



**GUIDE TO  
POSITION  
MEASUREMENT**

**NORMAN D. WILLIS & ASSOCIATES, INC.  
810 Third Avenue, Suite 260  
Seattle, Washington 98104  
(206) 624-1838**

## TABLE OF CONTENTS

SECTION	PAGE
I. EVALUATION CONSIDERATIONS	1
II. EVALUATION COMPONENTS AND DIMENSIONS	3
1. Knowledge and Skills	4
2. Mental Demands	8
3. Accountability	11
4. Working Conditions	14
III. THE EVALUATION PROCESS	16

# I. EVALUATION CONSIDERATIONS

This guide has been prepared to assist you in understanding and applying the Willis position evaluation system.

Position measurement is the determination of the relative content of jobs, one to another, within an organization. Often referred to as job evaluation, position measurement is one critical step in the development of the organization's pay plan. Other uses can be made of a sound position measurement system, e.g., incentive pay plans, personnel selection and development programs, and organization design, but the principal role is in the establishment and maintenance of the basic pay or compensation plan.

Pay plan development has two basic goals:

- Pay opportunity for the jobs in the plan should be internally equitable, and,
- The plan should be sufficiently competitive in the marketplace to enable the organization to attract and retain the quantity and quality of employees needed to get the work done.

Position measurement provides for the determination of the internal relationships required under the first of these goals and provides the basis, when combined with external pay data, for achieving the second.

Job evaluation, or position measurement, began approximately 60 years ago as companies tried to make judgments regarding differences between and among jobs in a rational manner which would also be understandable to other people within the pay plan.

Numerous systems - point plans, factor-comparison plans, and factor-point plans - have been developed, refined, and implemented in a variety of environments over the years.

The Willis factor-point job evaluation system is a sound, valid method that has been employed in a large number of applications throughout North America since 1971. It combines all the strengths of previous plans into a single system. It can be (and has been) used to measure all kinds of jobs in a wide range of organizations, both private and public sector. Wide experience in job evaluation assignments has enabled continual review and refinement of the evaluation system to assist evaluators in understanding and applying the method equitably and consistently.

Before presenting a detailed explanation of the evaluation components and factors in the next section, it will be helpful to discuss some of the considerations and approaches to be used by evaluators in measuring each job.

**Evaluate Job Content** - The *facts* regarding the job's *actual job requirements* form the only legitimate basis for evaluation. Present salary, market supply, historical relationships, etc., have *no* bearing on job measurement. The facts should be documented in questionnaires completed by employees, supplemented by job descriptions and, in many cases, information obtained in personal interviews.

**Evaluate the Job, Not the Person or Job Title** - Variations in performance of the individual occupying a job should not influence the evaluation. The job should be evaluated on the basis of its requirements, assuming a fully satisfactory level of performance (not necessarily above or below expectations, but meeting expectations). This, however, should not obscure the fact that the individual incumbent may influence the requirements of the job. This is especially true at higher levels in the organization where the particular strengths or qualifications of an incumbent may cause the addition or modification of responsibilities. But, bear in mind that the level of responsibilities are to be evaluated, *not how well they are accomplished*.

**Evaluate at Stretch Points** - Every incumbent performs a mix of duties, some of which require greater skills and responsibilities. For example, a job may have a variety of problems to solve, some requiring substantial analysis and creativity, while others are more routine. The job, however, should be evaluated on the basis of the highest skill or most challenging level required as a *normal part of the job*.

## II. EVALUATION COMPONENTS AND DIMENSIONS

To a great extent, job evaluation is an exercise in advanced semantics in that the words used to describe the job are compared to the words in the evaluation dimensions defining varying levels required for fully satisfactory job performance. It is important, therefore, that those undertaking the evaluation process arrive at a consistent and mutually agreed-upon understanding of the words on the charts. For that reason, attention is directed in this section toward a detailed description of the evaluation factors and of key terms used.

The measurement system is designed to provide the organization with the tools necessary to assure consistent and accurate appraisal of job content. The system can be viewed as a common yardstick used to examine the content and measure the value of all jobs. Jobs are evaluated according to four components which are characteristic of all jobs. Each component contains two or three dimensions:

### Knowledge and Skills

- Job Knowledge
- Managerial Skill
- Interpersonal Skills

### Mental Demands

- Independent Judgment
- Problem Solving

### Accountability

- Freedom to Take Action
- Size of Impact
- Nature of Impact

The fourth component is employed where appropriate due to the existence of adverse conditions normal to the job. This component is divided as follows:

### Working Conditions

- Physical Effort
- Hazards
- Discomfort

Examination of the charts shows that each of these dimensions contains a series of levels, providing a scale of increasingly higher degrees of job content. Each level has an appropriate definition.

All jobs, regardless of function or level in the organization, have requirements that relate to the component dimensions, and the relative size and complexity of each job can be measured according to the appropriate dimension levels.

## 1. KNOWLEDGE AND SKILLS

Every job requires a given amount of Knowledge and Skills for fully satisfactory job performance. There are certain things that an incumbent must know and abilities an incumbent must possess to be able to meet the job's requirements and responsibilities. It does not matter how these skills and knowledge are obtained - they could be by formal education, specialized training or job-related experiences. The Knowledge and Skills component evaluates the job in relation to three dimensions: Job Knowledge, Managerial Skills, and Interpersonal Skills.

- A. **Job Knowledge** - This dimension measures the amount of specialized or technical knowledge required by the job. Job Knowledge required could range from familiarity with facts and procedures, manual skills, capability to operate equipment, and ability to organize and supervise work, to knowledge of one or more professional or scientific disciplines.

Job Knowledge is measured in *breadth* (comprehensiveness) and *depth* (thoroughness). A job, for example, may be limited in breadth in that it specializes in one area, but may be extensive in depth in that it is required to be deeply knowledgeable in that field, such as research specialist. Another job may not be required to have especially deep knowledge in any one field, but may have to have a familiarity with many areas. Many managerial jobs fall into this category. The process involved in evaluating this dimension, therefore, requires two major judgments:

- How *complex* is the subject matter(s) with which the job must be familiar or the level of skill which is required?
- How *knowledgeable* must the incumbent be in that field (or fields)? This judgment should incorporate an assessment of the importance of the end results expected of the employee including the tolerance that may be permitted for error. In weighing the importance of results, consideration should be given to responsibility for the safety and well-being of people, protection of confidential information and protection of resources.

**Level A** - This level is appropriate for those jobs requiring virtually *no specialized skills*. A fairly brief period of instruction is sufficient to bring the incumbent up to proficiency.

**Level B** - Three types of knowledge or skill begin to be assessed at this level:

- knowledge of simple procedures,
- ability to operate basic machinery, and/or
- physical ability such as fine motor skills. Use of basic arithmetic, simple typing, or the requirement to make quick hand movements on an assembly line operation are typical examples.

**Level C** - Some jobs require *vocational competence*; that is, the incumbent must be fully versed in a field normally requiring specialized training and containing a variety of formal procedures and practices. Examples include secretarial and bookkeeping positions. Other jobs at this level include those requiring *adeptness in the operation of complex machinery*, such as a computer or lathe. Many trade jobs are at this level.

**Level D** - Basically, three types of jobs fall into this level:

- Those requiring an *advanced level of understanding in a vocational field*, such as a senior bookkeeper, or *competence in a specialized skill*, such as a licensed electrician, finish carpenter or cabinetmaker.
- Those requiring a *beginning measure of knowledge in a specialized or technological field*. A specialized or technological field is defined as one requiring a substantial amount of post-secondary training and containing complex principles and practices. This includes professional or learned disciplines. Thus, a position appropriate to Level D might be a junior accountant.
- Para-professional or training level jobs in a specialized or technological field where experience is gained prior to moving to a job requiring full competence in a professional discipline.

**Level E** - This level is appropriate for jobs requiring *full competence in a specialized or technological field*. This is equivalent to a post-secondary degree or advanced degree plus sufficient experience in applying the principles and practices to a range of situations. Examples include general accountants, project engineers, technical sales or marketing representatives, attorneys, and many manager jobs.

**Level F** - This level is for jobs in a professionally based field requiring an *advanced degree of understanding* beyond sufficiency, or full competence in two or more *different* specialized or technological areas. Knowledge about management processes and systems, as opposed to skills required in the exercise of management activities, are considered at the specialized or technological level.

Senior positions in particular specialized or technological fields are found at Level F.

**Level G** - Two types of jobs are appropriate to this level:

- Those requiring a *command of a specialized or technological field*. "Command" implies *expert* status.
- Those requiring *advanced levels of understanding in several different specialized or technological fields*.

The continuum of the requirement for functional knowledge ranges from the completely unskilled to the "expert" in a specialized or technological field (or several fields). The emphasis shifts over this continuum from knowledge of *what* is to be done and *how* to do it in Levels A through D to the additional requirement for knowledge of *why* it should be done (Levels D through G). A bookkeeper (Level C) must know *what* has to be posted, where, and by when. The accountant (Level E) must have the theoretical knowledge of the discipline to determine *why* the accounting system must be established to record and report transactions in this particular manner.

Note the overlap at Level D. This is intentional to provide for the combinations where advanced vocational jobs often require some knowledge of the *why*, yet beginning level specialized and technological jobs require knowledge of the *what*.

- B. Managerial Skills** - This dimension deals with the *nature and complexity* of the management process required of the job. Management, in these terms, is defined strictly as the exercise of all elements of management - planning, organizing, executing, controlling and evaluating activities, functions and subfunctions. The subordinate areas managed could be line, supportive, or administrative. Remember the requirement to *exercise* managerial skills will be measured. This is distinct from specialized job knowledge measured in the preceding dimension, but which may include *knowledge* about management systems and techniques.

In viewing jobs according to this dimension, three considerations are applied:

- The complexity of the management function.
- The extent of harmonizing or blending different, diverse, or even competing functions or subfunctions to achieve desired results.
- The amount of impact of the managerial function to the organization.

There is a definite tendency to overslot here, particularly with respect to the use of Levels 2 and 3. A clear distinction must be made between management and supervision. Most supervisors fall into Level 1.

**Level 1** - This level is appropriate for jobs executing specific tasks with no identifiable managerial requirements *and* for those performing supervision or one or more activities or subfunctions. Clearly, most jobs in an organization fall into this level.

**Level 2** - Jobs that meet the tests of managerial complexity, harmonizing and organizational impact belong here. The emphasis at this level is upon management of subfunctions of a generally similar nature or with parallel end results.

**Level 3** - At this level, the job is managing subfunctions having significantly different natures, or where the end results of the subordinate subfunctions tend to be conflicting or competitive with each other and require special harmonizing. Additionally, jobs managing an important function with separate identifiable subfunctions are appropriate to Level 3.

**C. Interpersonal Skills** - This dimension measures the direct *people contact* or *human relations skills* required of a job. It deals with the extent to which the job must be able to establish rapport with, empathize with, and influence the actions of others. It does not matter whether the others are within or outside of the organization, or whether they are peers, subordinates or superiors. The nature of the skills necessary to influence them is to be measured.

**Level K** - This first level applies to those jobs that have *no requirement for personal contacts* with others beyond immediate supervisors and perhaps other members of work teams. Normal courtesy is required.

**Level X** - Jobs at this level are *expected to interact with others* beyond the immediate work team. No special requirements exist, however, to influence or motivate the activities of others. Contacts tend to be limited to the exchange of information, such as accounting results, or material, such as supplies.

**Level N** - This level fits jobs in which *influencing others is a major responsibility*. It could be thought of as nudging others along a path which they may be inclined to follow. Alternatively, the level is appropriate for jobs in which *personal serving others is a major responsibility*. An example might be a job having regular and frequent personal contact with customers or members of the public to respond to questions or provide assistance.

**Level Y** - This is the "giving religion" level. *Motivating* others (subordinates, other employees, members of the public) or getting them to do something that they might not do otherwise is the key to the success of the job. Many sales, executive, and supervisory jobs fall at this level. When evaluating supervisory jobs, it is important to consider the relative significance of Interpersonal Skill required rather than a mechanical counting of subordinates. That is, how important is interpersonal skill to the successful performance of the job?

## 2. MENTAL DEMANDS

This component measures the requirements to analyze alternatives and to solve problems. All incumbents do some thinking as part of their jobs, but the level of thinking required varies widely between jobs.

A job incumbent is required to think and solve problems with what he or she is required to know. Therefore, Mental Demands is treated as a percentage utilization of Knowledge and Skills. You will notice that there are letters rather than numbers on this chart. These letters represent percentages (e.g., i = 33 percent) which are, in each case, applied to the Knowledge and Skills evaluation points for a given job to arrive at appropriate Mental Demands evaluation points.

This component has two dimensions: Independent Judgment and Problem Solving.

- A. **Independent Judgment** - This dimension can be thought of as setting the stage for problem solving. What is measured here is the opportunity for thinking permitted by the job's characteristics and role in the organization. Conversely, this factor can be viewed as the amount of structure and guides available - or lack thereof - in dealing with problems. Some jobs have precise guides, such as detailed rules or procedures, to assist the incumbent when a problem arises. On the other hand, other jobs can turn only to less specific policies or general objectives in the problem solving. The latter job, obviously, has to exercise a greater degree of *Independent Judgment* than the first.

In locating the appropriate Independent Judgment level for a given job, the following definitions will be helpful:

*Procedure* - a manner or way of proceeding; a step-by-step course of action.

*Policy* - a settled course adopted by management to be followed throughout the organization.

*Goal* - an expected end result, generally of long-range duration. For our purposes, however, it may be a specific short-range objective, identifying both time and target.

**Level A** - Jobs that are told precisely how to deal with problems and exercise virtually no Independent Judgment belong at this level. The job does not select between alternatives.

**Level B** - This level is appropriate for jobs that have a highly structured work routine or a set of work routines with some, but *limited* alternatives available.

**Level C** - Jobs at this level perform their work and solve problems under *set procedures and methods*. Normally, the job incumbent will have to select between alternatives at key stages in the individual work procedure.

**Level D** - Jobs at this particular level have a variety of *varied and/or complex procedures*. Additionally, there is a wide range of alternatives to be selected from in accomplishing the work. Jobs at this level can be thought of being given the *what* to do, but the job has some discretion in regard to *how* to do it.

**Level E** - At this level, the job is doing its thinking within the *policies and goals* for a specific department or operating entity. This is the level at which a job will devise and set procedures for others.

**Level F** - Jobs that solve problems and exercise independent judgment within a *broad framework of policies and strategies* that apply to a major portion of the organization belong here. This level is distinguished from the previous one in:

- The greater variety of policies;
- That policies are more generalized; and,
- They tend to cover a larger sphere.

**B. Problem Solving** - This dimension measures the nature and complexity of the problems the job encounters and must solve. Three elements should be considered:

- The amount and depth of *analysis* the job is required to perform.
- The nature of the problems to be solved and the complexity of the data.
- The extent of evaluative, innovative, or creative thinking required.

The higher Problem Solving levels are not reserved for top management. There are many jobs at different organizational levels that call for the same degree of utilization of Knowledge and Skills in solving problems. As with Independent Judgment, it is helpful to define the key terms used in the Problem Solving slots:

*Analysis* - The separation of a problem or situation into its component parts.

*Evaluation* - To assign values, such as weighing the relative advantages of different and/or competing alternatives.

*Creative* - The establishment of new, rather than imitative, concepts or approaches.

**Level 1** - Jobs at this level are not required to analyze a problem or evaluate its component parts. Response to a situation is based virtually upon recall.

**Level 2** - This level is appropriate for the first range of jobs that analyze the parts of a problem. Here, however, the problems are relatively simple and there is a set procedure for dealing with the problem. This could be as simple as a custodian determining why a furnace does not work and seeking immediate solutions, such as a clogged filter or severed power cord.

**Level 3** - Jobs required to analyze problems containing a substantial degree and diversity of data belong at this level. The problems, however, tend to be *generally recurring* and of a *similar* type. Many higher level clerical jobs as well as supervisory jobs are evaluated at Level 3.

**Level 4** - This level defines jobs which not only analyze non-routine problems containing a wide variety of data, but must also engage in *evaluative* thinking. This level is characterized by jobs that deal with complex problems and must weigh the desirability and/or probability of possible outcomes in relation to each other. The incumbent must think a problem out several steps into the future.

**Level 5** - Those few jobs that are expected to exercise truly *creative* thinking fit this level. Creativity in the sense of devising something *essentially* new is unique to this level.

### 3. ACCOUNTABILITY

The first two components measure a job's complexity; the third, Accountability, evaluates the expected results. All jobs exist in the organization to accomplish some end result; if they did not, they would not exist. Accountability can be thought of as the measure of a job's reason for existence in the organization. It is measured by three dimensions: Freedom to Take Action, Size of Impact and Nature of Impact.

- A. **Freedom to Take Action** - This dimension is quantitatively the most important aspect of Accountability. It measures the existence or absence of personal or procedural restraints; i.e., how much latitude does the incumbent have to do the job. Conceptually, this factor is similar to *Independent Judgment* in that it deals with the amount of latitude permitted a job, and the definitions of the levels have much in common.

The important difference is here we are considering freedom to get things accomplished as opposed to the pure thinking environment. As a general guideline, it is unlikely to find a job with more Freedom to Take Action than *Independent Judgment*.

Several things are to be observed:

- Normally, there are fewer levels within this dimension than there are organization echelons. Therefore, it is not uncommon for two organizational levels (superior and subordinate) to have the same Freedom to Take Action designation.
- Controls over actions may be supervisory or procedural or both. The amount of direct supervision over a job limits Freedom to Take Action. More commonly, controls are built into the work process itself in the form of rules and procedures. Therefore, in each level both types of controls must be considered. These criteria are not always present in combination - one or the other may be present.

**Level A** - Jobs at this level are required to exercise virtually no discretion. They are told exactly how to accomplish an expected end result.

**Level B** - Here, a job may have some very limited choices open, but tends to work within a set routine or under close supervision. For example, the incumbent may decide which format to use for a letter.

**Level C** - The C level defines jobs that are controlled by work procedures and methods with a number of alternative courses of action available at stages in the work process. Emphasis is on *how* the work is to be accomplished.

**Level D** - This level is appropriate for incumbents working under a variety of procedures or routines with a substantial degree of selection between alternatives available.

**Level E** - Here, jobs tend to be limited only by *policies* governing a specific department or similar organizational unit. Direction tends to be *administrative* in that emphasis is placed on the specific end results expected with the means of accomplishment left up to the incumbent. Jobs at this level tend to be setting the *how* for the subordinate jobs. The job's emphasis is on *what* needs to be accomplished rather than *how* it is to be done.

**Level F** - The primary distinction between Level F and Level E is that here jobs tend to be operating under a wider framework of policies and goals, normally those applicable to a larger organizational or operating unit. The employment of a broad range of policies to achieve specific organizational goals and strategies is involved.

### **Size of Impact and Nature of Impact**

These two dimensions are interrelated and must therefore be considered together in order to determine what makes the most sense. They measure:

- The size of the end results the job most clearly is designed to have an impact on, and,
- The extent of accountability for those end results.

The measurement of Size and Nature of Impact must be taken at the point representing the job's most significant influence upon the organization. It relates to the basic reason the job exists. For example, depending upon the type of end results expected, an accounting department manager could be viewed alternately as impacting the accounting department or the entire organization (i.e., providing organization-wide information).

In choosing the combination of Size and Nature of Impact in a given case, it should be remembered that the larger the Size selected, the lesser will be the Nature of Impact.

- B. Size of Impact** - The simplest way to look at Size of Impact is to say the job most clearly impacts something *big*, or something *little*, or something *in-between*. But it is difficult to use these concepts without putting some kind of boundaries on them. For example, an organization can be labeled as *very large*, and a department as *large*. But obviously, one department may be much larger, and carry a heavier accountability than another department. When divisions of a department are considered, the distinctions are even more subtle.

To give uniform definition to this dimension, the degrees of size may be generally related to annualized dollars entrusted to or affected by the job under examination. They may reflect objectives (service quotas, for example); or stewardship (operating budgets, for example); or spheres of influence (total operating revenues, for example).

- C. Nature of Impact** - The three degrees of Impact express the main kinds of Accountability a job can have on a chosen end result. For an end result of any consequence, a number of jobs are involved, all making some kind of contribution. Many people can properly claim Accountability for an end result provided the Impact of each job's Accountability is known.

**Level N** - *In relation to the specific Size of Impact selected*, the job has a serving role, but is not designed to appreciably control or alter the end result; the end result tends to be specified.

**Level S** - Jobs at this level tend to *participate, influence, and share* in Accountability for the end result for the Size of Impact selected, but do not fully control those end results.

**Level D** - This level is appropriate for jobs that fully control and have the principal Accountability for the end results selected for the Size of Impact.

## 4. WORKING CONDITIONS

Some, but not all, jobs require that the employees be exposed to adverse conditions within their normal working situations. The intention is *not* to evaluate temporary situations such as overcrowded conditions or understaffing; rather, those conditions to be considered are those that are reasonably expected in performing the activities for which the job was designed. Three dimensions should be independently considered in determining if, and to what degree, Working Conditions should be afforded: Physical Effort, Hazards, and Discomfort.

- A. **Physical Effort** - Measured here is the amount of intellectual and/or physical energy expended on the job, *without* regard for the size, strength, stamina or gender of the individual employee.

None of the definitions of the four levels (L, S, M, H) may fit precisely. For example, a considerable amount of lifting of heavy weights doesn't fit M (considerable lifting of medium weights) or H (continual and intensive lifting of heavy weights). The evaluator must make a value judgment as to which definition best fits the actual situation.

Normal fatigue that accompanies a full day of productive effort on any job is not to be included. On the other hand, the evaluation of effort should give consideration to any significant expenditure of energy that is a function of the nature of the work itself. In addition to physically tiring work, the intent is to include extensive and intense concentration such as, for example, extended periods of sensory attention with accountability for speed, precision and/or accuracy.

In assessing the amount of effort the job requires, consideration should be given to the extent to which it is prolonged as well as its intensity.

- B. **Hazards** - The relative exposure to potential physical or mental bodily injury is evaluated by this dimension, whether caused by accident, illness, other physical harm, or developed as a chronic condition directly related to the job's physical or stressful environment. This assumes normal use of protective clothing and observance of safety precautions.
- C. **Discomfort** - This dimension measures job conditions that would normally be perceived as disagreeable by employees. The degree and extent of disagreeableness are assessed. The Discomfort dimension considers mental, as well as physical, disagreeableness.

**Note:** A highly intelligent individual may feel mental stress associated with a simple repetitive job; by the same token, an individual without a strong sense of dedication may feel stress in connection with a job having even a moderate level of responsibility. These examples are *not* intended to be included within the

interpretation of significant mental stress. This is reserved for those jobs that stand out as having a marked degree of mental or emotional pressure or tension associated with them under normal working conditions and with individuals who, by aptitude and attributes, are well suited to their jobs. Examples might include frequent personal contacts with irate members of the public, extended time away from home, exposure to inmates in a maximum security correctional institution, or normal and frequent interruptions in performing work activities.

### III. THE EVALUATION PROCESS

Along with an understanding of the concepts and factors involved in the job measurement system, it is important for the evaluation committee to follow an orderly and logical process to arrive at consistent and fair evaluations. Therefore, the following steps are essential:

1. **Review Documentation** - The written material - which should be an incumbent-completed questionnaire plus, in some cases, a formal job description and/or interview notes - should be read by each evaluator. The resulting evaluation should be based upon the facts of the job as contained in the documentation. Incomplete or inaccurate documentation should be revised before evaluation. Opinions, preconceptions, conclusions or assumptions must be discarded as irrelevant to the process.
2. **Group Discussion** - Subsequent to individual reading of the job documentation and a group discussion of the facts surrounding the job, the evaluation committee member should have a thorough grasp of the job's requirements. At times it may be appropriate to gather additional information. A job should not be evaluated until each committee member understands the nature and scope of job responsibilities.
3. **Individual Evaluation** - Each committee member should individually evaluate the job by comparing the facts about the job to the definitions on the charts. There are two key points involved here:
  - a) **Get the job in the right level** - This requires, with respect to each job, three Knowledge and Skill judgments, two Mental Demands judgments, three Accountability judgments and, where applicable, three Working Conditions judgments. These judgments can be made very firmly if the job is well understood in its essential aspects. Difficulty in making these determinations indicates that the job is either imperfectly understood or poorly designed.
  - b) **Give the job the correct point designation (low, middle, or high) within the level** - This requires making a keen, perceptive judgment, either by comparison with other jobs already firmly placed, or with reference to the level definitions. The overall aspect of the job must be considered in making this internal level judgment; for example, in Knowledge and Skills the overall aspects of Job Knowledge, Interpersonal Communication Skills, and Managerial Skills are *combined*. On the basis of this combined aspect, the job is placed either squarely in the middle of the level, or towards the bottom or top of the level. As judgments accumulate within a level, the level takes on a pattern into which each new job can be reliably positioned. This process will give the evaluation and point score for each component.

- c) **Assure a logical relationship between the different jobs** - The numbering pattern within each evaluation chart is based upon a 15 percent difference between the point values. For example, 140 points is 15 percent above 122 points. This 15 percent difference is referred to as one "Step." The points are displayed in step increments on the conversion charts.

These steps should be used as a check to assure logical evaluation relationships between jobs. For example, the following Knowledge and Skills differences could indicate:

**One Step** - A slightly noticeable difference; the jobs must be examined closely to discern a difference.

**Two Steps** - A clear difference; upon inspection a difference can be seen.

**Three or more Steps** - The difference between the jobs is quite obvious.

This check is most useful for comparing evaluations of jobs within the same function or organization.

- d) **Use the "Job Shape" to assure the logic of the individual evaluation** - The term "Job Shape" refers to the Step relationship between the Mental Demands points and the Accountability evaluation points for a job. If Accountability is three steps higher than Mental Demands, the job is referred to as a *plus 3* job. If the two are equal, it is an *equal* job. If Mental Demands points are one step higher than Accountability, the job is a *minus one*.

The significance of Job Shape is that it can be used to check the logic of the individual evaluation. A job which is viewed by the evaluator as having a high degree of Accountability relative to Mental Demands requirements, is expected to be more of a plus job shape (say, plus three or plus four). Conversely, a job with a relatively higher Mental Demands component is expected to be an equal or minus shaped job.

Taking some examples, a production manager job is expected to have a high degree of Accountability relative to Mental Demands and the evaluation should be in the range of plus three or four. On the other hand, a research scientist would probably be thought of as having more Mental Demands requirements than Accountability, and the resulting evaluation is expected to be an equal or minus shape.

Note that the range of probable job shapes extends from a minus two to a plus four. Most jobs fall into the plus one to three area.

The concept of Job Shape is used to assure that the evaluation for a job is consistent with the evaluator's understanding of the job. The evaluator first estimates the shape of the job prior to actual evaluation and, afterwards, compares the actual shape resulting from the evaluation. If the two are significantly different, the evaluation for all the components can be reviewed.

4. **Consensus** - Perhaps the most critical element in the process, *consensus* involves arriving at an evaluation that represents the committee's considered judgment of the complexity and accountability of the job. Generally, the group's consensus evaluation will be more accurate than any evaluator's over a given number of evaluations.

Consensus is achieved through a discussion of the differences in the evaluations of individual members, identification and discussion of the job facts supporting individual evaluations, and the determination of an evaluation representing the majority perspective. It is important that committee members be willing to make adjustments in their evaluation as new light is shown on the job through consensus discussion. Consensus, however, does not necessarily require total unanimity.

# KNOWLEDGE & SKILLS EVALUATION CHART STATE OF VERMONT

		MANAGERIAL SKILLS											
		1. Activities are carried out within a subfunction, or subfunctions, or subordinates are supervised in performing one or more specific subfunctional activities.				2. The elements of management are practiced in coordinating or blending activities, subfunctions or functions. Management complexity and impact on the total organization are substantial.				3. Management of complex operating entities or functions; management at a broad executive level strategically affecting overall results.			
JOB KNOWLEDGE	INTERPERSONAL COMMUNICATIONS SKILLS	K	X	N	Y	K	X	N	Y	K	X	N	Y
	<b>A.</b> No previous experience is needed. Activities follow a simple pattern requiring a brief on-the-job learning period.	40	46	53	61	53	61	70	80	70	80	92	106
		46	53	61	70	61	70	80	92	80	92	106	122
		53	61	70	80	70	80	92	106	92	106	122	140
	<b>B.</b> Uncomplicated procedures may be followed. The operation of machines or equipment and/or application of a degree of repetitive quickness or manual dexterity may be required.	53	61	70	80	70	80	92	106	92	106	122	140
		61	70	80	92	80	92	106	122	106	122	140	160
		70	80	92	106	92	106	122	140	122	140	160	184
	<b>C.</b> Activities or procedures require vocational competence and/or adeptness in the operation of complicated mechanical equipment or equipment which may necessitate a high level of speed or manual dexterity.	70	80	92	106	92	106	122	140	122	140	160	184
		80	92	106	122	106	122	140	160	140	160	184	212
		92	106	122	140	122	140	160	184	160	184	212	244
	<b>D.</b> A measure of knowledge is required in a specialized or technological area, enhancing vocational competence. Alternatively, competence in a manual or mechanical skill is required.	92	106	122	140	122	140	160	184	160	184	212	244
		106	122	140	160	140	160	184	212	184	212	244	280
		122	140	160	184	160	184	212	244	212	244	280	320
	<b>E.</b> Competence is required in a specialized or technological field. This includes a comprehension of complex principles and practices.	122	140	160	184	160	184	212	244	212	244	280	320
	140	160	184	212	184	212	244	280	244	280	320	368	
	160	184	212	244	212	244	280	320	280	320	368	424	
<b>F.</b> An advanced level of understanding is required in a specialized or technological field, or competence in multiple specialized fields, which may include management systems and techniques.	160	184	212	244	212	244	280	320	280	320	368	424	
	184	212	244	280	244	280	320	368	320	368	424	488	
	212	244	280	320	280	320	368	424	368	424	488	560	
<b>G.</b> The position incumbent is required to be highly knowledgeable, having a command of the subject matter pertaining to a specialized or technological field, or an advanced understanding in multiple specialized fields and/or extensive knowledge of management systems and techniques.	212	244	280	320	280	320	368	424	368	424	488	560	
	244	280	320	368	320	368	424	488	424	488	560	640	
	280	320	368	424	368	424	488	560	488	560	640	736	

Knowledge & Skills encompasses the total amount of understanding, familiarity with facts or information, or dexterity necessary to perform the job in a satisfactory manner. Knowledge & Skill may be gained through experience, association, aptitude, training and/or education. There are three parts to this component:

**JOB KNOWLEDGE** - What the position incumbent must know or know how to do to perform satisfactorily with reasonable expectation of reliability in the avoidance of errors and the consequence of errors.

**MANAGERIAL SKILLS** - The degree to which the elements of management must be practiced in coordinating activities, functions or subfunctions.

**INTERPERSONAL COMMUNICATIONS SKILLS** - Direct contact skills in relationships with people within and outside the organization. The levels are:

**K.** Sufficient personal aptitude is needed to get along with fellow employees. Contacts with others are incidental or required as a member of a work team.

**X.** Personal interaction outside of the immediate work team is required. Contacts normally involve giving or receiving information or materials.

**N.** Influencing and/or personally servicing others is a material part of the job; tact and diplomacy required in dealing with others.

**Y.** Personal contacts with others require the capability to persuade and/or motivate people to take action.

# MENTAL DEMANDS EVALUATION CHART

## STATE OF VERMONT

PROBLEM SOLVING				
	1. Problems encountered require recall rather than analysis.	2. Problems encountered require some analysis of uncomplicated data by established routines or quick reactions to the initiation of expected efforts.	3. Problems encountered require analysis of a variety of data pertaining to situations of a generally routine or recurring nature.	4. Problems encountered require analysis and evaluation of a variety of data pertaining to nonroutine or varying situations.
A. Specific directions and prescribed rules limit the latitude permitted for independent judgment.	a	c	e	g
B. Standardized work routines limit the latitude permitted for independent judgment.	b	d	f	h
C. Similar procedures and methods limit the latitude permitted for independent judgment; or performance of multiple work routines is normally subject to significant interruption.	c	e	g	i
D. Varying or complex procedures and methods limit the latitude permitted for independent judgment.	d	f	h	j
E. Distinct departmental or functional policies and goals steer independent judgment.	e	g	i	k
F. General policies and goals of an operating complex or a major function steer independent judgment.	f	h	j	l
G. Overall policies and organization mission guide independent judgment.	g	i	k	m
H. Overall policies and organization mission guide independent judgment.	h	j	l	n

I N D E P E N D E N T J U D G M E N T

This component weighs the degree of effort of the required thinking process in analysis and evaluation of alternatives in reaching solutions. It is represented by the following parts:

- The latitude permitted for Independent Judgment
- The extent and nature of the job's Problem Solving requirements.

# MENTAL DEMANDS POINTS

MD symbol	K & S points																													
	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120	1280	1472	1696	1952	2240	
P	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120	1280	1472	1696	1952	2240
o	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120	1280	1472	1696	1952
u	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120	1280	1472	1696
m	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120	1280	1472
i	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120	1280
k	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976	1120
j	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848	976
i	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736	848
h	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640	736
g	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560	640
f	10	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488	560
e	9	10	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424	488
d	8	9	10	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368	424
c	7	8	9	10	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320	368
b	6	7	8	9	10	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280	320
a	5	6	7	8	9	10	11	13	15	17	20	23	26	30	35	40	46	53	61	70	80	92	106	122	140	160	184	212	244	280

Point  
increments

3392 -  
 2944 -  
 2560 -  
 2240 -  
 1952 -  
 1696 -  
 1472 -  
 1280 -  
 1120 -  
 976 -  
 848 -  
 736 -  
 640 -  
 560 -  
 488 -  
 424 -  
 368 -  
 320 -  
 280 -  
 244 -  
 212 -  
 184 -  
 160 -  
 140 -  
 122 -  
 106 -  
 92 -  
 80 -  
 70 -  
 61 -  
 53 -  
 46 -  
 40 -  
 36 -  
 30 -  
 26 -  
 23 -  
 20 -  
 17 -  
 15 -  
 13 -  
 12 -  
 11 -  
 10 -  
 9 -  
 8 -  
 7 -  
 6 -  
 5 -

# ACCOUNTABILITY

## EVALUATION CHART

### STATE OF VERMONT

NATURE OF IMPACT <span style="float: right;">▶</span>		SIZE OF IMPACT											
		1. SMALL IMPACT			2. MODERATE IMPACT			3. MAJOR IMPACT			4. ORGANIZATION-WIDE IMPACT		
F R E E D O M  T O  T A K E  A C T I O N	A.	N	S	D	N	S	D	N	S	D	N	S	D
	Duties are routine and specifically delineated; work is closely controlled.	10	15	23	13	20	30	17	26	40	23	35	53
		11	17	26	15	23	35	20	30	46	26	40	61
		13	20	30	17	26	40	23	35	53	30	46	70
	B. Duties are somewhat routine in nature and clearly delineated; work is closely controlled.	15	23	35	20	30	46	26	40	61	35	53	80
		17	26	40	23	35	53	30	46	70	40	61	92
		20	30	46	26	40	61	35	53	80	46	70	106
	C. Characteristics of the position are such that activities and methods are clearly defined, and/or work is frequently reviewed.	23	35	53	30	46	70	40	61	92	53	80	122
		26	40	61	35	53	80	46	70	106	61	92	140
		30	46	70	40	61	92	53	80	122	70	106	160
	D. Characteristics of the position are such that activities and methods are generally defined, and/or efforts are reviewed after the fact.	35	53	80	46	70	106	61	92	140	80	122	184
		40	61	92	53	80	122	70	106	160	92	140	212
		46	70	106	61	92	140	80	122	184	106	160	244
	E. Characteristics of the position are such that activities and methods are broadly outlined, and/or governed by departmental policies; administrative direction is afforded.	53	80	122	70	106	160	92	140	212	122	184	280
		61	92	140	80	122	184	106	160	244	140	212	320
	70	106	160	92	140	212	122	184	280	160	244	368	
F. The position operates within organization-wide policies and goals; executive guidance is afforded.	80	122	184	106	160	244	140	212	320	184	280	424	
	92	140	212	122	184	280	160	244	368	212	320	488	
	106	160	244	140	212	320	184	280	424	244	368	560	
G. The position operates within a state-wide sphere. Top executive guidance is afforded.	122	184	280	160	244	368	212	320	488	280	424	640	
	140	212	320	184	280	424	244	368	560	320	488	736	
	160	244	368	212	320	488	280	424	640	368	560	848	

Each position is designed to make some contribution toward desired overall results. The amount of contribution required is represented by the job's accountability. It has three parts:

**FREEDOM TO TAKE ACTION:**

The extent of restraint under which the job must operate.

Limitation can be in the form of necessary supervision or direction, or can be inherent in the nature of the position.

**SIZE OF THE JOB'S IMPACT ON END RESULTS:**

The general size most representative of the job's scope; that which most relates to its reason for existence. (It may be expressed as an annualized dollar figure.)

**NATURE OF THE JOB'S IMPACT:**

**NONDIRECT** – Services afforded are facilitative, collateral or incidental in nature.

**SUPPORTIVE** – Services afforded are participative in nature. Actions taken influence, rather than control, results.

**DIRECT** – Principal actions - at the position's organizational level - are taken in achieving results.

**WORKING  
CONDITIONS  
EVALUATION CHART  
STATE OF VERMONT**

		<b>HAZARDS</b>															
		1. Danger of injury or probability of illness or physical harm associated with the job is minimal.				2. Some danger of injury or probability of illness or physical harm is inherent in the job.				3. A significant degree of danger of injury or probability of illness or physical harm is inherent in the job.				4. A severe exposure to potential loss of life or permanently debilitating injury or illness is inherent in the job.			
<b>DISCOMFORT</b> ▶		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
<b>E F F O R T</b>	<b>L.</b> Activities require little working in tiring or restrained positions, lifting, climbing, or other situations that, by their nature, cause a marked degree of fatigue.		5	7	9	6	8	10	13	9	11	15	20	13	17	23	30
			6	8	10	7	9	11	15	10	13	17	23	15	20	26	35
			7	9	11	8	10	13	17	11	15	20	26	17	23	30	40
	<b>S.</b> Work is characterized to a considerable degree by tiring or restrained positions, lifting or climbing, extended concentration, or other situations causing mental or physical fatigue.	5	7	9	11	8	10	13	17	11	15	20	26	17	23	30	40
		6	8	10	13	9	11	15	20	13	17	23	30	20	26	35	46
		7	9	11	15	10	13	17	23	15	20	26	35	23	30	40	53
	<b>M.</b> A substantial expenditure of mental or physical energy is the nature of, and normal to, the work.	7	9	11	15	10	13	17	23	15	20	26	35	23	30	40	53
		8	10	13	17	11	15	20	26	17	23	30	40	26	35	46	61
		9	11	15	20	13	17	23	30	20	26	35	46	30	40	53	70
	<b>H.</b> Work situations normally involve continual and highly intensive expenditure of mental or physical energy.	9	11	15	20	13	17	23	30	20	26	35	46	30	40	53	70
		10	13	17	23	15	20	26	35	23	30	40	53	35	46	61	80
		11	15	20	26	17	23	30	40	26	35	46	61	40	53	70	92

This factor includes undesirable conditions the work requirements impose on the employee. The dimensions are:

**EFFORT** - The amount of intense mental concentration or physical energy required to be expended.

**HAZARDS** - The degree of risk of injury or harm.

**DISCOMFORT** - The environmental or stressful conditions associated with the work. These include such things as noise, temperature, isolation, exposure to emotionally draining situations, and other similar or related unfavorable conditions. There are four levels:

- A. Nature of the work is such that there is a minimum of undesirable conditions.
- B. Normal work conditions tend to be moderately disagreeable on occasion.
- C. Normal work conditions are moderately disagreeable much of the time, or strongly disagreeable on occasion.
- D. Strongly disagreeable conditions exist continuously or much of the time.

STATE OF VERMONT  
RECOMMENDED PAY GRADE STRUCTURE

<u>Grade</u>	<u>Computation Point</u>	<u>Point Range</u>	<u>Grade</u>	<u>Computation Point</u>	<u>Point Range</u>
5	75	72 – 79	19	287	275 – 301
6	83	80 – 87	20	316	302 – 332
7	91	88 – 95	21	348	333 – 365
8	100	96 – 105	22	383	366 – 402
9	110	106 – 115	23	421	403 – 442
10	121	116 – 127	24	463	443 – 486
11	133	128 – 139	25	509	487 – 534
12	146	140 – 153	26	560	535 – 588
13	161	154 – 169	27	616	589 – 647
14	177	170 – 186	28	678	648 – 712
15	195	187 – 205	29	746	713 – 783
16	215	206 – 226	30	821	784 – 862
17	237	227 – 249	31	903	863 – 948
18	261	250 – 274	32	993	949 – 1042