SERIES PURPOSE:
The purpose of the design engineer occupation is to review engineering drawings, plans & designs.
Incumbents design or redesign projects or coordinate review of drawings, plans or designs respectively.

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.
**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 workflow & 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.
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.