

STATE OF OHIO (DAS)
CLASSIFICATION
SPECIFICATION

CLASSIFICATION SERIES:

Design Engineer

SERIES NO.:

8542

MAJOR AGENCIES:

Administrative Services, Youth Services, Mental Health

EFFECTIVE DATE:

02/26/2012

SERIES PURPOSE:

The purpose of the design engineer occupation is to review engineering drawings, plans & designs.

At the lowest level, incumbents design & develop engineering plans under close supervision from registered professional engineer.

At the higher two levels, incumbents design or redesign projects or coordinate review of drawings, plans or designs respectively.

CLASS TITLE

Design Engineer Intern

CLASS NUMBER

85420

PAY RANGE

30

EFFECTIVE

01/09/2005

CLASS CONCEPT:

The developmental level class works under close supervision from higher-level, registered exempt engineer & requires considerable knowledge of engineering in order to design & develop highway &/or railroad & pedestrian structures, water & sewer lines roadways, parking areas, recreational facilities &/or other contract plans.

CLASS TITLE

Design Engineer 1

CLASS NUMBER

85421

PAY RANGE

31

EFFECTIVE

01/09/2005

CLASS CONCEPT:

The first full performance level class works under general direction & requires thorough knowledge of engineering in order to design or redesign projects to conform to all design criteria.

CLASS TITLE

Design Engineer 2

CLASS NUMBER

85422

PAY RANGE

33

EFFECTIVE

01/09/2005

CLASS CONCEPT:

The second full performance level class works under general supervision & requires considerable knowledge of engineering in order to coordinate review of drawings, plans or designs submitted by contractors or field districts.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Design Engineer Intern	85420	13	01/09/2005	30

JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Under close supervision from higher-level licensed engineer (i.e., all work subject to review & approval), designs & develops highway &/or railroad & pedestrian structures, water & sewer lines, roadways, parking areas, recreational facilities &/or related contract plans.

Performs field work to check survey data; reviews plans & projects; examines damage &/or deterioration of existing structures & ascertain least expensive method of repair & to calculate data; performs engineering calculations; prepares detailed cost estimates & compiles engineering data; checks falsework & prestressed concrete shop drawings prepared by contractors & suppliers for structural adequacy & conformance with specifications, regulations & policy; meets with property owners & public officials.

Checks contract plans of minor highway structures or updating work prepared by others; attends meetings & seminars; assists in formulating design criteria, policies & procedures.

MAJOR WORKER CHARACTERISTICS:

Knowledge of engineering; office practices & procedures*. Ability to understand practical field of study; use algebra & trigonometry; understand technical manuals & instructions; gather, collate & classify data; prepare contract designs/plans; cooperate with co-workers on group projects; handle contacts with public & private officials.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Engineering degree from recognized school or college which has been accredited by Accreditation Board for Engineering Technology; completed application for admission for examination to obtain valid certificate as Engineer-In-Training issued by Ohio Board of Registration for professional Engineers & Surveyors.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:

N.A.

UNUSUAL WORKING CONDITIONS:

N.A.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Design Engineer 1	85421	13	01/09/2005	31

JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Designs projects (e.g., lighting, minor road or roadside construction) or re-designs projects to conform to all design criteria, processes change orders & design details not covered by standard drawings & lays out vertical & horizontal curves on construction plans.

Acts as lead worker (i.e., provides work direction & training) over design squad, coordinates work flow & assists supervisor as needed (e.g., recommends actions, attends meetings, seminars); writes project proposals, contract specifications & technical reports; assists in formulation of design criteria, policies & procedures; consults with contractors local &/or other agency officials on plans & design criteria.

Instructs trainees in methods & procedures to complete or review plans; reviews &/or monitors review of preliminary or final plans to insure conformity to design criteria, including work distribution & duty assignments; maintains computer programs for plans & designs; monitors project progress & analyzes data.

Works in field, checking survey data, reviewing plans, collecting data & revising projects; acts as liaison or coordinator on projects which overlap bureaus; meets with public to answer questions (e.g., landowners, city or county officials); assists in preparation for such meetings.

MAJOR WORKER CHARACTERISTICS:

Knowledge of supervision*; public relations*; office practices *; government structure*; engineering. Ability to understand practical field of study; use algebra & trigonometry; write contract specifications; establish friendly work atmosphere; understand technical manuals & instructions.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Engineering degree from recognized school or college which has been accredited by Accreditation Board for Engineering & Technology; valid certificate as Engineer-In-Training issued by Ohio Board of Registration For Professional Engineers & Surveyors; 2 years engineering related experience.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:

N.A.

UNUSUAL WORKING CONDITIONS:

N.A.

<u>CLASS TITLE</u>	<u>CLASS NUMBER</u>	<u>B. U.</u>	<u>EFFECTIVE</u>	<u>PAY RANGE</u>
Design Engineer 2	85422	13	01/09/2005	33

JOB DUTIES IN ORDER OF IMPORTANCE: (These duties are illustrative only. Incumbents may perform some or all of these duties or other job-related duties as assigned.)

Coordinates review of drawings, plans or designs submitted by contractors or field districts, suggests revisions as needed, analyzes studies done for proposed projects, summarizes data, & makes judgments & writes reports, correspondence & manuals.

Initiates literature review & research to design studies & develop conventional field testing procedures; designs projects &/or revises design for district offices; prepares or monitors preparation of divisional design & construction standards & specifications.

Assists supervisor as needed; meets with public officials, contractors, consultants & others to confer on design of projects; acts as liaison with other bureaus or agencies for project programming & scheduling; coordinates activities with districts, consultants to expedite projects & conducts field investigations to verify progress.

MAJOR WORKER CHARACTERISTICS:

Knowledge of supervision*; office practices*; engineering. Ability to understand practical field of study; use trigonometry & geometry; establish friendly work atmosphere as coordinator.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Engineering degree from recognized school or college which has been accredited by Accreditation Board for Engineering & Technology; valid certificate as Engineer-In-Training issued by Ohio Board of Registration For Professional Engineers & Surveyors; 3 years engineering related experience.

TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:

N.A.

UNUSUAL WORKING CONDITIONS:

N.A.