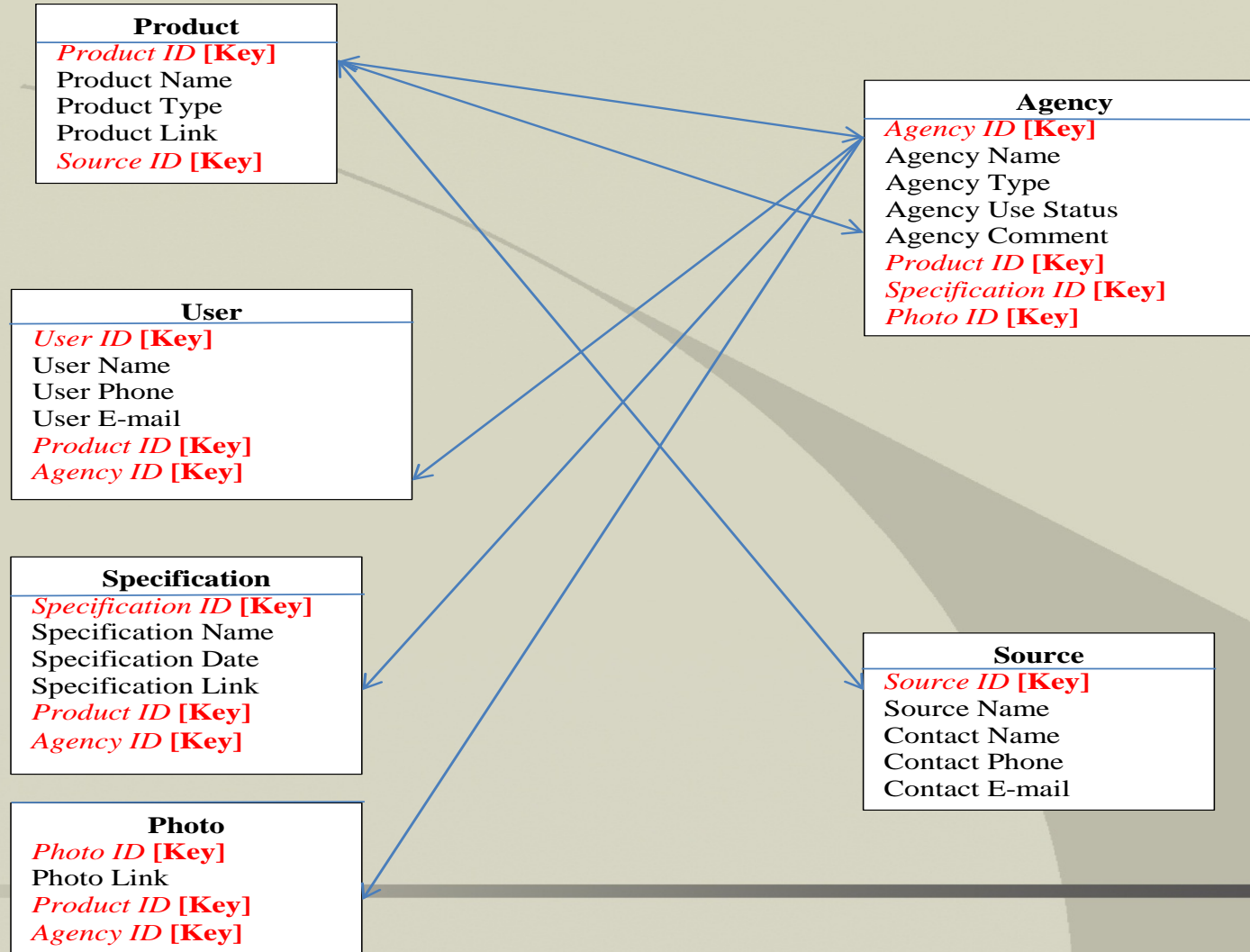
National Bridge Deck Working Group

National Bridge Deck Treatment Data-Base

- A nationwide framework and listing of available bridge deck preservation products and technologies and their respective technical attributes.
- Approved and Funded by the TSP-2 Oversight Panel.
- Would differ fundamentally from NTPEP & APEL in both content and purpose by having no evaluations of any products
- Currently in the design stage.
- Designed to apply to other Preservation areas. (Coatings. Etc.)



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Report 1—Specify Product in Current Use→Agencies→Users

Report 2—Specify Agency→Products in Current Use

Report 3—Specify Source→Products in Current Use→Agencies→Users

Report 4—Specify Product Type→Sources

Report 5—Specify Product in Current Use→Agencies→Specifications

Report 6—Specify Product in Current Use→Agencies→Photos



National Bridge Deck Working Group

- Thanks to Mike Johnson, Drew Storey, Atiq Alvi, Chris Keegen, Jason DeRuyver and Andy Doyle and the respective deck working groups in each of the partnerships
- Thanks to Ed Welch for his advocacy with the TSP2 Oversight Panel
- Thanks to John O'Doherty the primary data base designer
- Questions