



**Bureau of Materials and Research
Materials Technology Section
Product Evaluation Unit**

PRODUCT EVALUATION PROCESS

*Rev. January 2018
(Document name change only.)*

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FOREWARD

The Qualified Products List (QPL) is one of the materials acceptance methods listed in the New Hampshire Department of Transportation (NHDOT) Quality Assurance Program, an element of the Stewardship Agreement between the Federal Highway Administration (FHWA) and NHDOT. This manual establishes guidelines for the review, evaluation, and qualification of products for listing in the QPL by the Bureau of Materials & Research, Product Evaluation Unit (PEU). The evaluation process for the continued listing of a product on the QPL or its removal is also addressed by this manual.

The QPL is maintained to ensure that only appropriate, compatible, high quality products are utilized in roadway and bridge projects. The QPL, which is posted online, is a companion document to the NHDOT Standard Specifications for Road & Bridge Construction manual (Standard Specifications), and it is referenced by a Special Attention included in most contracts. Qualified products are listed on the QPL by item categories, and any product listed meets the requirements of the latest edition of the Standard Specifications and associated Supplemental Specifications or Special Provisions. Updates to the QPL are made as needed.

The decision whether to list or not list a product on the QPL, or to remove it, is based on consideration of the best information available to the NHDOT. The NHDOT strives to ensure QPL-listed products are safe for use for workers and the traveling public, are environmentally friendly, and are durable to provide a long term performance.

The NHDOT must comply with federal regulations when listing products on the QPL since many NHDOT administered projects are federally funded. The requirements of 23 CFR 635.411, "Material or product selection" must be followed, as well as 23 USC 112(a), under "Letting of contracts" which states, "In all cases where the construction is to be performed by the State transportation department or under its supervision, a request for submission of bids shall be made by advertisement unless some other method is approved by the Secretary. The Secretary shall require such plans and specifications and such methods of bidding as shall be effective in securing competition."

The FHWA has interpreted 23 USC 112(a) as requiring competition not only for the award of the contract, but also for the various materials and processes involved in the work. Therefore, Federal Regulations do not allow the listing of only one product under a product type on the QPL (or within the Standard Specifications or project plans), unless such listing is in the public interest and can be adequately justified. The process for qualifying products for sole listing in an item category on the QPL is addressed in this manual.

This guideline will be updated and revised as needed by the Bureau of Materials & Research to ensure it conforms to federal requirements and reflects internal operating procedures for management of the QPL and its associated products.

PRODUCT EVALUATION OVERVIEW

The product evaluation process involves reviewing and evaluating submittals for transportation-related products, maintaining a list of qualified products for use on roadway and bridge construction projects, and removal of those products from the QPL when circumstances or conditions warrant. There are a variety of methods that can be used to evaluate products. The methods employed to evaluate products are selected based upon the type of product, availability of information, testing requirements, ability to test products or availability of third party testers, field trials or feedback from users of the product, etc.

Once a need for a product category is determined, that category is added to the QPL and acceptable products are listed by item number in the category. A systematic process must be followed by the Bureau of Materials & Research PEU in order to populate the product category. The process starts with the development of Qualification Criteria for the product category.

QPL-listed products are evaluated against criteria designed to assure they will meet the requirements of a given specification. All products considered under a given product category of the QPL must be evaluated against the same criteria. This assures that this process provides an equal opportunity for all manufacturers who have submitted their product for consideration. Products should be considered as equals when used per the applicable specification.

Most products listed on the QPL are “off the shelf” type manufactured products. Products fall into specific “product type” categories derived from specification references in the NHDOT Standard Specifications for Roads & Bridge Construction manual. A product type category, if not noted in the Standard Specifications, may be found in a Special Provision, Supplemental Specification, or in the project plans. Some examples of product types appropriate for listing in the QPL are: Admixtures for Portland cement concrete, crack sealants for asphalt pavement and concrete, bridge expansion joints, sign sheeting, bridge bearing pads, and geotextiles.

I. PRODUCT INFORMATION / SUBMITTALS

Transportation related manufactured products are introduced to the NHDOT from a variety of sources. Typically, submitters are representatives from the manufacturer, a distributor, or a private labeler. The PEU's [Qualified Products page](#) on the NHDOT website has links to information and documents to assist with the product submittal process and to answer product evaluation questions. Links to documents and information include, but are not limited to:

- Qualified Products List
- NHDOT Qualified Products List User Guide
- State of NH Department of Transportation Certificate of Compliance Form
- QPL Product Submittal Form
- NHDOT QPL Product Submittal Guide
- Product Evaluation Process Poster
- Product Qualification Criteria
- NHDOT Standard Specifications for Road & Bridge Construction
- National Transportation Product Evaluation Program (NTPEP)
- American Association of State Highway and Transportation Officials (AASHTO) Product Evaluation List (APEL)

There is other pertinent information related to qualified products and product evaluation, but the information is not specifically on the Qualified Products webpage. For example, the following regarding the Federal "Buy America" requirements in 23 CFR 635.410 can be found on the NHDOT website:

- Buy America Federal Contract Provision – Steel & iron products
- Buy America Certificate of Compliance Form

Within the product submittal packet, submitters are instructed to supply at least the following:

- 1.) QPL Product Submittal Form
- 2.) Product Technical Data Sheet & Specifications
- 3.) Product Safety Data Sheet
- 4.) Notarized Letters (as applicable)
- 5.) Certifications (as applicable)
- 6.) NTPEP or independent lab tests (as applicable)
- 7.) All other documents such as drawings, instructions, and any other pertinent information relative to product qualification as required in the NHDOT Standard Specifications and/or Qualification Criteria.

When a product submittal packet is received, the PEU determines if the product is currently on the QPL, or if it fits into an existing QPL product category before reviewing it. If neither condition is met, the NHDOT Bureau that might potentially use the product is identified. The packet is then forwarded to that Bureau for their internal review for suitability of use of the product. If the Bureau expresses

interest, the Product Evaluation Subcommittee would meet to determine if a new product type should be added to the QPL and coordinates development of Qualification Criteria.

The Product Submittal Guide instructs submitters to not send product samples unless specifically requested to do so.

II. INITIAL REVIEW & LOGGING OF PRODUCT SUBMITTAL

All products must be submitted to the Bureau of Materials & Research using the QPL Product Submittal Form. The submittal is checked by the PEU to ensure all required information has been received. If the packet is not complete, the submitter will be contacted. If the request for the missing information does not produce the required results within a reasonable amount of time, the submittal will be rejected. Evaluations are uniformly and impartially administered.

Whether the product is reviewed by the PEU or sent on to another bureau for review, all products are logged into the QPL database by the PEU and assigned to a number that is unique to each product category in the QPL. This is the “Item Number”. If the product does not seem to fit into an existing category, then an “X” is temporarily assigned as the suffix to the item number.

The first 3 digits in the Item Number relate to the Section of the Standard Specifications that relates to the product type. This number is followed by a letter assigned by the PEU. For example, 520.A is the number assigned to the product category, “Fast Set, Non-Shrink Patching Mortar”, and 550.B is the number assigned to “Stick Wax for High Strength A325 & A490 Fasteners”, because these items are used with Portland cement concrete and structural steel, respectively. Each product is also assigned a unique 10-digit number, so each specific product and its information can be referenced or queried in the QPL database using that number.

III. PRODUCT REVIEW, EVALUATION AND TESTING

The PEU reviews the information on the product data sheets, certifications, field trials, laboratory test results, documented compliance with AASHTO’s NTPEP Audit Program, and all other required information against the Qualification Criteria, Standard or Supplemental Specifications, and any Special Provisions. Non-conformance with the NHDOT submittal requirements will result in product rejection.

For certain product types, the Qualification Criteria requires products to be submitted into a NTPEP testing program and/or that they comply with the NTPEP Audit Program in order to be considered for qualification. Further, some Standard Specifications and Special Provisions require proof of current compliance with the NTPEP Audit Program. For example, Reinforcement for Concrete, Section 544.1.1.1 states that, “Manufacturers of reinforcing steel must participate in, and maintain compliance with, the AASHTO National Transportation Product Evaluation Program (www.ntpep.org) that audits producers of reinforcing steel.” If companies are found not to be currently compliant with the NTPEP Audit Program, the product submittal will be rejected regardless of test results, or other product qualifications.

Some product Qualification Criteria require the submission of laboratory test results from an AASHTO accredited lab. In some cases, independent test results from laboratories accredited by other entities are acceptable. This requirement is noted in the Qualification Criteria. If the Qualification Criteria specifically requires laboratory testing and the results are not received or available, the product will not be considered for further review. When products are tested by the NHDOT, the testing process, testing data, product performance and outcome will be outlined in either a report or a summary.

Due to the high variability of some product types, “field-testing” must be conducted. Field testing of products at NHDOT facilities or projects will be conducted as outlined in the specific Qualification Criteria for the particular product type. In certain cases, NTPEP field test results may be used in lieu of NHDOT field testing of products. The Product Submittal Guide reminds submitters that the use of a product in the course of an evaluation does not constitute an endorsement by the NHDOT. Nor does it imply a commitment to purchase, recommend or specify the product in the future.

IV. PRODUCT QUALIFICATION CRITERIA

Qualification Criteria for the nearly 100 product types listed on the QPL have been developed over time to assist with the evaluation of products. The Qualification Criteria document describes the process for verifying conformance with related NHDOT specifications, and it is posted on the PEU webpage in the Qualification Criteria section. Before any new or revised Qualification Criteria document is posted it must be approved by both the Chief of Materials Technology and Administrator of the Bureau of Materials & Research.

In the “Product Submittal Guide”, submitters are asked to review current Qualification Criteria and specifications at the time of product submittal. However, Qualification Criteria may change as products and project needs evolve. Changes in Qualification Criteria may require that products currently listed on the QPL be reevaluated to determine if they meet the new criteria.

V. PRODUCT EVALUATION SUBCOMMITTEE

In 2015, the NHDOT Specification Committee established a “Product Evaluation Subcommittee” consisting of the PEU staff and members from various NHDOT bureaus as detailed in the charter contained in Appendix A. The charter outlines the goals and objectives of the Subcommittee with the primary objective being the development and review of Qualification Criteria for product type categories. The Subcommittee usually meets twice per year, although sub-groups of the Subcommittee may meet more frequently as needed for the review of specific product categories.

VI. PRODUCT QUALIFICATION / QPL LISTING

Once approved, a product will be listed on the QPL under the applicable product category. Many products are marketed as having multiple uses. Products appearing on the QPL are only qualified for use as specified for the product category they appear under. If a product is qualified for more than one use, it will be listed under each category for which it has been qualified.

If another bureau is performing a submittal review for qualification of a product, it can recommend to the PEU if the product should or should not be listed on the QPL. The information it gives the PEU will also be noted in the “Notes” section of the QPL database to keep a running log of all activity and assessments of the product.

It is required that the product name on all submittal documents be the same as that shown on the product label. Any abbreviation, additional designation, or other changes will be considered as referring to a different product. Changes or variations in product name will not be accepted unless notarized documentation of the change is provided to the Product Evaluation Supervisor.

A discrepancy between the QPL-listed product name and the name shown on product labeling may be an indication that the supplied product has not been qualified. Products will not be qualified under any name other than that of the original submittal unless approved by the PEU, and only after the manufacturer follows the procedures for product name change certification.

The Product Submittal Guide states; “Data resulting from an evaluation of a submitted product is public information and will not be considered privileged. The NHDOT may, at its discretion, release all information developed during the product evaluation...”

Inclusion of a product on the QPL does not imply that it meets all local, State, or Federal regulations related to safety or environmental issues in effect at the time of use. Manufacturers, suppliers, and contractors must be aware of, and comply with, all applicable regulations that govern product use. Of particular note are the following regulations from the NH Department of Environmental Services:

- NH Code of Administrative Rules Chapter Env-A 4200 Architectural and Industrial Maintenance Coatings
- NH Code of Administrative Rules Chapter Env-Wq 1500 Alteration of Terrain

VII. PATENTED OR PROPRIETARY PRODUCTS

Federal regulation 23 CFR 635.411 prohibits contracting agencies from requiring the use of a patented or proprietary material specification, or process, unless:

- ✓ The item is purchased or obtained through competitive bidding with equally suitable unpatented items, or,
- ✓ The contracting agency certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or,
- ✓ The item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes, and,
- ✓ When use of the product is in the public interest as approved by FHWA.

In addition, materials and products that are determined to be equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they should be bid as alternatives with all, or at least a reasonable number of, acceptable materials or products listed.

Usually two or more products must be listed in a QPL category per federal regulation. If only one product is available to list in a product category, then a Public Interest Finding (PIF) form must be completed and submitted to FHWA for approval. Sufficient justification must be provided in the PIF for the sole product listing. PIF approvals are for a limited time period (e.g. 3 years).

VIII. QPL SPECIAL ATTENTION

A “Qualified Products List” Special Attention is included in most NHDOT projects and federally funded municipally managed projects requiring the use of the QPL. The QPL Special Attention is reviewed and updated as needed to ensure it conforms to the requirements of the Quality Assurance Program.

IX. MONITORING / MAINTAINING THE QPL

Product and manufacturer names listed in the QPL are monitored and checked at least annually to ensure they are correct and current. Also, any notes related to the specifications or the materials are reviewed to ensure those are current as well.

The PEU Product Submittal Guide notes that it is the responsibility of the manufacturers of QPL-listed products to provide the NHDOT with updates of product and manufacturer information. This includes name changes and reformulations. Failure to do this may result in the product being removed from the QPL.

If the PEU finds or is advised that there has been a product name change, the manufacturer is contacted to provide a notarized letter certifying only the name, not the formulation, properties, and performance of the product have changed. If this documentation is not received within a timely manner, the product may be removed from the QPL.

The PEU welcomes and encourages feedback and input from NHDOT field staff such as the Bureaus of Construction, Bridge Maintenance, and Highway Maintenance regarding product performance, ease of use, etc. of QPL-listed products that are used on projects. Their input weighs heavily regarding decisions to keep products on the QPL – regardless of whether the product passed qualification or not.

Changes to the QPL such as product and manufacturer name changes, products added, products removed, updated expiration dates for existing products, and updated notes, will be made on a regular basis. All changes will be reflected in a table that will be posted on the QPL webpage along with the QPL.

X. PROJECT USE OF PRODUCTS ON THE QPL

QPL-listed products may be used on highway and bridge projects without further approvals or testing being required unless noted in the QPL. When a product is selected for use on a project, the Contractor must provide a Certificate of Compliance (COC) per Section 106.04(k) of the NHDOT Standard Specifications manual. Products used can be tested at the discretion of the NHDOT to check for compliance with standards per Section 105.03 of the NHDOT Standard Specifications.

XI. PROJECT USE OF PRODUCTS NOT ON THE QPL

The NHDOT Qualified Products List User Guide notes: “A product that falls into one of the QPL listed categories and is not listed shall not be used, unless qualified through written request to the NHDOT, Bureau of Materials and Research. Such request shall be made with sufficient lead-time to allow for an appropriate evaluation of the product. It should be noted that some product evaluations require a field performance evaluation of as much as 2 years.” If not listed on the QPL, a product can only be used if allowed by a specification, typically by a Special Provision included in a project.

XII. QPL PRODUCT REMOVAL

At any time, failure of the product to perform as intended may result in rejection of a product and removal from the QPL without notification of the submitter. Any indication that the product has changed name or manufacturer without notification of such to the PEU may also result in removal. The NHDOT reserves the right to remove specific products and/or product types from the QPL without notice to the submitter.

Some Qualification Criteria for product types include “QPL expiration dates” (e.g. concrete admixtures, erosion control products, and geotextiles). Most expiration dates are based on the NTPEP testing cycle for the product type. Products that have lapsed in their required testing, have not been submitted for testing, or do not have current NTPEP test results available will be removed from the QPL without notice to the submitter.

Occasionally, a QPL-listed product becomes unavailable because it is no longer produced, and for this reason the product is removed from the QPL.

The PEU maintains a summarized list logging all QPL changes. This log includes products removed and the dates of their removal, and will reflect all changes back five years. It is posted with the QPL on the QPL webpage for the public’s information.

APPENDIX A



CHARTER

Product Evaluation Subcommittee to the Specifications Committee

PURPOSE

The purpose of this charter is to establish the “Product Evaluation Subcommittee” as a subcommittee of the New Hampshire Department of Transportation (NHDOT) Specifications Committee as well as to describe its purpose and authority, identify the membership, and define their responsibilities.

SCOPE

The Product Evaluation Subcommittee is established and charged with the responsibility of developing and implementing qualification criteria for the evaluation of products to be listed on the NHDOT Qualified Products List (QPL). The subcommittee is also charged with developing and/or reviewing specifications that define appropriate usage of QPL listed products.

AUTHORITY

The Product Evaluation Subcommittee shall act under the direction and guidance of the Specification Committee.

Proposed specifications that are developed by this subcommittee shall be subject to approval by the Specification Committee prior to implementation.

Qualification criteria documents developed by this subcommittee shall be subject to approval by the Administrator of the Bureau of Materials and Research prior to implementation. Committee members serve for 1 year or more years on a rotating basis as determined by their respective Administrator(s).

SUBCOMMITTEE MEMBERSHIP AND RESPONSIBILITIES

The standing subcommittee members shall be made up of representatives from the bureaus listed below. The designee from each bureau will be determined by the Administrator of that bureau.

- Materials & Research
- Bridge Design
- Bridge Maintenance
- Construction
- Environment
- Highway Design
- Highway Maintenance
- Specifications and Contracts
- Traffic
- Turnpikes

The Materials & Research Product Evaluation Supervisor shall serve as Chairperson.

The Chairperson's responsibilities shall include the following:

- Develop the subcommittee agenda.
- Facilitate/chair subcommittee meetings.
- Facilitate and/or participate in product research activities.
- Monitor progress of action items to assure a timely outcome.
- Report to the Specification Committee.

Subcommittee members shall be responsible for performing the following tasks as needed in the development of product qualification criteria and related specifications:

1. Perform and/or facilitate research related to development of qualification criteria for products to be listed on the QPL.
2. Solicit product related information from subject matter experts within the Department, from other state transportation agencies, and from industry.
3. Analyze gathered information as necessary to determine product performance properties that will assure that products will meet the Department's needs.
4. Develop qualification criteria documents for posting to the Department's website as follows:
 - a. Develop and/or update qualification criteria documents for products currently listed on the QPL
 - b. Develop qualification criteria documents for product types that are to be added to the QPL
5. Develop and/or review specifications that define product properties and usage for approval of the Specification Committee.

MEETINGS

Product Evaluation Subcommittee meetings will be held monthly or at a lesser or greater frequency as need exists. The subcommittee Chairperson may schedule additional meetings if a high priority item, as indicated by the Specification Committee, must be addressed. Meeting minutes describing meeting discussion, attending members, and actions/decisions shall be recorded.