

TS-78 February 1969

**General Schedule
Position Classification Standards**



WCPS-2 August 2002

**POSITION CLASSIFICATION
STANDARD
FOR
CONSTRUCTION CONTROL
SERIES, GS-0809**



**Workforce Compensation
and Performance Service**



Construction Control Series

GS-0809

TABLE OF CONTENTS

SERIES DEFINITION	3
BACKGROUND	3
EXCLUSIONS	3
FUNCTIONS PERFORMED	5
SPECIALIZATIONS AND TITLES	7
KNOWLEDGE, SKILLS AND ABILITIES	7
CLASSIFICATION CRITERIA	8
EVALUATION NOTES	8
CONSTRUCTION INSPECTION AID, GS-0809-02	9
CONSTRUCTION INSPECTION AID, GS-0809-03	10
CONSTRUCTION INSPECTOR, GS-0809-04	10
CONSTRUCTION INSPECTOR, GS-0809-05	11
CONSTRUCTION INSPECTOR, GS-0809-06	12
CONSTRUCTION INSPECTOR, GS-0809-07	13
CONSTRUCTION INSPECTOR, GS-0809-08	14
CONSTRUCTION INSPECTOR, GS-0809-09	15

SERIES DEFINITION

This series includes positions which involve on-site inspection of construction or the monitoring and control of construction operations. Positions in this occupation require application of (a) practical knowledge of engineering methods and techniques; (b) knowledge of construction practices, methods, techniques, costs, materials, and equipment; and (c) ability to read and interpret engineering and architectural plans and specifications.

This series supersedes the Construction Inspection Series, GS-0809.

This standard supersedes the standards for the Construction Inspection Series, GS-0809, published in February 1960, and the Construction and Maintenance Series, GS-1640, published in September 1956.

BACKGROUND

"Construction" for the purposes of this standard is defined as the act of building; the erection of a new structure or facility; the installation of mechanical and electrical equipment and systems; the alteration of an existing structure such as the addition of a floor or wing; the major repair to an existing structure, and related boring, clearing, dredging, excavating, filling, piledriving, landscaping, and other operations incident to construction. The structures include airports, buildings, canals and locks, dams, piers, fortifications, highways and streets, bridges, levees, power-plants railroads, transmission lines, pipelines, tunnels, water and sewage plants, etc.

This series specifically includes the following positions:

- Positions formerly classified in the Construction Inspection Series, GS-0809.
- Positions formerly classified as Construction Representative in the Construction and Maintenance Series, GS-1640.

EXCLUSIONS

1. Positions primarily responsible for supervising or for inspecting the quality of work of employees in trades or crafts, or equipment operators, requiring personal knowledge and experience in the trade, craft, or manual labor occupation, are excluded from the General Schedule system. For example, if the supervisor or the inspector must be able to perform the trade or craft work being inspected to determine whether the finished work is acceptable, the position is classified and graded under the [Federal Wage System](#).

2. Positions which require application of professional engineering knowledge to construction surveillance are classified in the [Civil Engineering Series, GS-0810](#). Nonprofessional positions primarily responsible for performing very similar work in overseeing, managing, or inspecting construction work, which requires a practical knowledge of engineering methods and techniques are classified in the Construction Control Series, GS-0809.
3. Positions primarily responsible for full-time survey and layout work are classified in the [Surveying Technician Series, GS-0817](#). Nonprofessional technical positions responsible for construction contract management including incidental site layout and surveying duties are classified in the Construction Control Series, GS-0809. Positions with broader responsibilities for inspection and survey, neither of which is grade controlling, in combination with functions such as design, are classified to the [Engineering Technician Series, GS-0802](#).
4. Nonprofessional technical positions primarily responsible for conducting quality control, analytical or test work on materials and equipment at the point of manufacture or in a laboratory setting are classified in the [Engineering Technician Series, GS-0802](#), or the [Quality Assurance, Inspection and Grading Group, GS-1900](#). Positions primarily responsible for on-site inspection of construction activities involving sampling, testing, and inspection of materials are classified to the Construction Control Series, GS-0809.
5. Nonprofessional technical positions concerned primarily with the operation and maintenance of Federal facilities and structures and including the supervision of Federal employees engaged in inspecting related construction activities are classified in the [Facility Management Series, GS-1640](#).
6. Positions that require primarily application of a practical knowledge of architectural design and construction of housing in the examination of plans and specifications for compliance with minimum standards, and in performing related work on housing costs, are classified in the [Construction Analyst Series, GS-0828](#).
7. Positions which involve review or control over construction contracts primarily to protect the Government from a business, financial, or legal standpoint are classified in the [Contracting Series, GS-1102](#). Such positions are not concerned fundamentally with the technical engineering aspects of a construction project.
8. Positions which involve primarily the performance testing of installed electrical and mechanical systems and equipment are classified in the [Engineering Technician Series, GS-0802](#). However, positions which concern primarily inspecting the installation of electrical and mechanical systems and equipment, including performance testing, for compliance with plans and specifications, are classified in the Construction Control Series.

9. Positions which involve primarily "office-engineering" technician duties in managing construction projects of the type performed "offsite" in headquarters or staff offices, e.g., preparing cost estimates, monitoring and reporting progress, and reviewing schedules and costs, are classified in the [Engineering Technician Series, GS-0802](#), or other appropriate series. Such positions do not require the knowledge which characterize the Construction Control Series.

FUNCTIONS PERFORMED

The technician functions involved in monitoring construction is divided into two identifiable, overlapping types of work. Construction inspector positions deal primarily with the detailed, continuous, and searching review of materials, work methods, and workmanship to assure that each part of the structure is built in accordance with the plans and specifications. Construction representative positions assure adequate inspection and also control or monitor the construction operations. Some construction representative positions have characteristics very similar to those of professional engineers who monitor construction of Federal structures and facilities.

Construction inspector functions

Positions in this series which involve primarily detailed inspection tasks include duties such as the following:

- reviewing and becoming familiar with the construction plan and specifications;
- inspecting all materials and equipment delivered to the construction site to insure that they meet specifications;
- observing work and work methods to insure that the structure is being built in accordance with the plan through use of acceptable work practices;
- inspecting work in progress and upon completion to insure an acceptable level of workmanship and compliance with plans and specifications;
- interviewing contractor employees to insure that labor laws and regulations are being observed;
- observing work site and activity to insure that safety standards are maintained; and
- maintaining a daily log, (history) of the project, recording facts concerning work activity, work force, equipment in use, inspection activities, accidents, visitors, weather conditions, and unusual happenings.

Construction representative functions

As employees become more proficient in performing inspection tasks, they begin to acquire capability for, and their assignments reflect the addition of construction management duties and responsibilities. The construction representative positions are very similar to professional resident engineer assignments described in the classification standard for the [Civil Engineering Series, GS-0810](#). The following functions are typical of such positions:

- Review project plans and specifications prior to contract advertisement to determine practicability from construction standpoint; whether physical obstructions or other construction difficulties have been anticipated; whether materials specified are readily available.
- Attend pre-bid and pre-construction conferences to discuss principal construction features and requirements, in terms of methods and equipment.
- Supervise conduct of detailed site survey; set stakes to mark pertinent features; investigate foundation and borrow pits.
- Develop or review specifications for clearing of land, excavation, building access roads and utilities, construction offices, testing facilities, equipment and material maintenance and storage facilities.
- Inform contractor of requirements concerning construction scheduling, progress reporting, safety measures, wage and hour law observance, labor relations, payroll records.
- Observe and investigate construction at all stages to identify problems, report potential problems, and take timely action to recommend changes to designer to solve problems such as unusual foundation conditions.
- Supervise inspection of construction operations for compliance with plans and specifications; interpret plans and specifications; confer with contractor representatives to resolve differences of opinion.
- Review, advise on, and evaluate the contractor's system of inspection.
- Investigate need for contract change orders, considering conditions at work site, field measurements and computations, and local prices, and negotiate costs for changes required.
- Investigate and report on situations in controversy with contractors which may lead to formal claims by the contractor. These may arise from such things as contract changes, labor strikes, unusual weather.

- Record changes and modifications to contract drawings and specifications for use in preparation of "as-built" drawings at completion of construction.
- Coordinate construction operations with contractors and Federal, State, and local agencies involved; and with railroad, pipeline, utility companies and highway officials on relocation of facilities.
- Keep officials of local jurisdictions informed on project operations, and maintain public relations through news media and personal contact with civic and business groups.

Construction inspectors and especially construction representatives work with and assist the contractor to discharge his contractual obligations on a timely basis, while assuring that he adheres to the provisions of the contract. They confer with his representatives on matters of scheduling, work methods, the acceptability of substitute materials, and the quality of workmanship.

At the higher grade levels, representatives develop cost estimates for changes to the construction plans and specifications, and negotiate such changes with the contractor's representatives. They also make recommendations concerning the release and payment of funds to the contractor, based upon the percentage of work satisfactorily completed.

SPECIALIZATIONS AND TITLES

The authorized titles for nonsupervisory positions are as follows:

Construction Inspection Aid applies to positions at GS-2 and GS-3.

Construction Inspector applies to positions at grades GS-4 and above that involve primarily on-site inspection of construction for compliance with plans and specifications.

Construction Representative applies to positions that involve monitoring and control of construction operations.

For those positions which involve supervision over others and require supervisory qualifications, the title is obtained by adding the prefix Supervisory.

KNOWLEDGE, SKILLS AND ABILITIES

Beyond the trainee levels, operating construction inspectors and representatives need to know and to be able to apply, in increasing measure, the following knowledge, skills, and abilities:

- Practical knowledge of the methods and techniques of engineering;
- Knowledge of construction practices and techniques;
- Knowledge of construction trades;
- Knowledge of algebra, geometry, and trigonometry;

- Knowledge of inspection practices and procedures;
- Knowledge of safety practices in the construction industry;
- Ability to read and interpret engineering and architectural plans and specifications;
- Ability to inspect materials, workmanship, and the construction and installation of various systems;
- Ability to apply good judgment in the inspection situation;
- Ability to use testing instruments;
- Ability to use level and transit to establish and check elevations;
- Ability to communicate effectively with the contractor, public officials, and user agency representatives;
- Ability to compute construction costs and to negotiate changes to the contract;
- Ability to prepare reports;
- Ability to monitor large construction projects to a successful and timely completion; and
- Ability to work effectively in stress situations.

CLASSIFICATION CRITERIA

The knowledge, skills, and abilities required of nonsupervisory construction inspectors and construction representatives as listed above are not repeated in the grade-level discussions. They are, however, implicit in the other factors.

Criteria for use in evaluating construction inspector positions are grouped under the two headings: *Assignment Characteristics* and *Level of Responsibility*.

Assignment Characteristics covers the type and scope of assignments. Assignments may range from those of the trainee inspector to the journeyman or higher level inspector serving on a large multi-structure project. Personal contacts are included under this heading. Inspectors have personal contacts with the construction foreman and employees. Contacts may range from asking simple questions for information to negotiating cost of changes to the plans with contractor representatives.

Level of Responsibility covers controls on the work such as guidelines and supervisory controls. It covers the degree of freedom extended to the employees to exercise judgment in accepting or rejecting materials and workmanship. It also covers the degree to which the employee may commit the agency to a given course of action.

EVALUATION NOTES

This is a one-grade interval series. Positions which involve primarily supervisory responsibilities are to be evaluated by reference to the [General Schedule Supervisory Guide](#).

Grade-level criteria are provided for use in classifying nonsupervisory construction inspector positions in grades GS-2 through GS-9.

The grade-level criteria contained in the classification standard for the [Civil Engineering Series, GS-0810](#), Part III - Construction, are to be used in classifying nonsupervisory construction

representative positions, typically in grades GS-9 and above. The use of the standard for the Civil Engineering Series will help to provide grade-level consistency in the classification of positions of technicians and engineers who perform similar work without repeating essentially the same criteria in both standards.

Construction engineer positions classified in grade GS-11 or GS-12 on the basis of the scope and complexity of the construction operations and the authority exercised typically involve a small portion of time on tasks requiring professional knowledge of engineering and scientific principles. In many cases the problems solved using such knowledge are typical of positions at the GS-9 or GS-11 grade levels. Even though that portion of the work that requires professional engineering knowledge may control the series classification, that work is typically not controlling in determining the grade level of the position.

The knowledge and abilities required for professional engineering work are, of course, different in kind from those required for nonprofessional work as a construction representative, but not necessarily different in grade level. Professional work characteristically requires scientific knowledge superior to that required for nonprofessional technical work. However, similar nonprofessional technical work may require high level technical or administrative qualifications applicable to the specific work assignments based on a comprehensive background of practical experience, training, and skill in applying knowledge of precedents, guides, and established practice. For purposes of evaluating the level of work, the practical knowledge and skill of the construction representative may be fully equivalent in level to the practical and scientific knowledge required of construction engineers.

In the absence of any significant differences in work assignments and in the major or grade-controlling duties and responsibilities of engineers and of construction representatives, there is no basis for assuming a difference in the level of the qualifications required. In such instances, the grade level of the position does not depend on whether it is classified in the professional or nonprofessional series. Accordingly, the professional engineering standard may be used in classifying construction representative positions provided appropriate consideration is given to all factors.

In using the professional standard, special attention should be directed to any significant differences in the work arising from the differences in qualifications. Thus positions of technicians who work with less freedom and more supervision than professional engineers performing in similar situations may be properly classified in GS-8 or GS-10. While the construction engineer standard does not provide for the use of GS-10, it does include a gap between grades GS-9 and GS-11. Construction representative positions that fall in that intermediate range should, of course, be classified to GS-10.

CONSTRUCTION INSPECTION AID, GS-0809-02

GS-2 employees receive classroom and on-the-job training in the basic elements of construction inspection. They are introduced to the guideline materials; and learn to recognize and understand the purpose of various guides and manuals. They become familiar with the terminology associated with construction work.

During their training GS-2 employees perform simple inspection tasks under close supervision.

CONSTRUCTION INSPECTION AID, GS-0809-03

Assignment characteristics

GS-3 inspectors perform a wider range of simple inspection tasks in making simple measurements or observations, and in keeping records than do GS-2 employees. Person-to-person contacts at the GS-3 level involve gathering data and information as requested by the supervisor.

Level of responsibility

Work guidelines applicable to GS-3 assignments are clear, explicit, and directly applicable. The body of guideline materials includes manuals, regulations, standards, plans, specifications, and work orders. There is little or no opportunity to use originality nor is there need to interpret plans and specifications.

Work is performed under close supervision. Instructions are explicit. GS-3 inspectors may make preliminary recommendations concerning the acceptance and rejection of materials or workmanship in clear-cut situations. All decisions of this sort are made by higher level employees.

CONSTRUCTION INSPECTOR, GS-0809-04

Assignment characteristics

GS-4 assignments differ from those at GS-3 in that tasks are more difficult and require knowledge of a variety of construction inspection techniques and practices and greater skill in their application. Like positions at GS-3, Construction Inspectors GS-4 carry out portions of inspection tasks. For example, on a power-line construction project, the GS-4 inspector serves as the junior inspector on a two-man team by checking line and grade of access roads; checking the excavation and concrete footings for steel structures; and checking the placement of members and hardware in the erection of steel structures.

Also typical of the GS-4 level is the independent performance of the less difficult inspection and testing tasks. For example, GS-4 employees inspect quantity, quality, and placement of gravel for road construction. They conduct sieve analysis of gravel, inform crusher operator of deficiencies, and recommend rejection of material that does not meet specifications.

GS-4 inspectors have contacts with contractor personnel to obtain information on changes in operations, processes, safety practices, or schedules. Negotiations or problems are handled by higher-grade inspectors.

Level of responsibility

Guidelines at GS-4 are similar to those at GS-3; however, at the GS-4 level inspectors must exercise judgment in determining compliance with plans and specifications. GS-4 inspectors collect and assemble data in accordance with explicit instructions. GS-4 inspectors make routine acceptances of materials or workmanship in clear-cut situations. In addition, they recommend corrective action in cases where the need is obvious by reference to well-established standards and practices. Work is reviewed in process and upon completion for accuracy, adequacy, and adherence to instructions.

CONSTRUCTION INSPECTOR, GS-0809-05

Assignment characteristics

GS-5 assignments differ from those at GS-4 in that GS-5 inspectors independently inspect a few standardized procedures, items or operations of limited difficulty. GS-5 assignments involve independent recordkeeping and preparation of reports, inspection and testing, interpretation of plans and specifications, and observation of construction activities to check adherence to safety practices and requirements.

Typically, GS-5 inspectors assisting in inspection of a road or small earthfill dam and related structures, where foundation and other problems are not complex, might inspect one or more items such as the following:

- slopes, embankments, grading, moisture content, and compaction of earthwork;
- excavation and backfill for culverts and siphons and placement of concrete pipe;
- simple batching and placing of concrete;
- concrete forms for contour of line, grade, bracing, tightness, placement of reinforcing steel, and embedded materials.

GS-5 inspectors maintain work relationships with contractor supervisory personnel. Contacts involve obtaining information on sequence of operations and work methods, explaining standard requirements of plans and specifications, and informing the contractor of inspection results.

Level of responsibility

Established agency policies, procedures, and manuals on standard operating practices and techniques are generally complete and applicable for all inspection situations involved in assignments at this level. GS-5 inspectors are authorized to accept materials and workmanship that conform to established standards or to practices approved by the supervisor.

Supervision and technical guidance are provided through periodic visits by the supervisor who interprets complex requirements of plans and specifications and resolves work problems. The supervisor is readily available to discuss significant developments. Completed work is reviewed for satisfactory results. Where the types and complexity of structures or the complexity of construction processes are limited, technical guidance is available but not usually required.

CONSTRUCTION INSPECTOR, GS-0809-06

Assignment characteristics

Construction Inspectors GS-6 perform duties similar to those at GS-5. However, GS-6 assignments differ from those at GS-5 in that GS-6 inspectors independently inspect a wide variety of standardized items or operations requiring a substantial knowledge of the methods and techniques of construction inspection and of construction methods, equipment, materials, and practices and the ability to interpret varied requirements in drawings and specifications.

GS-6 assignments involve, for example, inspection in small residential buildings of a variety of unrelated construction processes of limited complexity, such as excavating, placing and compacting concrete, installation of standard electrical wiring, plastering, and installation of mechanical equipment.

Because of the greater variety of operations, the contacts of Construction Inspectors GS-6 are more extensive than at GS-5. GS-6 inspectors obtain information on schedules and work methods and explain requirements of plans and specifications. They make suggestions to the contractor concerning well-established, acceptable methods and practices to assist the contractor in meeting standard requirements.

Level of responsibility

GS-6 inspectors interpret standard requirements of plans and specifications and determine the acceptability of materials and workmanship for requirements that are typically more varied and complex than at GS-5.

Supervision and technical guidance are provided through periodic visits by the supervisor who resolves difficult problems arising from differences in plans and specifications or the unusual work practices of the contractor. Completed work is reviewed for satisfactory results. Construction Inspectors GS-6 are typically not authorized to approve deviations in construction plans, methods, and practices even of a minor nature.

CONSTRUCTION INSPECTOR, GS-0809-07

Assignment characteristics

This is the full performance level for construction inspection work of normal difficulty, that is, the work involves a broad range of inspection functions for a variety of construction operations, materials, and methods under varying conditions and requirements. The work requires a broader and more intensive knowledge of construction than at GS-6. However, the problems are not of major scope and complexity.

GS-7 assignments involve:

- (1) Inspection of an entire project of limited size or complexity such as, relatively small 1- and 2-story concrete or steel buildings that do not include any major mechanical installations or other complicating features; or a forest road construction project which involves only clearing, grading, and drainage structures.
- (2) Inspection of a phase or minor part of a large project. For example, one or more parts of a hydroelectric dam, such as clearing reservoir site, preparing the foundation, or placing concrete;
- (3) On a powerline construction project, inspection of assembly, erection, hardware installation, conductor stringing, and counterpoise installation of both wood poles and steel towers.

Personal contacts are more demanding than at GS-6 in that GS-7 inspectors interview contractor personnel to assure that labor and safety standards are maintained. They contact contractors to explain requirements, discuss plans for work accomplishment and scheduling, and assist contractors in complying with contract plans and specifications.

Level of responsibility

GS-7 inspectors are expected to interpret plans and specifications relating construction problems of normal difficulty, that is, those for which there are precedents and those without unusual complications. GS-7 inspectors resolve differences between plans and specifications when such differences do not involve questions of cost or engineering design. Engineering and supervisory assistance is readily available and is provided as needed to assist in interpreting plans and specifications and in resolving differences involving complex problems. Technical assistance is also available on unusual specialized trade, craft, or materials problems.

Inspection reports are reviewed for accuracy, completeness and adequacy. Unusually difficult and novel problems are discussed with the supervisor.

In comparison with positions at GS-6, GS-7 inspectors are typically authorized to approve minor deviations in construction methods and practices which conform to established precedents, do not involve added cost, and are consistent with contract plans and specifications. Decisions by GS-7 inspectors on the acceptability of construction methods and practices, workmanship, materials, and the finished product are considered to be final. When the contractor indicates that he will appeal the inspector's decision, the inspector prepares and presents documentation of his decision for review by the supervisor.

CONSTRUCTION INSPECTOR, GS-0809-08

Assignment characteristics

GS-8 assignments are larger and more varied and complex than those typical of the GS-7 grade level. Illustrative of GS-8 assignments is inspection of electrical, mechanical, and structural aspects of construction of multi-story office or residence buildings of moderate size and conventional design. Typically, there are few complicating features such as complex foundation problems or unique design components.

By comparison to GS-7, Construction Inspectors GS-8 have extensive contacts with contractor representatives concerning problems of work scheduling, interpretation of plans and specifications, selection of work methods, and acceptability of materials and workmanship.

Level of responsibility

Construction Inspectors GS-8 independently interpret plans and specifications relating to construction problems other than those of unusual complexity or controversy or requiring specialized knowledge. On such questions assistance and guidance is obtained from the supervisor or specialists, e.g., on radiation shielding or soils.

GS-8 inspectors approve minor obviously-needed changes to plans which do not alter basic design or involve additional cost to the Government, such as minor realignment of pipes to eliminate interferences.

Supervisory and technical assistance is usually available on site or through telephone or radio contact. Inspection efforts are reviewed through periodic visits and through written reports and conferences.

CONSTRUCTION INSPECTOR, GS-0809-09

Assignment characteristics

GS-9 assignments are characterized by the inspection of construction of unusual difficulty and complexity. The variety, complexity or uniqueness of construction operations and requirements impose demands for specialized competence and require the application of skills and knowledge beyond those necessary for inspection of the difficulty and complexity typical of positions at grade GS-8.

GS-9 assignments typically may involve:

- (1) Inspection of a major segment of a difficult and complex project -- such as inspecting the materials, installation, and testing of complex and sophisticated electrical or mechanical systems in, a large multi-story, special purpose building(s) such as a laboratory or hospital.
- (2) Inspection of complicated structures involving highly complex construction problems, e.g., stabilizing the subsoil structure in constructing a missile launching pad; or a runway for jet aircraft with extremely exacting requirements for strength and surface smoothness.
- (3) Inspection of the various aspects of construction of Federally-insured residential buildings, other than high-rise elevator buildings, that are constructed by a variety of private builders. There is marked variation in the plans and specifications, in the capability of builders, and in site and other construction conditions. Such situations require working with builders to identify and insure correction of deficiencies, to interpret and explain agency requirements, to suggest and advise on the acceptability of alternative construction methods, and to resolve problems such as unauthorized deviations from approved plans and specifications.

By comparison to GS-8, inspectors at grade GS-9 have more critical and extensive contacts with contractor representatives to promote cooperation and resolve differences. These contacts concern controversial problems of work scheduling, interpretation of plans and specifications, work methods, acceptability of workman-ship, and changes to the plan. GS-9 employees also have extensive contacts with user agency personnel, designers, and others to resolve problems and expedite the work.

Level of responsibility

GS-9 inspectors interpret plans and specifications relating to construction problems of unusual difficulty and complexity. GS-9 inspectors exercise greater judgment and initiative in making such decisions than do inspectors at the GS-8 level. For example, the construction plan may call for construction of a 6-foot reinforced concrete slab for the floor of a special purpose laboratory building. The plan may be silent in terms of how the concrete is to be poured, that is, as one continuous pour to create a monolithic slab, or three pours in 2-foot layers. In facing such a problem, the GS-7 inspector normally seeks technical assistance; the GS-8 inspector may seek

confirmation of his judgment; the GS-9 inspector is expected to make the correct determination independently.

GS-9 inspectors approve changes to the plans which do not alter basic design or involve additional cost to the Government, such as movement of doors or windows to remove structural conflicts and improve the final product.

GS-9 inspectors work independently. Inspection efforts are reviewed through periodic supervisory visits and through review of written reports and conferences.