NCEES Principles and Practice of Engineering Examination

CIVIL—STRUCTURAL Design Standards[1]

These standards apply to the Structural afternoon module of the PE Civil exam.

Effective Beginning with the April 2013 Examinations

ABBREVIATION	DESIGN STANDARD TITLE
AASHTO	*AASHTO LRFD Bridge Design Specifications,* 5th edition, 2010, American Association of State Highway & Transportation Officials, Washington, DC.
IBC	*International Building Code,* 2009 edition (without supplements), International Code Council, Falls Church, VA.
ASCE 7	*Minimum Design Loads for Buildings and Other Structures,* 2005, American Society of Civil Engineers, Reston, VA.
ACI 318[2]	*Building Code Requirements for Structural Concrete,* 2008, American Concrete Institute, Farmington Hills, MI.
AISC	*Steel Construction Manual,* 13th edition, American Institute of Steel Construction, Inc., Chicago, IL.
NDS[3]	*National Design Specification for Wood Construction ASD/LRFD,* 2005 edition & *National Design Specification Supplement, Design Values for Wood Construction,* 2005 edition, American Forest & Paper Association, Washington, DC.
PCI	*PCI Design Handbook: Precast and Prestressed Concrete,* 6th edition, 2004, Precast/Prestressed Concrete Institute, Chicago, IL.
TMS 402/602-08[4] (ACI 530)	*Building Code Requirements and Specifications for Masonry Structures* (and related commentaries), 2008; The Masonry Society, Boulder, CO; American Concrete Institute, Detroit, MI; and Structural Engineering Institute of the American Society of Civil Engineers, Reston, VA.

Notes

1. Solutions to exam questions that reference a standard of practice are scored based on this list. Solutions based on other editions or standards will not receive credit. **All questions are in English units.**
2. Appendix C does not apply to the Civil Structural examination.
3. Examinees will use only the (Allowable Stress Design) ASD method for wood design.
4. Examinees will use only the ASD method, except strength design Section 3.3.5 may be used for walls with out-of-plane loads.

NCEES Principles and Practice of Engineering Examination
CONSTRUCTION Design Standards

Effective Beginning with the April 2013 Examinations

ABBREVIATION	DESIGN STANDARD TITLE
ASCE 37-02	*Design Loads on Structures During Construction*, 2002, American Society of Civil Engineers, Reston, VA, www.asce.org.
NDS	*National Design Specification for Wood Construction*, 2005, American Forest & Paper Association/American Wood Council, Washington, DC, www.awc.org.
CMWB	*Standard Practice for Bracing Masonry Walls During Construction*, 2001, Council for Masonry Wall Bracing, Mason Contractors Association of America, Lombard, IL, www.masoncontractors.org.
AISC	*Steel Construction Manual*, 13th ed., American Institute of Steel Construction, Inc., Chicago, IL, www.aisc.org.
ACI 318-08	*Building Code Requirements for Structural Concrete*, 2008, American Concrete Institute, Farmington Hills, MI, www.concrete.org.
ACI 347-04	*Guide to Formwork for Concrete*, 2004, American Concrete Institute, Farmington Hills, MI, www.concrete.org (in ACI SP-4, 7th edition appendix).
ACI SP-4	*Formwork for Concrete*, 7th ed., 2005, American Concrete Institute, Farmington Hills, MI, www.concrete.org.
OSHA	*Occupational Safety and Health Standards for the Construction Industry*, 29 CFR Part 1926 (US federal version), US Department of Labor, Washington, DC.
MUTCD-Pt 6	*Manual on Uniform Traffic Control Devices—Part 6 Temporary Traffic Control*, 2009, US Federal Highway Administration, www.fhwa.dot.gov.

Reference categories for **Construction** depth module

- Construction surveying
- Construction estimating
- Construction planning and scheduling
- Construction equipment and methods
- Construction materials
- Construction design standards (see above)

NCEES Principles and Practice of Engineering Examination

TRANSPORTATION Design Standards

Effective Beginning with the April 2013 Examinations

ABBREVIATION	DESIGN STANDARD TITLE
AASHTO	*A Policy on Geometric Design of Highways and Streets,* 6th edition, 2011, American Association of State Highway & Transportation Officials, Washington, DC.
AASHTO	*AASHTO Guide for Design of Pavement Structures* (GDPS-4-M), 1993, and 1998 supplement, American Association of State Highway & Transportation Officials, Washington, DC.
AASHTO	*Roadside Design Guide,* 4th edition, 2011, American Association of State Highway & Transportation Officials, Washington, DC.
AASHTO	*Mechanistic-Empirical Pavement Design Guide: A Manual of Practice*, interim edition, July 2008, American Association of State Highway & Transportation Officials, Washington, DC.
AI	*The Asphalt Handbook* (MS-4), 7th edition, 2007, Asphalt Institute, Lexington, KY.
HCM	*Highway Capacity Manual* 2010, Transportation Research Board—National Research Council, Washington, DC.
MUTCD	*Manual on Uniform Traffic Control Devices,* 2009, U.S. Department of Transportation—Federal Highway Administration, Washington, DC.
PCA	*Design and Control of Concrete Mixtures*, 15th edition, 2011, Portland Cement Association, Skokie, IL.
FHWA	*Hydraulic Design of Highway Culverts*, Hydraulic Design Series Number 5, Publication No. FHWA-NH1-01-020, September 2011, revised May 2005, U.S. Department of Transportation—Federal Highway Administration, Washington, DC.