

**STATE OF OHIO (DAS)**CLASSIFICATION  
SPECIFICATION**CLASSIFICATION SERIES:**

Transportation Technician

**SERIES NO.:**

8587

**MAJOR AGENCIES:**

Department of Transportation only

**EFFECTIVE DATE:**

04/04/1993

**SERIES PURPOSE:**

The purpose of the transportation technician occupation is to provide technical engineering support in completion of various construction projects, in design &/or drafting of highway construction/improvement projects or in conducting traffic studies & research & in design, improvement & maintenance of structures &/or roadway conditions. Must have authority to approve use of contingencies (i.e., quantity & plan design) in order to be properly classified at any level in this series.

At the four non-supervisory levels, employees specialize in construction, or planning & design or operations or testing functions, with assignments increasing in the degree of complexity & independence as employees move through the series.

Note: The classification series is reserved for non-engineers or employees who do not have an engineering degree, or engineering registration.

**GLOSSARY:** The terms listed below are to be interpreted to mean the following whenever they appear in the classification specification.

**MAJOR STRUCTURES:** complex hydraulic analysis (flood plain study utilizing HEC-2 or WSPRO analysis); steel girder bridges; multi-span steel beam bridges, with overall length equal to or greater than 500 feet; prestressed concrete I-Girder bridges; railroad bridges; lift bridges; steel truss bridges; bridges with friction drilled shaft foundations; bridges with foundation conditions requiring stability &/or settlement analysis; bridges with counterfort abutments; bridges with complicated geometrics, requiring unusual framing or curved stringers; bridges with exotic components (e.g., pot bearings, spherical bearings, modular expansion joint seals); rehabilitation projects for major structures; rehabilitation projects for minor structures requiring in-depth computations for construction (removal & repair) loads.

**MINOR STRUCTURES:** non-complex hydraulic analysis (flood hazard analysis); single span concrete slab (SB-2-73); continuous concrete slab (CS-2-73); single or multi-span non-composite prestress concrete box beam (PSBD-1-81) (for multi-span), overall length less than 300 feet; single span steel beam bridges; multi-span steel beam bridges with integral or stub type abutments (overall length less than 500 feet); culverts; superspans; retaining wall (RW-1-63); rehabilitation projects.

**SIMPLE PLANS/PROJECTS:** designed to develop technical skills, knowledges & abilities requiring application of standard techniques, procedures & criteria in carrying out a sequence of engineering related tasks. Limited exercise of judgment is required on details of work & in making preliminary selections & adoptions of technical alternatives. The following are simple plans/projects by assigned specialty: in Construction - guardrail, two-lane resurfacing, striping, ditch lay-overs; in Planning & Design - guardrail, two-lane resurfacing, striping, ditch lay-overs, minor structures; in Operations - traffic signs & signals, raised pavement markers, striping, ditch layovers, bridge painting & water-proofing.

**STANDARD PLANS/PROJECTS:** assignments require evaluation, selection & application of standard techniques using judgment to make minor adaptations & modifications. Assignments have clear & specified objectives & require the investigation of a limited number of variables. The following are standard plans/projects by assigned specialty: in Construction - bridge overlays, culvert replacements & minor structures; in Planning & Design - detailed drawings of roadways, culvert replacements, minor structures, signing, roadway illumination & right of way; in Operations - maintenance of existing minor structures & roadways & culverts & updating specifications & plans for minor structure rehabilitation, two-lane resurfacing, roadway illumination projects, roadway signing & two-phase traffic signals.

**COMPLEX PLANS/PROJECTS:** characterized by planning & conducting technical work requiring judgment in the independent evaluation, selection, adaption & modification of standard techniques, procedures & criteria. Employees devise new approaches to problems encountered. The following are complex plans/ projects by assigned specialty: in Construction - new location, new alignment, multi-lane &/or bi-directional reconstruction & major structures; in Planning & Design - new location, new alignment, multi-lane &/or bi-directional reconstruction & major structures; in Operations - multi-phase traffic signal design, major structure rehabilitation, ditch relocation, traffic control standards & guidelines, multi-lane resurfacing & lane additions & widenings.

**SUPPORT PERSONNEL:** technical & paraprofessional level employees. Does not include clerical, secretarial & like personnel.

**CLASS TITLE:**  
Transportation Technical Specialist

**CLASS NUMBER:**  
85871

**EFFECTIVE DATE:**  
04/04/1993

**CLASS CONCEPT:**  
The first developmental level class works under immediate supervision & requires working knowledge of engineering technology & application of standard practices & techniques in order to inspect simple projects to ensure contractor compliance to plans, notes & guidelines & approve use of contingencies (i.e., quantity & plan design), or to review & design simple plans for proposed highway construction projects/improvements, or to assist in planning simple improvement & reconstruction projects to upgrade roads, structures & landscapes.

**CLASS TITLE:**  
Transportation Technician 1

**CLASS NUMBER:**  
85873

**EFFECTIVE DATE:**  
04/04/1993

**CLASS CONCEPT:**  
The second developmental class works under general supervision & requires considerable knowledge of civil engineering technology & evaluation, selection & application of standard techniques in order to inspect standard projects & approve use of contingencies (i.e., quantity & plan design) as stipulated by contract, or to generate standard detailed drawings used in construction, maintenance & planning of transportation projects & assist in review of highway & bridge plans, contracts & cost estimates for technical accuracy, or to assist in standard maintenance projects by performing calculations for hydraulics, signals, signing, pavement, fence & bridge design & to update specifications & plans for standard projects.

**CLASS TITLE:**  
Transportation Technician 2

**CLASS NUMBER:**  
85874

**EFFECTIVE DATE:**  
04/04/1993

**CLASS CONCEPT:**  
The full performance level class works under general supervision & requires considerable knowledge of civil engineering technology & independent evaluation, selection, adaptation & modification of standard techniques, procedures & criteria in order to manage multiple complex construction projects, review design of all necessary changes to project(s), ensure construction methods for all aspects of project(s) will achieve plan & specification intent & act as lead worker (i.e., provide work direction & training) over lower-level transportation engineers, transportation technicians &/or other support personnel, or independently manage complex projects by generating detailed drawings utilizing engineering principles (e.g., structural steel design, structural concrete design, hydraulic design, geometric design, statistical analysis & cost analysis) in development of construction project plans, or to independently manage complex projects in field & from design development standpoint for maintenance of structures &/or roadway conditions (i.e., determine work required, develop & generate rehabilitation plans using CADD & drafting equipment for structures, develop rehabilitation layouts & analyze conditions & determine project scope).

**CLASS TITLE:**  
Transportation Technician 3

**CLASS NUMBER:**  
85875

**EFFECTIVE DATE:**  
04/04/1993

**CLASS CONCEPT:**  
The advanced level class works under direction & requires thorough knowledge of civil engineering technology in order to act as lead worker (i.e., provide work direction & training) over lower-level transportation engineers, transportation technicians &/or other support personnel assigned to complete all aspects of multiple &/or complex construction projects or engaged in all design phases of complex transportation projects or engaged in complex design phase for maintenance of transportation structures &/or roadway systems or engaged in performing structural steel shop inspections.

<b>CLASS TITLE:</b> Transportation Technical Specialist	<b>CLASS NUMBER:</b> 85871	<b>BARGAINING UNIT:</b> 013
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**EFFECTIVE DATE:**

04/04/1993

**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.)**

In Construction, inspects simple projects to ensure contractor compliance to plans, notes & guidelines (e.g., examines plans; verifies calculations; checks quantities; conducts tests to ensure compliance of materials to plan requirements; estimates costs) & approves use of contingencies (i.e., quantity & plan design); or in Planning & Design, reviews & designs simple plans for proposed highway construction projects/improvements & receives training in standard plans or projects; or in Operations, assists in planning simple improvement & reconstruction projects using CADD & drafting equipment to upgrade roads, structures & landscapes.

Records project information in construction diary & on various construction reports; coordinates raw field data & researches existing records to provide detailed information to higher-level engineers for further analysis; conducts traffic studies & researches specific locations (e.g., high accident areas); identifies capabilities of machinery to be purchased.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of engineering technology; OSHA safety practices\*. Skill in use of computer, CADD & drafting equipment. Ability to understand civil engineering technology; use statistical analysis; comprehend & interpret plans & specifications to conduct simple inspections or design simple plans; cooperate with co-workers on assigned planning & design functions or projects.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

Completion of associate degree program in engineering technology; 2 yrs. engineering related technical experience in construction/rehabilitation/maintenance or planning & design of civil engineering projects or materials testing, with experience commensurate with position to be filled.

-Or 4 yrs. trg. or 4 yrs. exp. in engineering related technical experience in construction/rehabilitation/maintenance projects or planning & design of civil engineering projects or materials testing, with experience to be commensurate with position to be filled.

Note: the official position description on file with the Ohio Department Of Administrative Services is to reflect, in the minimum acceptable characteristics, the required technical experience. Only those applicants possessing the required technical experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technical experience commensurate with the position in question.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May require travel where employee must provide own transportation; may be exposed to unsafe conditions during inspections of projects; may work varying hours.

<b>CLASS TITLE:</b> Transportation Technician 1	<b>CLASS NUMBER:</b> 85873	<b>BARGAINING UNIT:</b> 013
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**EFFECTIVE DATE:**

04/04/1993

**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.)**

In Construction, inspects standard projects to ensure contractor compliance, approves use of contingencies (i.e., quantity & plan design) stipulated by contract & has authority to stop work by contractor; or in Planning & Design, generates standard detailed drawings for specific portions of construction, maintenance & planning of transportation projects (e.g., applies knowledge of soils, slope of land & availability of existing drainage & structural design to establish precedents to meet estimated load requirements, improve efficiency, safety, economy & environmental compatibility) & assists in review of highway & bridge plans, contracts & cost estimates for technical accuracy; or in Operations, assists in standard maintenance projects by performing calculations for hydraulics, signals, signing, pavement, fence & bridge design & updates specifications & plans for standard projects.

Approves & signs documentation (e.g., approves use of contingencies, construction diaries, TE-30 material reports & construction estimates); assists in reviewing environmental documents (e.g., air & water reports; engineering source documents) in preliminary development stage for accuracy & compliance to specifications; participates in survey, layout & preparation of traffic signal installations; reviews routine traffic engineering studies & summarizes for engineer; generates reports & costs estimates.

Meets with public, government officials & property owners to provide information regarding projects; confers with higher-level engineer or transportation technician to gain assistance to resolve unusual problems.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of civil engineering technology; OSHA safety practices\*; public relations\*. Skill in use of computer, CADD & drafting equipment. Ability to understand civil engineering technology; use statistical analysis; comprehend & interpret plans & specifications to conduct standard inspections or design standard plans; cooperate with co-workers on group projects; handle routine & sensitive contacts with public government officials & property owners concerning assigned projects/plans.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

12 mos. exp. as Transportation Technical Specialist, 85871, with experience to be commensurate with position to be filled.

-Or completion of associate degree program in engineering technology; 3 yrs. engineering related technical experience in simple construction/ rehabilitation/maintenance projects or planning & design of simple civil engineering projects or materials testing, with experience to be commensurate with position to be filled.

-Or 5 yrs. engineering related technical experience in simple construction/ rehabilitation/maintenance projects or planning & design of simple civil engineering projects or materials testing, with experience to be commensurate with position to be filled.

Note: the official position description on file with the Ohio Department Of Administrative Services is to reflect, in the minimum acceptable characteristics, the required technical experience. Only those applicants possessing the required technical experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technical experience commensurate with the position in question.

-Or equivalent of minimum class qualifications for employment noted above.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May require travel where employee must provide own transportation; may be exposed to unsafe conditions during inspections of projects; may work varying hours.

<b>CLASS TITLE:</b> Transportation Technician 2	<b>CLASS NUMBER:</b> 85874	<b>BARGAINING UNIT:</b> 013
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**EFFECTIVE DATE:**

04/04/1993

**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.)**

In Construction, manages multiple complex construction projects, reviews design of all necessary changes to project(s) & ensures construction methods for all aspects of project(s) will achieve plan & specification intent by acting as lead worker (i.e., provides work direction & training) & routinely reviewing construction diaries, inspection reports &/or material test reports completed by lower-level transportation technicians &/or transportation engineers &/or other support personnel; or in Planning & Design, independently manages complex projects by generating &/or reviewing detailed drawings using CADD or drafting equipment & engineering principles; or in Operations, independently manages complex projects in field & from design development standpoint for maintenance of existing structures &/or roadway conditions (i.e., determines work required, develops & generates rehabilitation plans using CADD & drafting equipment for structures, develops rehabilitation layouts, analyzes conditions & determines project scope).

Prepares required reports relative to assigned projects/plans; prepares cost estimates; confers with supervisor or higher-level engineer regarding unusual or complex problems or to obtain approval on plans.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of civil engineering technology; OSHA safety practices\*; public relations. Skill in use of computer, CADD & drafting equipment. Ability to understand civil engineering technology; use statistical analysis; comprehend & interpret plans & specifications to conduct complex inspections or design complex plans; cooperate with co-workers on assigned planning & design functions or projects.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

2 yrs. exp. as Transportation Technician 1, 85873, with experience to be commensurate with position to be filled.

-Or completion of associate degree program in engineering technology; 5 yrs. engineering related technical experience in simple & standard construction/ rehabilitation/maintenance projects or planning & design of simple & standard civil engineering projects or materials testing, with experience to be commensurate with position to be filled.

-Or 7 yrs. trg. or 7 yrs. exp. in engineering related technical experience in simple & standard construction/rehabilitation/maintenance projects or planning & design of simple & standard civil engineering projects or materials testing, with experience to be commensurate with positions to be filled. Note: the official position description on file with the Ohio Department Of Administrative Services is to reflect, in the minimum acceptable characteristics, the required technical experience. Only those applicants possessing the required technical experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technical experience commensurate with the position in question.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May require travel where employee must provide own transportation; may be exposed to unsafe conditions during inspections of projects; may work varying hours.

<b>CLASS TITLE:</b> Transportation Technician 3	<b>CLASS NUMBER:</b> 85875	<b>BARGAINING UNIT:</b> 013
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**EFFECTIVE DATE:**

04/04/1993

**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.)**

In Construction, interprets complex plans to provide for effective implementation & minimize chance of accident, conflict & delay, conducts field reviews of project implementation &/or reviews site of proposed project to ensure project adaptability & prepares design changes to final plans (i.e., plans let for construction) to solve plan implementation problems (i.e., changes to structural design including camber of beam, pavement design, geometric design & hydraulics);

OR

In Planning & Design, prepares or reviews complex plans & designs for major four-lane rehabilitation, new construction, bridge replacement, roadway relocation by incorporating geometric, hydraulic & structural design techniques in plan preparation using CADD or drafting tools to draw plans & instructs & trains employees in CADD techniques, or reviews shop plans for inappropriate or awkward details which may contribute to fabrication errors, reviews & recommends final approval for all structural steel reports to include dimensions, welds, workmanship, cleaning & painting of steel, inspects & evaluates fabrication shops applying for approval to fabricate structural steel in Ohio & determines inspection methods to be followed in performing inspection of bridge components;

OR

In Operations, interprets complex plans to provide for effective implementation & minimize chance of accident, conflict & delay, conducts field reviews of project implementation &/or reviews site of proposed project to ensure project adaptability & prepares design changes to final plans to solve plan implementation problems, monitors project progress & reviews recommended design revisions, prepares plans & designs revisions for reconstruction of roadways (e.g., shoulder widening, ditch lay-overs, drainage design, structural repair & rehabilitation) using CADD & drafting equipment, recommends & designs change orders, reviews complex engineering reports & analyzes bids & recommends awards;

OR

As district staff specialist, independently conducts studies related to technical specialty & originates report of study results or recommends changes to engineer/technician/supervisor in charge of project to correct problems with construction work zone & maintenance of traffic schemes, acts as direct representative of district construction engineer exercising technical control over construction work zone, maintenance of traffic schemes (M/T) & related traffic control devices on all active construction within assigned district, coordinates review of major changes in active project m/t plan schemes by district, central office & FHWA personnel & investigates & analyzes traffic accidents occurring within project limits;

AND

In addition to one of above options, acts as lead worker (i.e., provides work direction & training) over lower-level transportation technicians &/or transportation engineers &/or other support personnel.

**MAJOR WORKER CHARACTERISTICS:**

Knowledge of employee training & development\*; OSHA safety practices\*; civil engineering technology; public relations. Skill in operation of computer, CADD & drafting equipment. Ability to understand civil engineering technology; use statistical analysis; comprehend & interpret plans & specifications & review plans/projects to ensure compliance & resolve technical problems which may arise; cooperate with co-workers on group projects; establish friendly atmosphere as lead worker; handle routine & sensitive contacts with government officials, consulting firms/contractors & general public.

(\*)Developed after employment.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

2 yrs. exp. as Transportation Technician 2, 85874, with experience to be commensurate with position to be filled.

-Or completion of associate degree program in engineering technology; 7 yrs. engineering related technical experience in

simple, standard & complex construction/rehabilitation/maintenance projects or planning & design of simple, standard & complex civil engineering projects or materials testing, with experience to be commensurate with position to be filled.

-Or 9 yrs. trg. or 9 yrs. exp. in engineering related technical experience in simple, standard & complex construction/rehabilitation/maintenance projects or in planning & design of simple, standard & complex civil engineering projects or materials testing, with experience to be commensurate with position to be filled.

Note: the official position description on file with the Ohio Department Of Administrative Services is to reflect, in the minimum acceptable characteristics, the required technical experience. Only those applicants possessing the required technical experience listed in the position description are to be considered for any vacancies posted. The vacancy/job posting should also only list the required technical experience commensurate with the position in question.

-Or equivalent of Minimum Class Qualifications For Employment noted above.

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

Not applicable.

**UNUSUAL WORKING CONDITIONS:**

May require travel where employee must provide own transportation; may be exposed to unsafe conditions during inspections of projects; may work varying hours.