

PRODUCT EVALUATION PROCESS

Moving Massachusetts Forward.
massDOT



Massachusetts Department of Transportation

2012 Northeast Bridge

Preservation Partnership Meeting

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September 18, 2012

PURPOSE OF PRODUCT EVALUATION PROCESS

- ✓ Provide an opportunity for adopting new, innovative, cost competitive products and incorporating these products into practice.
- ✓ Adds product options for DOT staff and contractors and increases competition within the marketplace to provide better products.

OVERVIEW OF MASSDOT PROGRAM

- ✓ Products are evaluated for placement on MassDOT's Qualified Construction Materials List (QPL)
- ✓ Application and Instructions on MassDOT Web Site
- ✓ Applications Accepted by US Mail Only
- ✓ Evaluation by Technical Services Engineer

DEFINITIONS

- ✓ **Qualified Construction Materials List (QPL)**
MassDOT's list of approved products, suppliers, equipment and processes that have been found to meet published standards and specifications.
- ✓ **Type 1 Product-** A product that falls within an existing product category under the QPL.
- ✓ **Type 2 Product** - A new product that does not fall within an existing product category under the QPL and has not been used or previously evaluated by MassDOT.

1 YEAR PERIOD

7/1/2011 THRU 7/1/2012

- ✓ Total Product Submissions received: 74
- ✓ Type 1 Submissions Received: 34
- ✓ Type 2 Submissions Received: 42

TECHNICAL SERVICES ENGINEER

- ✓ Supervises the Technical Services Section
- ✓ Evaluates New Product Submissions
- ✓ Maintains the Qualified Construction Materials List (QPL)
- ✓ Prepares updates to materials specifications
- ✓ The unit is also responsible for administering the laboratory quality system for AASHTO accreditation.

TYPES OF PRODUCTS EVALUATED

- ✓ Manufactured Materials - grouts, bonding agents, admixtures, patching products, rebar
- ✓ Bridge Maintenance/Preservation – Membrane waterproofing, sealers, paints
- ✓ Tools and Devices - mechanical bar splicers
- ✓ Traffic Control Devices - signal equipment, cones, drums
- ✓ Tools and Devices - mechanical bar splicers
- ✓ Safety - Critical Products - guard rail, attenuators

HOW PRODUCTS ARE APPROVED AT MASSDOT

- ✓ QPL Category (Type 1) – Submitted products that fall within an existing MassDOT QPL Category are evaluated for placement on the QPL.
- ✓ No QPL Category (Type 2) – New products that DO NOT fall within an existing QPL Category are evaluated for project by project use.

PRELIMINARY EVALUATION BY TECHNICAL SERVICES ENGINEER

- ✓ Products are categorized as Type 1 or Type 2
- ✓ (Type 1) – Must conform to MassDOT specifications and applicable standards.
- ✓ (Type 2) - Must conduct internal survey among MassDOT groups to gauge interest or need for the product or device.
- ✓ Determine that product is suitable for maintenance, preservation or construction innovation.

SCREENING OF TYPE 1 PRODUCTS

Does the Product Meet:

- ✓ MassDOT Standard Specification
- ✓ Industry Standards Including: AASHTO, ASTM, FHWA

Must Show Previous Documented Uses:

- ✓ Is product approved by other DOT's

Independent Testing

- ✓ Is the product in a NTPEP testing category?

SCREENING OF TYPE 2 PRODUCTS

- ✓ Need or interest in the product must be established by internal MassDOT survey
- ✓ Negative Outcome: No need or interest currently exists for the product
- ✓ Positive Outcome: Some interest established. Usage on MassDOT projects would be only on a project by project basis by means of a project Special Provision.

RELIANCE ON NATIONAL PRODUCT TESTING CENTERS

NTPEP – National Transportation Product Evaluation Program

MassDOT utilizes NTPEP for several products. A partial list includes:

- Concrete Admixtures
- Rapid Set Concrete Patch Materials
- Structural Steel Coatings
- Asphalt Release Agents
- Geotextiles

NCHRP – National Cooperative Highway Research Program
conducts research in problem areas that affect highway planning, design, construction, operation, and maintenance nationwide.

NCHRP

SYNTHESIS 328

**NATIONAL
COOPERATIVE
HIGHWAY
RESEARCH
PROGRAM**

**State Product Evaluation
Programs**

POTENTIAL PROGRAM ENHANCEMENTS

- ✓ Improve turnaround time to minimize vendors and manufacturers waiting time.
- ✓ Introduce a shelf life for approval of certain QPL products such as is done with HMA and Concrete mixes.
- ✓ The QPL could be refined to identify products that need to be removed or reconfirmed as still in use and it could also list greater detail as other states do for certain approved products.
- ✓ Tighten up the application instructions to greater encourage applicant to engage in due diligence to pre-assess his/her product's potential for meeting MassDOT's approval criteria.
- ✓ Spell Out the Process (next slide).

SPELL OUT THE PROCESS

According to NCHRP Synthesis 328

- ✓ Programs that explicitly spell out all the procedures of the application and evaluation process, communicate the same message to all parties and avoids confusion.
- ✓ Several states now have their applications and evaluation processes defined in written documents and available on-line. This helps to ensure that all parties have equal access to the relevant procedures and guidelines.

OBSERVATIONS/WRAP UP

- ✓ While progress is being made, more can be done to enhance and improve the product evaluation process.
- ✓ For MassDOT, it is sometimes difficult to make new product evaluations the highest priority. This is especially true when staff needs to prioritize materials approvals for construction projects.
- ✓ MassDOT's customer friendly approach is helpful in administering a program and in minimizing vendors and manufacturers' waiting time.
- ✓ MassDOT staff involved in product evaluations have found that the exchange of product data and experiences with other DOT's is a valuable tool for gaining insight on performance and provides an obvious mutual benefit and we intend to engage this opportunity more proactively in the future.