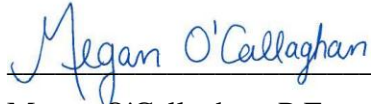


Approved:



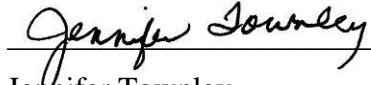
Megan O'Callaghan, P.E.
Deputy Director of Construction
Management

Standard Procedure - 122-004(SP)

Effective: June 1, 2012

Responsible Office: Construction
Management, Engineering, Planning

Supersedes Standard Procedure 122-004(SP)
dated September 18, 2002 and 510-005(SP)
dated December 1, 2004



Jennifer Townley
Deputy Director of Planning



James Young, P.E.
Deputy Director of Engineering

DEVELOPMENT OF STANDARDS AND SPECIFICATIONS

PROCEDURAL STATEMENT:

These standard procedures are for the development, approval, distribution and implementation of all new and revised Standards and Specifications as listed under *Definitions*.

AUTHORITY:

Ohio Revised Code, Sections 5501.02, 5501.03 and 5501.31.

Code of Federal Regulations 23 CFR 625

REFERENCES:

Development of Standards and Specifications (Policy No. 16-004(P))

SCOPE:

These standard procedures are applicable to the design industry, contracting industry, FHWA, and any affected department employee who may develop or request revisions to Standards or Specifications.

BACKGROUND & PURPOSE:

The Department had a standard procedure for distribution of design standards and a standard procedure for development of construction specifications.

This standard procedure is the merger of two former standard procedures; 122-004(SP) dated September 18, 2002 and 510-005(SP) dated December 1, 2004, and the Administrative Ruling for Specification Committee Supplemental Instructions dated December 9, 2005. This document allows for more thorough and consistent development of new design standards and construction specifications. By having a construction perspective on design standards and a design perspective on construction specifications, it will ensure all perspectives are considered and eliminate potential conflicts when implemented.

DEFINITIONS:

Construction and Material Specifications Book (C&MS): A published bound book that contains detailed provisions, together with the Plans and the Proposal, constitute the Contract for the performance of required work. It is an official legal and technical document by which the Department bids and constructs highway projects.

Design Manuals: A document that contains design criteria and describes plan content associated with various design specialty areas.

Proposal Notes: Published proposal notes contain a wide variety of legal and technical requirements necessary for the proper bidding and sale of an individual project. These notes override all other requirements in the Plans, C&MS, Supplemental Specifications, and Standard Construction Drawings

Publication Owner: The office that authors a Standard or Specification

Specifications: Contract documents used to issue instructions to contractors. For the purposes of this procedure, Specifications will include: the C&MS, Supplemental Specifications, Supplements, and Proposal Notes.

Standards and Specification Committee (Committee): Working committees, formed around specific design tasks, construction tasks or materials, and composed of ODOT district and central office staff, representatives from the Federal Highway Administration and industry trade

groups.

Standards and Specifications Committee Chairperson (Chairperson): The individual assigned by the Division of Construction Management Deputy Director with the responsibility to manage the standards and specification development process consistent with this standard procedure.

Specifications Coordinator: The individual assigned by the Division of Construction Management Deputy Director with the responsibility to perform the functions described in Section VII of this procedure.

Standards: Documents related to design of an improvement. For the purposes of this procedure, Standards will include Design Manuals and Standard Drawings.

Standard Drawings: Detail drawings furnished by ODOT describing items which are frequently used in plans and would otherwise require a plan detail. Standard Drawings require pre-approval for general use.

Supplemental Specifications: Individually numbered documents describing the construction and material specifications for new items of Work.

Supplements: Individually numbered documents describing necessary information such as laboratory methods of test, and certification or pre-qualification procedures for materials.

PROCEDURE STATEMENT

I. GENERAL:

- A. All requests to add, revise or delete Standards and Specifications must be submitted in writing to the appropriate Publication Owner.
- B. Contractors, producers, suppliers and consultants should submit their requests through their association.
- C. FHWA may submit their request directly to the appropriate Publication Owner.
- D. Department staff must submit their request through their Administrator.
- E. All initial submissions for inclusion into the Standard or Specifications must include or reference the following topics:
 - 1. Standards:
 - a. Description;

- b. Manual or Drawing;
- c. Design Considerations (i.e. applicability to various project types and conditions);
- d. Method of calculation (if required);
- e. Method of payment (if required);
- f. Implementation procedure;
- g. Review requirements for new/revised items; and
- h. List of specifications or other standards that may be impacted by the revision.

2. Specifications:

- a. Description;
- b. Materials;
- c. Construction requirements;
- d. Method of measurement;
- e. Basis of payment; and
- f. Designer note to address conditions under which the Specification will be used on construction projects (if required).

II. COMMITTEES

A. The Administrators of Construction Administration, Roadway Engineering, Structural Engineering, Pavement Engineering, Traffic Engineering, Geotechnical Engineering, Environmental Services and Hydraulic Engineering will assign standards and specifications to the following committees:

- 1. Contract Administration Committee;
- 2. Geotechnical Committee;
- 3. Pavement Committee;
- 4. Structures Committee;
- 5. Hydraulics and Environmental Committee; and
- 6. Traffic and Roadway Committee.

B. See Attachment B for typical committee membership

III. PUBLICATION OWNER'S TASKS

A. Review requests to add, revise or delete existing Standards and Specifications, as needed;

- B. Each Publication Owner is in responsible charge of their designated Standard or Specification (Attachment C) and shall:
1. Receive all proposed requests for inclusion into the publication;
 2. Review the proposed request. If it has merit, prepare the initial draft and submit it to the appropriate Standards and Specifications Committee Chairperson;
 3. In collaboration with Committee Chairperson, reconcile all comments received during reviews until recommended final draft is achieved
 4. Submit the final draft Standard or Specification for quality control as described in this standard procedure;
 5. Forward final draft Standard or Specification to Specification Coordinator for final review and formal review, respectively, and approval;
 6. Reconcile all quality control comments received from FHWA or the Executive Committee. The Publication Owner will have ten days to resolve quality control comments and produce a final draft specification;
 - a. Non-substantive Comments: At the discretion of the Publication Owner, reconciliation of the non-substantive quality control comments can be accomplished through written communication.
 - b. Substantive Comments: Any substantive or content changes to the document recommended by either quality control reviewer will require that Publication Owner reconvene with the Committee to address the recommended changes.
 - c. Quality Control Comment Reconciliation Validation: The Publication Owner will validate that the quality control comments have been satisfactorily addressed.

IV. COMMITTEE CHAIRPERSON'S TASKS

- A. The Deputy Director of Construction shall assign one chairperson to each committee. The Chairperson acts as the liaison between the Department, FHWA and the industry.
- B. The Chairperson will assemble approved committee members as designated in Attachment B.
- C. The Chairperson shall:
1. Distribute the initial draft to committee members electronically for review and comment;
 2. Allow committee members to review the initial draft and return written comments to the Chairperson within 21 days of receipt;
 3. Schedule and conduct a committee meeting each quarter, if necessary. The purpose of this meeting is to thoroughly discuss the merits of the

initial draft Standard or Specification.

4. Return the initial draft and comments to the Publication Owner;
6. Collaborate with the Publication Owner and recommend a final draft Standard or Specification.

V. COMMITTEES' TASKS

A. General:

1. Attend committee meetings;
2. Review and update existing Standards and Specifications, as needed;
3. Remove obsolete Standards and Specifications
4. Review proposed Standards and Specifications;
5. Write all proposed Standards and Specifications to conform with the appropriate Quality Control Checklist (attachment D or E);
6. Circulate draft Standards and Specifications for review by non-committee members and other industry people as needed;
7. Assist the Committee Chairperson in providing documentation needed for the distribution of new and revised Standards and Specifications; and
8. Ensure compliance with the applicable state and federal regulations, policies and standard procedures.

VI. STANDARDS AND SPECIFICATIONS QUALITY CONTROL TASKS

- A. Provide Standards quality control in accordance with Standards Quality Control Checklist (attachment E).
- B. Provide Specifications quality control in accordance with Specification Quality Control Checklist (attachment D).
- C. Collaborate with FHWA quality control review to ensure compliance with applicable laws, policies and standard procedures.

VII. SPECIFICATION COORDINATOR TASKS

- A. These tasks will be performed by the Specification Coordinator (Division of Construction Management).
 1. Log final draft Standards and Specifications recommended by the Committee;
 2. Forward final draft Standards and Specifications to Executive Committee for final approval;
 3. Return non-approved final draft Standards and Specifications and written comments received to the Publication Owner. Repeat steps 1 and 2 until Executive Committee final approval is obtained;

4. Log and forward the final draft Standards and Specifications approved by Executive Committee to FHWA.
5. Return non-approved final draft Standards and Specifications and written comments received to the Publication Owner. Repeat steps 2, 3, and 4 until formal approval is obtained;
6. Publish and distribute approved Standards and Specifications, designer notes, and other written guidance, to all interested parties including the FHWA and ODOT;
7. Notify Publication Owner of approval and publication of Standards and Specifications; and
8. Maintain a record of all Standards and Specifications and correspondence for tracking and historical purposes;

VIII. EXECUTIVE COMMITTEE

- A. The Executive Committee is responsible for final approval of all Standards and Specifications on behalf of the Department.
- B. Members of the Executive Committee are as follows:
 1. Deputy Director Division of Engineering;
 2. Deputy Director Division of Construction Management;
 3. Deputy Director Division of Planning;
 4. Deputy Director Division of Operations; and
 5. District Deputy Directors (or designee)
- C. In the event of a tie, the Assistant Director for Transportation Policy will make the final determination.
- D. The Executive Committee will provide formal approval or non-approval in writing of all proposed Standard and Specifications with 14 days of receipt.

IX. FHWA

- A. The FHWA will provide oversight of the Standards and Specification process and interact with the committees during Standard and Specification development.
- B. FHWA defers development reviews to the Department for Standards and Specifications that are only editorial in nature.
- C. The FHWA will provide formal approval in writing of all proposed Standard and Specifications with 14 days of receipt.
- D. Formal FHWA approval is not required for Proposal Notes numbered below 100.

X. DISTRIBUTION

- A. All new and revised Standards shall be published quarterly on the Design Reference Resource Center (DRRC) webpage (<http://www.dot.state.oh.us/drrc/>). All new and revised Specifications shall be published quarterly on the Construction Reference Resource Center (CRRC) webpage (<http://www.dot.state.oh.us/crrc/>).
- B. The quarterly dates shall be the third (3rd) Friday of January, April, July, and October.
- C. Exceptions to the quarterly release date will be considered provided the Deputy Director over the Publication Owner responsible for the revision demonstrates a safety or significant cost impact.
- D. Each Division's webpage manager will maintain the DRRC webpage and CRRC webpage. Notification of changes shall be sent to the webpage manager two (2) weeks prior to the quarterly release date.
- E. Notification of changes on the DRRC or CRRC webpage will be by email to a distribution list. Registration to the distribution list will be available to all internal and external customers.
- F. All scope documents for LPA/Consultant Contracts shall require parties to incorporate revisions noted on the DRRC or CRRC webpage to Design Manuals, Proposal Notes, Standard Drawings, Construction and Material Specifications and Supplemental Specifications into Construction Plans.
- G. All Standards and Specifications shall be available in Adobe Acrobat (.pdf) or TIF format.

TRAINING

The Committee Chairperson must complete a course on writing Specifications in the Active Voice/Imperative Mood style.

FISCAL ANALYSIS

Implementation of this standard procedure will provide cost savings to the Department. Construction personnel will have input in design standards and design personnel will have input in construction specifications. This allows for more thorough and consistent development of standards and specifications prior to their implementation and provides a feedback opportunity to incorporate lessons learned into contract documents through this

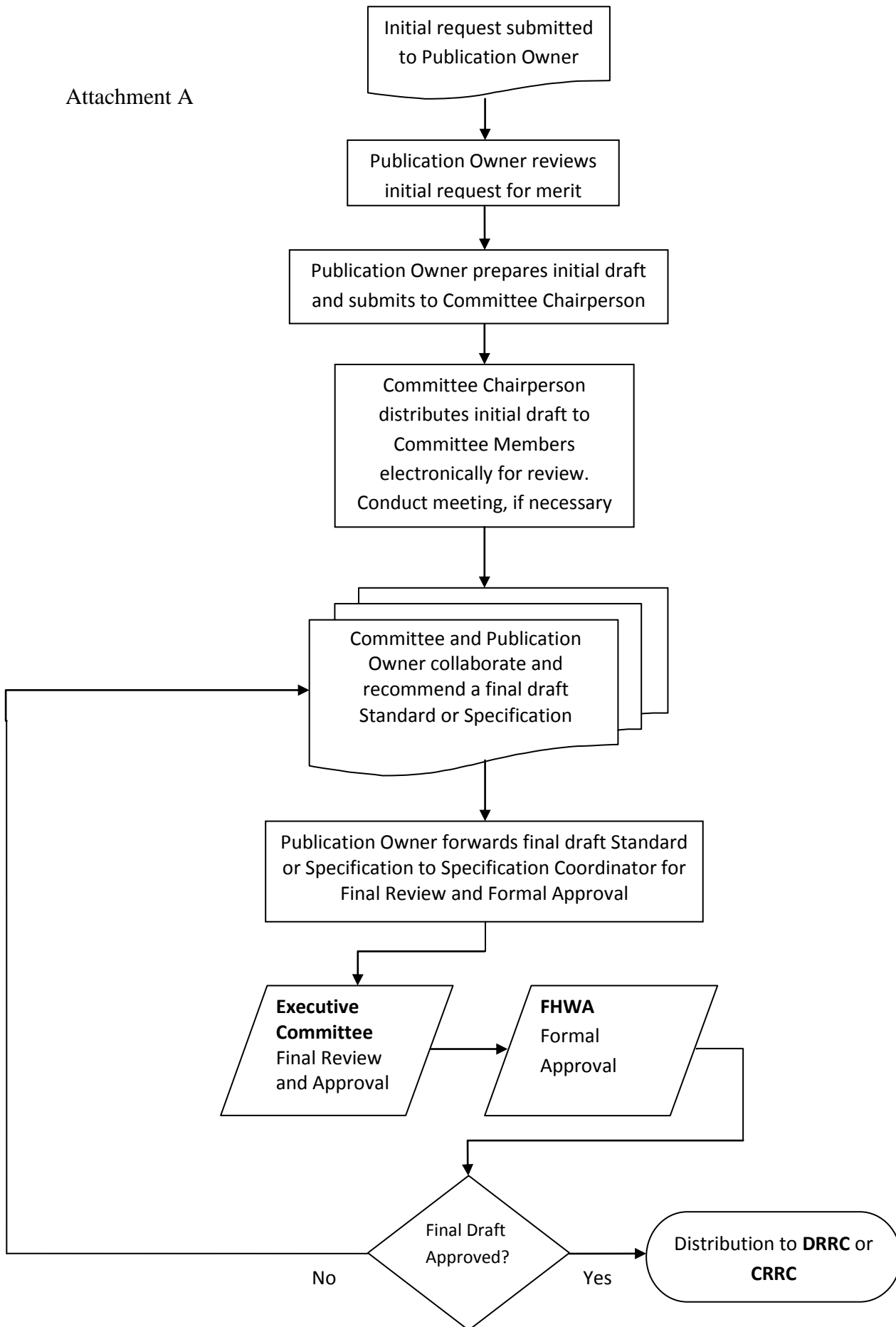
Standard Procedure 122-004(SP)

Effective: June 1, 2012

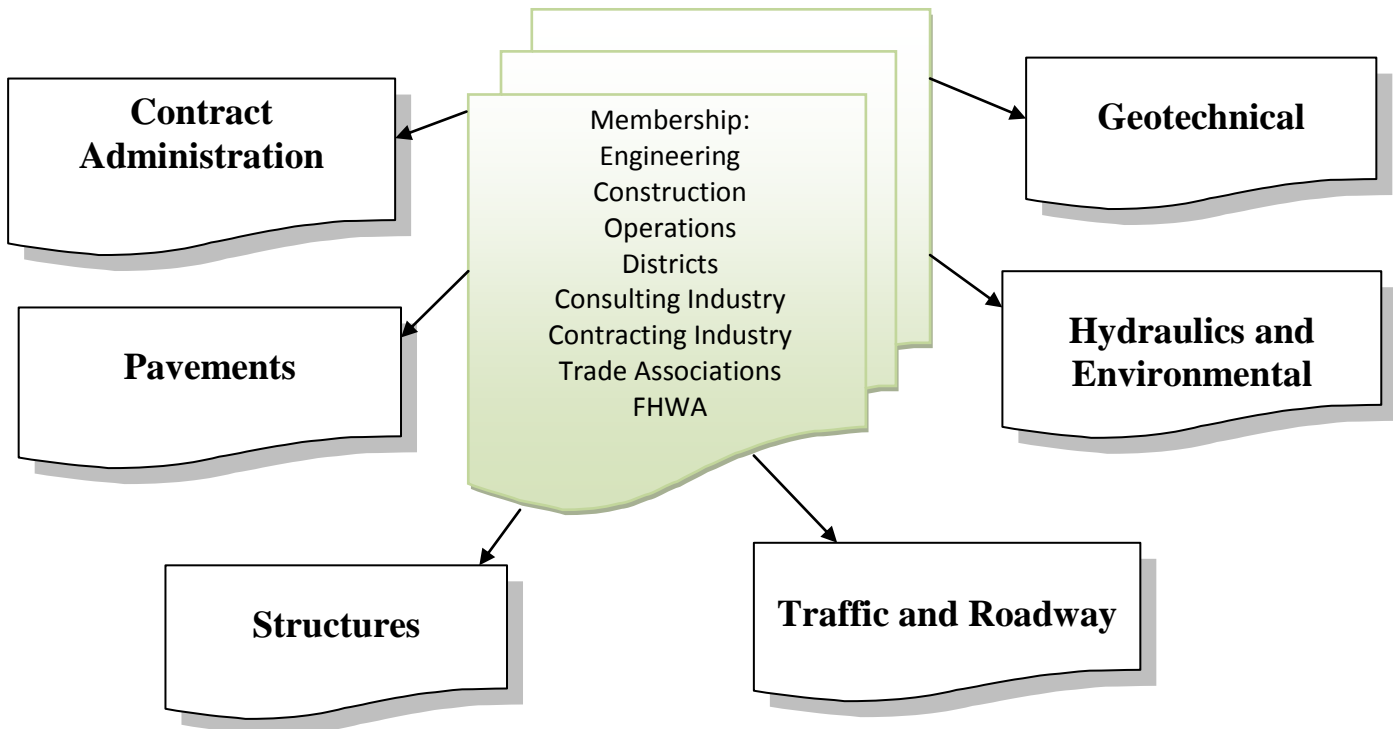
Page 9 of 9

continuous quality improvement process. Distribution of all standards and specifications are electronic in lieu of hard copy. Costs for paper, print, binders, and postage will be reduced considerably.

Attachment A



Standards and Specifications Committees



CONTRACT ADMINISTRATION COMMITTEE
Committee Chairperson: from Construction Administration
Specification Sections: 100, 619, 624
Standards: Innovative Contracting Manual, CADD Engineering Standards Manual, Design Build Scope Manual, Real Estate Policies and Procedures Manual, Project Development Process Manual
Contract Sales Section
Office of Materials Management
Office of Construction Administration
Office of Real Estate
Office of Aerial Engineering
Office of Estimating (as needed)
Office of Environmental Services (as needed)
District Representatives (two for design and two for construction)
Federal Highway Administration
Ohio Contractors Association
Contractors (two chosen by Ohio Contractors Association)
American Council of Engineering Companies of Ohio (two member representatives)

GEOTECHNICAL COMMITTEE	
Committee Chairperson: from Construction Administration	
Specification Sections: 200, 304, 410, 411, 617, 651, 652, 653, 654 and pertinent 700 sections. Standards: Geotechnical Bulletins, Specifications for Geotechnical Explorations, Manual for Abandoned Underground Mines - Inventory and Risk Assessment, Survey and Mapping Specification	
Office of Materials Management	
Office of Construction Administration	
Office of Pavement Engineering	
Office of Geotechnical Engineering	
Office of Aerial Engineering	
Office of Environmental Services	
District Representatives (two for design and two for construction)	
Federal Highway Administration	
Ohio Contractors Association	
Contractors (two chosen by Ohio Contractors Association)	
American Council of Engineering Companies of Ohio (two member representatives)	
Ohio Aggregates & Industrial Minerals Association	

PAVEMENT COMMITTEE	
Committee Chairperson: from Construction Administration	
Concrete sub-committee: Specification Sections: 255, 256, 257, 258, 305, 320, 321, 450, 608, 609, and pertinent 700 sections Standards: Sections of Location and Design Manual - Volume 3, Pavement Standard Drawings	Asphalt sub-committee: Specification Sections: 251, 252, 253, 254, 301, 302, 400 (except 410 and 411), 615, 618, and pertinent 700 sections Standards: Sections of Location and Design Manual - Volume 3, Pavement Standard Drawings
Office of Construction Administration	Office of Construction Administration
Office of Materials Management	Office of Materials Management
Office of Pavement Engineering	Office of Pavement Engineering
Office of Geotechnical Engineering	Office of Geotechnical Engineering
District Representatives (one for design and one for construction)	District Representatives (one for design and one for construction)
Federal Highway Administration	Federal Highway Administration
Ohio Contractors Association	Ohio Contractors Association
Contractor (chosen by Ohio Contractors Association)	Contractor (chosen by Ohio Contractors Association)
American Council of Engineering Companies of Ohio – member representative	American Council of Engineering Companies of Ohio – member representative
American Concrete Pavement Association	Flexible Pavements of Ohio
Ohio Aggregates & Industrial Minerals Association	Ohio Aggregates & Industrial Minerals Association
Ohio Ready Mix Concrete Association	

STRUCTURES COMMITTEE
Committee Chairperson: from Construction Administration
Specification Sections: 500, 610 and pertinent 700 sections Standards: Bridge Design Manual, Bridge Standard Drawings
Office of Construction Administration
Office of Materials Management
Office of Structural Engineering
Office of Geotechnical Engineering
District Representatives (two for design and two for construction)
Federal Highway Administration
Ohio Contractors Association
Contractors (two chosen by Ohio Contractors Association)
Ohio Ready Mix Concrete Association
American Council of Engineering Companies of Ohio (two member representatives)

HYDRAULICS and ENVIRONMENTAL COMMITTEE
Committee Chairperson: from Construction Administration
Specification Sections: 601, 602, 603, 604, 605, 613, 616, 638, 659, 660, 670, 671 and pertinent 700 sections. Standards: Location and Design Manual - Volume 2 - Drainage Design, Sections of Location and Design Manual - Volume 3, Hydraulic Standard Drawings, Waterway Permit Manual
Office of Construction Administration
Office of Materials Management
Office of Structural Engineering
Office of Hydraulic Engineering
Office of Roadway Engineering
Office of Environmental Services (as needed)
District Representatives (two for design and two for construction)
Federal Highway Administration
Ohio Contractors Association (if needed)
Contractors (two chosen by Ohio Contractors Association)
American Council of Engineering Companies of Ohio (two member representatives)
Ohio Aggregates & Industrial Minerals Association

TRAFFIC AND ROADWAY COMMITTEE

Committee Chairperson: from Construction Administration
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Specification Sections: 606, 607, 614, 620- 622, 625-633, 640, 656, 657, 658, 661- 666 and pertinent 700 sections. Standards: Location and Design Manual - Volume 1 - Roadway Design, Traffic Engineering Manual, Roadway Standard Drawings, Traffic Standard Drawings

Office of Construction Administration

Office of Materials Management

Contract Sales Section

Office of Traffic Engineering

Office of Roadway Engineering

District Representatives (two for design and two for construction)
--

Federal Highway Administration

Ohio Contractors Association

Contractors (two chosen by Ohio Contractors Association)
--

Institute of Traffic Engineers (ITE) or

American Council of Engineering Companies of Ohio (member representative)

Publication Owners

Standards:

Bridge Design Manual	Office of Structural Engineering
CADD Engineering Standards Manual	Office of Aerial Engineering
Design Build Scope Manual	Office of Construction Administration
Geotechnical Bulletins	Office of Geotechnical Engineering
Innovative Contracting Manual	Office of Construction Administration
Location and Design Manual - Volume 1 - Roadway Design	Office of Roadway Engineering Services
Location and Design Manual - Volume 2 - Drainage Design	Office of Hydraulics
Location and Design Manual - Volume 3 - Highway Plans and associated Sample Plan Sheets	Office of Roadway Engineering
Manual for Abandoned Underground Mines - Inventory and Risk Assessment	Office of Geotechnical Engineering
Survey and Mapping Specification	Office of Aerial Engineering
Pavement Design and Rehabilitation Manual	Office of Pavement Engineering
Project Development Process Manual	Office of Environmental Services
Real Estate Policies and Procedures Manual	
Right of Way Plan Manual	Office of Real Estate
Utilities	Office of Real Estate
Railroad Coordination	Office of Real Estate
Specifications for Geotechnical Explorations	Office of Geotechnical Engineering
Traffic Engineering Manual	Office of Traffic Engineering
ODOT Standard Construction Drawings & Plan Insert Sheets	
Roadway	Office of Roadway Engineering Services
Bridges	Office of Structural Engineering
Traffic	Office of Traffic Engineering
Hydraulic	Office of Hydraulics
Pavement	Office of Pavement Engineering

Specifications:

Construction & Material Specifications	Office of Construction Administration
Supplemental Specifications	Office of Construction Administration
Supplements	Office of Materials Management or Office of Construction Administration
Proposal Notes	Office of Construction Administration

ODOT Specification Quality Control Checklist

Specification Number:	Revision Date:
Submitted By/Date:	Reviewed By/Date:

Check-off or Comment	Quality Control Point:
	Active Voice, Imperative Mood
	Spelling re-checked
	Cross references checked
	Designers note or usage instructions included
	Standard formatting followed: Times New Roman, 12 pt, as per C&MS
	Standard section numbering and bullets followed
	Computer file in MS Word, with revision tracking turned on, and edits shown from original document
	Punctuation re-checked
	English (Metric) units order checked
	Comments from committee members included as hidden comments in the MS Word file
	Specification concepts reviewed for conformance to applicable laws, regulations, policies, and procedures

This checklist is to be completed by the Specification Coordinator for each revised, or new Specification. The Specification Coordinator will send a completed copy to the Committee Chairperson and the FHWA when the QC check is completed.

ODOT Standards Quality Control Checklist

Standard:	Revision Date:
Submitted By/Date:	Reviewed By/Date:

Check-off or Comment	Quality Control Point:
	Description;
	Manual or Drawing;
	Design Considerations (i.e. applicability to various project types and conditions);
	Method of calculation (if required);
	Method of payment (if required);
	Implementation procedure;
	Review requirements for new/revised items;
	List of specifications or other standards that may be impacted by the revision
	Spelling re-checked
	Cross references checked
	Standard formatting followed
	Punctuation re-checked
	English (Metric) units order checked
	Comments from committee members
	Standards concepts reviewed for conformance to applicable laws, regulations, policies, and procedures

This checklist is to be completed by the Publication Owner for each revised, or new Standard. The Publication Owner will send a completed copy to the Committee Chairperson and the FHWA when the QC check is completed.

Attachment F

TITLE 23--HIGHWAYS

CHAPTER I--FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

PART 625_DESIGN STANDARDS FOR HIGHWAYS

Sec.

625.1 Purpose.

625.2 Policy.

625.3 Application.

625.4 Standards, policies, and standard specifications.

Sec. 625.4 Standards, policies, and standard specifications.

The documents listed in this section are incorporated by reference with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 and are on file at the Office of the Federal Register in Washington, DC. They are available as noted in paragraph (d) of this section. The other CFR references listed in this section are included for cross-reference purposes only.

(a) Roadway and appurtenances. (1) A Policy on Geometric Design of Highways and Streets, AASHTO 2001. [See Sec. 625.4(d)(1)]

(2) A Policy on Design Standards Interstate System, AASHTO, January 2005. [See Sec. 625.4(d)(1)]

(3) The geometric design standards for resurfacing, restoration, and rehabilitation (RRR) projects on NHS highways other than freeways shall be the procedures and the design or design criteria established for individual projects, groups of projects, or all nonfreeway RRR projects in a State, and as approved by the FHWA. The other geometric design standards in this section do not apply to RRR projects on NHS highways other than freeways, except as adopted on an individual State basis. The RRR design standards shall reflect the consideration of the traffic, safety, economic, physical, community, and environmental needs of the projects.

(4) Erosion and Sediment Control on Highway Construction Projects, refer to 23 CFR part 650, subpart B.

(5) Location and Hydraulic Design of Encroachments on Flood Plains, refer to 23 CFR part 650, subpart A.

(6) Procedures for Abatement of Highway Traffic Noise and Construction Noise, refer to 23 CFR part 772.

(7) Accommodation of Utilities, refer to 23 CFR part 645, subpart B.

(8) Pavement Design, refer to 23 CFR part 626.

(b) Bridges and structures. (1) Standard Specifications for Highway Bridges, Fifteenth Edition, AASHTO 1992. [See Sec. 625.4(d)(1)]

(2) Interim Specifications--Bridges, AASHTO 1993. [See Sec. 625.4(d)(1)]

(3) Interim Specifications--Bridges, AASHTO 1994. [See Sec. 625.4(d)(1)]

(4) Interim Specifications--Bridges, AASHTO 1995. [See Sec. 625.4(d)(1)]

(5) AASHTO LRFD Bridge Design Specifications, First Edition, AASHTO 1994 (U.S. Units). [See Sec. 625.4(d)(1)]

(6) AASHTO LRFD Bridge Design Specifications, First Edition, AASHTO

1994 (SI Units). [See Sec. 625.4(d)(1)]

(7) Standard Specifications for Movable Highway Bridges, AASHTO 1988. [See Sec. 625.4(d)(1)]

(8) Bridge Welding Code, ANSI/AASHTO/AWS D1.5-95, AASHTO. [See Sec. 625.4(d)(1) and (2)]

(9) Structural Welding Code--Reinforcing Steel, ANSI/AWS D1.4-92, 1992. [See Sec. 625.4(d)(2)]

(10) Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, AASHTO 1994. [See Sec. 625.4(d)(1)]

(11) Navigational Clearances for Bridges, refer to 23 CFR part 650, subpart H.

(c) Materials. (1) General Materials Requirements, refer to 23 CFR part 635, subpart D.

(2) Standard Specifications for Transportation Materials and Methods of Sampling and Testing, parts I and II, AASHTO 1995. [See Sec. 625.4(d)(1)]

(3) Sampling and Testing of Materials and Construction, refer to 23 CFR part 637, subpart B.

(d) Availability of documents incorporated by reference. The documents listed in Sec. 625.4 are incorporated by reference and are on file and available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal--register/code--of--federal--regulations/ibr--locations.html>. These documents may also be reviewed at the Department of Transportation Library, 400 Seventh Street, SW., Washington, DC, in Room 2200. These documents are also available for inspection and copying as provided in 49 CFR part 7, appendix D. Copies of these documents may be obtained from the following organizations:

(1) American Association of State Highway and Transportation Officials (AASHTO), Suite 249, 444 North Capitol Street, NW., Washington, DC 20001.

(2) American Welding Society (AWS), 2501 Northwest Seventh Street, Miami, FL 33125.