

O*NET Database Release 4.0
Content Model and Database Summary

Appendix B - O*NET 4.0 Content Model and Database Summary

Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
WORKER CHARACTERISTICS	WORKER CHARACTERISTICS	CATEGORY	1				
Abilities	Enduring attributes of the individual that influence performance	Domain	1.A				
Cognitive Abilities	Abilities that influence the acquisition and application of knowledge in problem solving	1st Level	1.A.1				
Verbal Abilities	Abilities that influence the acquisition and application of verbal information in problem solving	2nd Level	1.A.1.a				
Oral Comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences.		1.A.1.a.1	AB01	YES	YES	YES
Written Comprehension	The ability to read and understand information and ideas presented in writing.		1.A.1.a.2	AB02	YES	YES	YES
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.		1.A.1.a.3	AB03	YES	YES	YES
Written Expression	The ability to communicate information and ideas in writing so others will understand.		1.A.1.a.4	AB04	YES	YES	YES
Idea Generation and Reasoning Abilities	Abilities that influence the application and manipulation of information in problem solving	2nd Level	1.A.1.b				
Fluency of Ideas	The ability to come up with a number of ideas about a topic (the <i>number</i> of ideas is important, <u>not</u> their quality, correctness, or creativity).		1.A.1.b.1	AB05	YES	YES	YES
Originality	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.		1.A.1.b.2	AB06	YES	YES	YES
Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does <u>not</u> involve solving the problem, only recognizing there is a problem.		1.A.1.b.3	AB07	YES	YES	YES
Deductive Reasoning	The ability to apply general rules to specific problems to produce answers that make sense.		1.A.1.b.4	AB08	YES	YES	YES
Inductive Reasoning	The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).		1.A.1.b.5	AB09	YES	YES	YES
Information Ordering	The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).		1.A.1.b.6	AB10	YES	YES	YES

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Category Flexibility	The ability to generate or use different sets of rules for combining or grouping things in different ways.		1.A.1.b.7	AB11	YES	YES	YES
Quantitative Abilities	Abilities that influence the solution of problems involving mathematical relationships	2nd Level	1.A.1.c				
Mathematical Reasoning	The ability to choose the right mathematical methods or formulas to solve a problem.		1.A.1.c.1	AB12	YES	YES	YES
Number Facility	The ability to add, subtract, multiply, or divide quickly and correctly.		1.A.1.c.2	AB13	YES	YES	YES
Memory	Abilities related to the recall of available information	2nd Level	1.A.1.d				
Memorization	The ability to remember information such as words, numbers, pictures, and procedures.		1.A.1.d.1	AB14	YES	YES	YES
Perceptual Abilities	Abilities related to the acquisition and organization of visual information	2nd Level	1.A.1.e				
Speed of Closure	The ability to quickly make sense of, combine, and organize information into meaningful patterns.		1.A.1.e.1	AB15	YES	YES	YES
Flexibility of Closure	The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.		1.A.1.e.2	AB16	YES	YES	YES
Perceptual Speed	The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.		1.A.1.e.3	AB17	YES	YES	YES
Spatial Abilities	Abilities related to the manipulation and organization of spatial information	2nd Level	1.A.1.f				
Spatial Orientation	The ability to know your location in relation to the environment or to know where other objects are in relation to you.		1.A.1.f.1	AB18	YES	YES	YES
Visualization	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.		1.A.1.f.2	AB19	YES	YES	YES
Attentiveness	Abilities related to application of attention	2nd Level	1.A.1.g				
Selective Attention	The ability to concentrate on a task over a period of time without being distracted.		1.A.1.g.1	AB20	YES	YES	YES

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Time Sharing	The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).		1.A.1.g.2	AB21	YES	YES	YES
Psychomotor Abilities	Abilities that influence the capacity to manipulate and control objects	1st Level	1.A.2				
Fine Manipulative Abilities	Abilities related to the manipulation of objects	2nd Level	1.A.2.a				
Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.		1.A.2.a.1	AB22	YES	YES	YES
Manual Dexterity	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.		1.A.2.a.2	AB23	YES	YES	YES
Finger Dexterity	The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.		1.A.2.a.3	AB24	YES	YES	YES
Control Movement Abilities	Abilities related to the control and manipulation of objects in time and space	2nd Level	1.A.2.b				
Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.		1.A.2.b.1	AB25	YES	YES	YES
Multilimb Coordination	The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does <u>not</u> involve performing the activities while the whole body is in motion.		1.A.2.b.2	AB26	YES	YES	YES
Response Orientation	The ability to choose quickly between <i>two or more movements</i> in response to <i>two or more different signals</i> (lights, sounds, pictures). It includes the speed with which the correct response is <i>started</i> with the hand, foot, or other body part.		1.A.2.b.3	AB27	YES	YES	YES
Rate Control	The ability to time your movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.		1.A.2.b.4	AB28	YES	YES	YES
Reaction Time and Speed Abilities	Abilities related to speed of manipulation of objects	2nd Level	1.A.2.c				
Reaction Time	The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when		1.A.2.c.1	AB29	YES	YES	YES

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Wrist-Finger Speed	The ability to make <i>fast, simple, repeated movements</i> of the <i>fingers, hands, and wrists</i> .		1.A.2.c.2	AB30	YES	YES	YES
Speed of Limb Movement	The ability to <i>quickly</i> move the arms and legs.		1.A.2.c.3	AB31	YES	YES	YES
Physical Abilities	Abilities that influence strength, endurance, flexibility, balance and coordination	1st Level	1.A.3				
Physical Strength Abilities	Abilities related to the capacity to exert force	2nd Level	1.A.3.a				
Static Strength	The ability to exert maximum muscle force to lift, push, pull, or carry objects.		1.A.3.a.1	AB32	YES	YES	YES
Explosive Strength	The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.		1.A.3.a.2	AB33	YES	YES	YES
Dynamic Strength	The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.		1.A.3.a.3	AB34	YES	YES	YES
Trunk Strength	The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing.		1.A.3.a.4	AB35	YES	YES	YES
Endurance	The ability to exert oneself physically over long periods without getting out of breath	2nd Level	1.A.3.b				
Stamina	The ability to exert yourself physically over long periods of time without getting winded or out of breath.		1.A.3.b.1	AB36	YES	YES	YES
Flexibility, Balance and Coordination	Abilities related to the control of gross body movements	2nd Level	1.A.3.c				
Extent Flexibility	The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.		1.A.3.c.1	AB37	YES	YES	YES
Dynamic Flexibility	The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.		1.A.3.c.2	AB38	YES	YES	YES
Gross Body Coordination	The ability to coordinate the <i>movement of your arms, legs, and torso together</i> when the whole body is in motion.		1.A.3.c.3	AB39	YES	YES	YES
Gross Body Equilibrium	The ability to keep or regain your body balance or stay upright when in an unstable position.		1.A.3.c.4	AB40	YES	YES	YES
Sensory Abilities	Abilities that influence visual, auditory and speech perception	1st Level	1.A.4				

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Visual Abilities	Abilities related to visual sensory input	2nd Level	1.A.4.a				
Near Vision	The ability to see details at close range (within a few feet of the observer).		1.A.4.a.1	AB41	YES	YES	YES
Far Vision	The ability to see details at a distance.		1.A.4.a.2	AB42	YES	YES	YES
Visual Color Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.		1.A.4.a.3	AB43	YES	YES	YES
Night Vision	The ability to see under low light conditions.		1.A.4.a.4	AB44	YES	YES	YES
Peripheral Vision	The ability to see objects or movement of objects to one's side when the eyes are looking ahead.		1.A.4.a.5	AB45	YES	YES	YES
Depth Perception	The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.		1.A.4.a.6	AB46	YES	YES	YES
Glare Sensitivity	The ability to see objects in the presence of glare or bright lighting.		1.A.4.a.7	AB47	YES	YES	YES
Auditory and Speech Abilities	Abilities related to auditory and oral input	2nd Level	1.A.4.b				
Hearing Sensitivity	The ability to detect or tell the differences between sounds that vary in pitch and loudness.		1.A.4.b.1	AB48	YES	YES	YES
Auditory Attention	The ability to focus on a single source of sound in the presence of other distracting sounds.		1.A.4.b.2	AB49	YES	YES	YES
Sound Localization	The ability to tell the direction from which a sound originated.		1.A.4.b.3	AB50	YES	YES	YES
Speech Recognition	The ability to identify and understand the speech of another person.		1.A.4.b.4	AB51	YES	YES	YES
Speech Clarity	The ability to speak clearly so others can understand you.		1.A.4.b.5	AB52	YES	YES	YES

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Interests	Preferences for work environments and outcomes	Domain	1.B				
Occupational Interests	Occupational Interest Profiles (OIPs) are compatible with Holland's (1985,1997) model of personality types and work environments. Six interest categories are used to describe the work environment of occupations: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. An OIP consists of six numerical scores indicating how descriptive and characteristic each work environment (or interest area) is for an O*NET-SOC occupation. In addition, a high-point profile has been assigned indicating which interests are most characteristic of an O*NET-SOC occupation. A high-point profile consists of one to three interest codes, depending on how many interest categories meet a minimum degree of descriptiveness for the O*NET-SOC occupation.	1st Level	1.B.1				
Realistic	Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.		1.B.1.a	special	YES	YES	YES
Investigative	Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.		1.B.1.b	special	YES	YES	YES
Artistic	Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.		1.B.1.c	special	YES	YES	YES
Social	Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.		1.B.1.d	special	YES	YES	YES

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Enterprising	Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.		1.B.1.e	special	YES	YES	YES
Conventional	Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.		1.B.1.f	special	YES	YES	YES
First Interest High-Point	Primary-Rank Descriptiveness		1.B.1.g	special	YES	YES	YES
Second Interest High-Point	Secondary-Cutoff/Rank descriptiveness		1.B.1.h	special	YES	YES	YES
Third Interest High-Point	Tertiary-Cutoff/Rank descriptiveness		1.B.1.i	special	YES	YES	YES
Occupational Values	Occupational Reinforcer Patterns (ORPs) indicate which work values and needs are likely to be reinforced or satisfied by a particular O*NET-SOC occupation. The use of work values to describe occupations is based on the Theory of Work Adjustment (TWA) developed during the Work Adjustment Project at the University of Minnesota under Research Grants from the U.S. Department of Health, Education and Welfare (Dawis, R.V., England, G.W., & Lofquist, L.H., 1964; Dawis, R.V., & Lofquist L. H., 1984). This theory proposes that job satisfaction is directly related to the degree to which a person's values and corresponding needs are satisfied by his or her work environment. The TWA identifies six work values each with a corresponding set of needs. Nine hundred O*NET-SOC occupation have an ORP consisting of: 1) 6 numerical scores indicating the mean extent to which each work value is reinforced; and 2) 21 numerical scores indicating the extent to which each need is reinforced.	1st Level	1.B.2				

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Achievement-Mean Extent	Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.		1.B.2.a	special	YES	YES	YES
Ability Utilization	Workers on this job make use of their individual abilities.		1.B.2.a.1	special	YES	YES	YES
Achievement	Workers on this job get a feeling of accomplishment.		1.B.2.a.2	special	YES	YES	YES
Working Conditions-Mean Extent	Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.		1.B.2.b	special	YES	YES	YES
Activity	Workers on this job are busy all the time.		1.B.2.b.1	special	YES	YES	YES
Independence	Workers on this job do their work alone.		1.B.2.b.2	special	YES	YES	YES
Variety	Workers on this job have something different to do every day.		1.B.2.b.3	special	YES	YES	YES
Compensation	Workers on this job are paid well in comparison with other workers.		1.B.2.b.4	special	YES	YES	YES
Security	Workers on this job have steady employment.		1.B.2.b.5	special	YES	YES	YES
Working Conditions	Workers on this job have good working conditions.		1.B.2.b.6	special	YES	YES	YES
Recognition-Mean Extent	Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.		1.B.2.c	special	YES	YES	YES
Advancement	Workers on this job have opportunities for advancement.		1.B.2.c.1	special	YES	YES	YES
Recognition	Workers on this job receive recognition for the work they do.		1.B.2.c.2	special	YES	YES	YES
Authority	Workers on this job give directions and instructions to others.		1.B.2.c.3	special	YES	YES	YES
Social Status	Workers on this job are looked up to by others in their company and their community.		1.B.2.c.4	special	YES	YES	YES
Relationships-Mean Extent	Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.		1.B.2.d	special	YES	YES	YES

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Co-workers	Workers on this job have co-workers who are easy to get along with.		1.B.2.d.1	special	YES	YES	YES
Social Service	Workers on this job have work where they do things for other people.		1.B.2.d.2	special	YES	YES	YES
Moral Values	Workers on this job are never pressured to do things that go against their sense of right and wrong.		1.B.2.d.3	special	YES	YES	YES
Support-Mean Extent	Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.		1.B.2.e	special	YES	YES	YES
Company Policies and Practices	Workers on this job are treated fairly by the company.		1.B.2.e.1	special	YES	YES	YES
Supervision, Human Relations	Workers on this job have supervisors who back up their workers with management.		1.B.2.e.2	special	YES	YES	YES
Supervision, Technical	Workers on this job have supervisors who train their workers well.		1.B.2.e.3	special	YES	YES	YES
Independence-Mean Extent	Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.		1.B.2.f	special	YES	YES	YES
Creativity	Workers on this job try out their own ideas.		1.B.2.f.1	special	YES	YES	YES
Responsibility	Workers on this job make decisions on their own.		1.B.2.f.2	special	YES	YES	YES
Autonomy	Workers on this job plan their work with little supervision.		1.B.2.f.3	special	YES	YES	YES
Work Styles	Work Styles	Domain	1.C				
Achievement Orientation	Job requires personal goal setting, trying to succeed at those goals, and striving to be competent in own work	1st Level	1.C.1				
Achievement /Effort	Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.		1.C.1.a	KN39	NO	NO	YES
Persistence	Job requires persistence in the face of obstacles.		1.C.1.b	KN40	NO	NO	YES
Initiative	Job requires a willingness to take on responsibilities and challenges.		1.C.1.c	KN41	NO	NO	YES
Social Influence	Job requires having an impact on others in the organization, and displaying energy and leadership	1st Level	1.C.2				
Energy	Job requires the energy and stamina to accomplish work tasks.	DELETED	1.C.2.a		NO	NO	NO

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Leadership	Job requires a willingness to lead, take charge, and offer opinions and direction.		1.C.2.b	KN42	NO	NO	YES
Interpersonal Orientation	Job requires being pleasant, cooperative, sensitive to others, easy to get along with, and having a preference for associating with other organization members	1st Level	1.C.3				
Cooperation	Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.		1.C.3.a	KN43	NO	NO	YES
Concern for Others	Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.		1.C.3.b	KN44	NO	NO	YES
Social Orientation	Job requires preferring to work with others rather than alone, and being personally connected with others on the job.		1.C.3.c	KN45	NO	NO	YES
Adjustment	Job requires maturity, poise, flexibility, and restraint to cope with pressure, stress, criticism, setbacks, personal and work-related problems, etc.	1st Level	1.C.4				
Self Control	Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.		1.C.4.a	KN46	NO	NO	YES
Stress Tolerance	Job requires accepting criticism and dealing calmly and effectively with high stress situations.		1.C.4.b	KN47	NO	NO	YES
Adaptability/Flexibility	Job requires being open to change (positive or negative) and to considerable variety in the workplace.		1.C.4.c	KN48	NO	NO	YES
Conscientiousness	Job requires dependability, commitment to doing the job correctly and carefully, and being trustworthy, accountable, and attentive to details	1st Level	1.C.5				
Dependability	Job requires being reliable, responsible, and dependable, and fulfilling obligations.		1.C.5.a	KN49	NO	NO	YES
Attention to Detail	Job requires being careful about detail and thorough in completing work tasks.		1.C.5.b	KN50	NO	NO	YES
Integrity	Job requires being honest and ethical.		1.C.5.c	KN51	NO	NO	YES
Independence	Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.		1.C.6	KN52	NO	NO	YES
Practical Intelligence	Job requires generating useful ideas and thinking things through logically.	1st Level	1.C.7				

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Innovation	Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.		1.C.7.a	KN53	NO	NO	YES
Analytical Thinking	Job requires analyzing information and using logic to address work-related issues and problems.		1.C.7.b	KN54	NO	NO	YES
WORKER REQUIREMENTS	WORKER REQUIREMENTS	CATEGORY 2					
Basic Skills	Developed capacities that facilitate learning or the more rapid acquisition of knowledge	Domain	2.A				
Content	Background structures needed to work with and acquire more specific skills in a variety of different domains	1st Level	2.A.1				
Reading Comprehension	Understanding written sentences and paragraphs in work related documents.		2.A.1.a	SK01	YES	YES	YES
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.		2.A.1.b	SK02	YES	YES	YES
Writing	Communicating effectively in writing as appropriate for the needs of the audience.		2.A.1.c	SK03	YES	YES	YES
Speaking	Talking to others to convey information effectively.		2.A.1.d	SK04	YES	YES	YES
Mathematics	Using mathematics to solve problems.		2.A.1.e	SK05	YES	YES	YES
Science	Using scientific rules and methods to solve problems.		2.A.1.f	SK06	YES	YES	YES
Process	Procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains	1st Level	2.A.2				
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.		2.A.2.a	SK07	YES	YES	YES
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.		2.A.2.b	SK08	YES	YES	YES
Learning Strategies	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.		2.A.2.c	SK09	YES	YES	YES

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Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.		2.A.2.d	SK10	YES	YES	YES
Cross-Functional Skills	Developed capacities that facilitate performance of activities that occur across jobs	Domain	2.B				
Social Skills	Developed capacities used to work with people to achieve goals	1st Level	2.B.1				
Social Perceptiveness	Being aware of others' reactions and understanding why they react as they do.		2.B.1.a	SK11	YES	YES	YES
Coordination	Adjusting actions in relation to others' actions.		2.B.1.b	SK12	YES	YES	YES
Persuasion	Persuading others to change their minds or behavior.		2.B.1.c	SK13	YES	YES	YES
Negotiation	Bringing others together and trying to reconcile differences.		2.B.1.d	SK14	YES	YES	YES
Instructing	Teaching others how to do something.		2.B.1.e	SK15	YES	YES	YES
Service Orientation	Actively looking for ways to help people.		2.B.1.f	SK16	YES	YES	YES
Complex Problem Solving Skills	Developed capacities used to solve novel, ill-defined problems in complex, real-world settings	1st Level	2.B.2				
Problem Identification	Identifying the nature of problems	ROLLED-UP (see 2.B.2.i)	2.B.2.a		YES	NO	NO
Information Gathering	Knowing how to find information and identifying essential information	ROLLED-UP (see 2.B.2.i)	2.B.2.b		YES	NO	NO
Information Organization	Finding ways to structure or classify multiple pieces of information	ROLLED-UP (see 2.B.2.i)	2.B.2.c		YES	NO	NO
Synthesis/Reorganization	Reorganizing information to get a better approach to problems or tasks	ROLLED-UP (see 2.B.2.i)	2.B.2.d		YES	NO	NO
Idea Generation	Generating a number of different approaches to problems	ROLLED-UP (see 2.B.2.i)	2.B.2.e		YES	NO	NO
Idea Evaluation	Evaluating the likely success of an idea in relation to the demands of the situation	ROLLED-UP (see 2.B.2.i)	2.B.2.f		YES	NO	NO
Implementation Planning	Developing approaches for implementing an idea	ROLLED-UP (see 2.B.2.i)	2.B.2.g		YES	NO	NO
Solution Appraisal	Observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts	ROLLED-UP (see 2.B.2.i)	2.B.2.h		YES	NO	NO
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	ROLL-UP	2.B.2.i	SK17	NO	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Technical Skills	Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems	1st Level	2.B.3				
Operations Analysis	Analyzing needs and product requirements to create a design.		2.B.3.a	SK18	YES	YES	YES
Technology Design	Generating or adapting equipment and technology to serve user needs.		2.B.3.b	SK19	YES	YES	YES
Equipment Selection	Determining the kind of tools and equipment needed to do a job.		2.B.3.c	SK20	YES	YES	YES
Installation	Installing equipment, machines, wiring, or programs to meet specifications.		2.B.3.d	SK21	YES	YES	YES
Programming	Writing computer programs for various purposes.		2.B.3.e	SK22	YES	YES	YES
Testing	Conducting tests to determine whether equipment, software, or procedures are operating as expected	ROLLED-UP (see 2.B.3.m)	2.B.3.f		YES	NO	NO
Operation Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.		2.B.3.g	SK24	YES	YES	YES
Operation and Control	Controlling operations of equipment or systems.		2.B.3.h	SK25	YES	YES	YES
Product Inspection	Inspecting and evaluating the quality of products	ROLLED-UP (see 2.B.3.m)	2.B.3.i		YES	NO	NO
Equipment Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.		2.B.3.j	SK26	YES	YES	YES
Troubleshooting	Determining causes of operating errors and deciding what to do about it.		2.B.3.k	SK27	YES	YES	YES
Repairing	Repairing machines or systems using the needed tools.		2.B.3.l	SK28	YES	YES	YES
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.	ROLL-UP	2.B.3.m	SK23	NO	YES	YES
Systems Skills	Developed capacities used to understand, monitor, and improve socio-technical systems	1st Level	2.B.4				
Visioning	Developing an image of how a system should work under ideal conditions	ROLLED-UP (see 2.B.4.g)	2.B.4.a		YES	NO	NO
Systems Perception	Determining when important changes have occurred in a system or are likely to occur	ROLLED-UP (see 2.B.4.g)	2.B.4.b		YES	NO	NO
Identifying Downstream Consequences	Determining the long-term outcomes of a change in operations	ROLLED-UP (see 2.B.4.g)	2.B.4.c		YES	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Identification of Key Causes	Identifying the things that must be changed to achieve a goal	ROLLED-UP (see 2.B.4.h)	2.B.4.d		YES	NO	NO
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.		2.B.4.e	SK31	YES	YES	YES
Systems Evaluation	Looking at many indicators of system performance, taking into account their accuracy	ROLLED-UP (see 2.B.4.h)	2.B.4.f		YES	NO	NO
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.	ROLL-UP	2.B.4.g	SK29	NO	YES	YES
Systems Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	ROLL-UP	2.B.4.h	SK30	NO	YES	YES
Resource Management Skills	Developed capacities used to allocate resources efficiently	1st Level	2.B.5				
Time Management	Managing one's own time and the time of others.		2.B.5.a	SK32	YES	YES	YES
Management of Financial Resources	Determining how money will be spent to get the work done, and accounting for these expenditures.		2.B.5.b	SK33	YES	YES	YES
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.		2.B.5.c	SK34	YES	YES	YES
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.		2.B.5.d	SK35	YES	YES	YES
Knowledge	Organized sets of principles and facts applying in general domains	Domain	2.C				
Business and Management	Knowledge of principles and facts related to business administration and accounting, human and material resource management in organizations, sales and marketing, economics, and office information and organizing systems	1st Level	2.C.1				
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.		2.C.1.a	KN01	YES	YES	YES
Clerical	Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription,		2.C.1.b	KN02	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
	designing forms, and other office procedures and terminology.						
Economics and Accounting	Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.		2.C.1.c	KN03	YES	YES	YES
Sales and Marketing	Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.		2.C.1.d	KN04	YES	YES	YES
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.		2.C.1.e	KN05	YES	YES	YES
Personnel and Human Resources	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.		2.C.1.f	KN06	YES	YES	YES
Manufacturing and Production	Knowledge of principles and facts related to the production, processing, storage, and distribution of manufactured and agricultural goods	1st Level	2.C.2				
Production and Processing	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.		2.C.2.a	KN07	YES	YES	YES
Food Production	Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.		2.C.2.b	KN08	YES	YES	YES
Engineering and Technology	Knowledge of the design, development, and application of technology for specific purposes.	1st Level	2.C.3				
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.		2.C.3.a	KN09	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.		2.C.3.b	KN10	YES	YES	YES
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.		2.C.3.c	KN11	YES	YES	YES
Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.		2.C.3.d	KN12	YES	YES	YES
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.		2.C.3.e	KN13	YES	YES	YES
Mathematics and Science	Knowledge of the history, theories, methods, and applications of the physical, biological, social, mathematical, and geography	1st Level	2.C.4				
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.		2.C.4.a	KN14	YES	YES	YES
Physics	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.		2.C.4.b	KN15	YES	YES	YES
Chemistry	Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.		2.C.4.c	KN16	YES	YES	YES
Biology	Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.		2.C.4.d	KN17	YES	YES	YES
Psychology	Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.		2.C.4.e	KN18	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Sociology and Anthropology	Knowledge of group behavior and dynamics, societal trends and influences, human migrations, ethnicity, cultures and their history and origins.		2.C.4.f	KN19	YES	YES	YES
Geography	Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.		2.C.4.g	KN20	YES	YES	YES
Health Services	Knowledge of principles and facts regarding diagnosing, curing, and preventing disease, and improving and preserving physical and mental health and well-being	1st Level	2.C.5				
Medicine and Dentistry	Knowledge of the information and techniques needed to diagnose and treat human injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.		2.C.5.a	KN21	YES	YES	YES
Therapy and Counseling	Knowledge of principles, methods, and procedures for diagnosis, treatment, and rehabilitation of physical and mental dysfunctions, and for career counseling and guidance.		2.C.5.b	KN22	YES	YES	YES
Education and Training	Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.		2.C.6	KN23	YES	YES	YES
Arts and Humanities	Knowledge of facts and principles related to the branches of learning concerned with human thought, language, and the arts.	1st Level	2.C.7				
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.		2.C.7.a	KN24	YES	YES	YES
Foreign Language	Knowledge of the structure and content of a foreign (non-English) language including the meaning and spelling of words, rules of composition and grammar, and pronunciation.		2.C.7.b	KN25	YES	YES	YES
Fine Arts	Knowledge of the theory and techniques required to compose, produce, and perform works of music, dance, visual arts, drama, and sculpture.		2.C.7.c	KN26	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
History and Archeology	Knowledge of historical events and their causes, indicators, and effects on civilizations and cultures.		2.C.7.d	KN27	YES	YES	YES
Philosophy and Theology	Knowledge of different philosophical systems and religions. This includes their basic principles, values, ethics, ways of thinking, customs, practices, and their impact on human culture.		2.C.7.e	KN28	YES	YES	YES
Law and Public Safety	Knowledge of regulations and methods for maintaining people and property free from danger, injury, or damage; the rules of public conduct established and enforced by legislation, and the political process establishing such rules.	1st Level	2.C.8				
Public Safety and Security	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.		2.C.8.a	KN29	YES	YES	YES
Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.		2.C.8.b	KN30	YES	YES	YES
Communications	Knowledge of the science and art of delivering information	1st Level	2.C.9				
Telecommunications	Knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems.		2.C.9.a	KN31	YES	YES	YES
Communications and Media	Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.		2.C.9.b	KN32	YES	YES	YES
Transportation	Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.		2.C.10	KN33	YES	YES	YES
Education	Prior educational experience required to perform in a job	Domain	2.D				
Required Level of Education	The level of education required to perform a job.		2.D.1	KN34	NO	NO	YES
Instructional Program Required	The instructional program required for this job	NOT USED	2.D.2		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Education Level in Specific Subjects	The amount of education required in 15 subject areas to perform in a job. Subject areas cover most of the courses that occur in high school, junior college, college undergraduate degree programs, and other education and training programs	1st Level	2.D.3				
Technical Vocational	Courses focus on non-business technical skills, such as Agriculture, Industrial Arts, Automobile and Shop, and Electronics	NOT USED	2.D.3.a		NO	NO	NO
Business Vocational	Courses focus on basic business skills, such as Word Processing, Filing, Bookkeeping/Basic Accounting	NOT USED	2.D.3.b		NO	NO	NO
English/Language Arts	Courses focus on reading, interpretation, and writing, such as Literature, Composition, Journalism, and Creative Writing	NOT USED	2.D.3.c		NO	NO	NO
Oral Communication	Courses focus on oral communication and speech, such as Oral Communication, Speech, and Interpersonal Communication	NOT USED	2.D.3.d		NO	NO	NO
Languages	Courses focus on reading, writing, and/or speaking languages other than English, such as French, Chinese, German, Japanese, Latin, Russian, and Spanish	NOT USED	2.D.3.e		NO	NO	NO
Basic Math	Courses focus on basic and applied math, such as General Math and Business Math	NOT USED	2.D.3.f		NO	NO	NO
Advanced Math	Courses focus on advanced topics in math, such as Algebra, Geometry, Calculus, and Statistics	NOT USED	2.D.3.g		NO	NO	NO
Physical Science	Courses focus on the study of matter and/or energy, such as Physics, Chemistry, and Astronomy	NOT USED	2.D.3.h		NO	NO	NO
Computer Science	Courses focus on computers and their uses, such as Programming, Information Systems Management, and Software Applications	NOT USED	2.D.3.i		NO	NO	NO
Biological Science	Courses focus on the study of life and living beings, such as life science, biology, anatomy and physiology	NOT USED	2.D.3.j		NO	NO	NO
Applied Science	Courses focus on the application of science, such as Engineering, Health, and Medicine	NOT USED	2.D.3.k		NO	NO	NO
Social Science	Courses focus on the behavioral sciences, such as Social Studies, Economics, History, Psychology, and Sociology	NOT USED	2.D.3.l		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Arts	Courses focus on visual and performing arts, such as Arts and Crafts, Music, Painting, Sculpture, Theater, and Voice	NOT USED	2.D.3.m		NO	NO	NO
Humanities	Courses focus on cultural and philosophical aspects of humans, such as Minority Studies, Philosophy, and Religion	NOT USED	2.D.3.n		NO	NO	NO
Physical Education	Courses focus on physical fitness and sports, such as Aerobics, Jogging, Weight Lifting, and Specific Sports	NOT USED	2.D.3.o		NO	NO	NO
EXPERIENCE REQUIREMENTS	EXPERIENCE REQUIREMENTS	CATEGORY	3				
Experience and Training	If someone were being hired to perform this job, how much of the following would be required?	Domain	3.A				
Related Work Experience	Amount of related <u>work experience</u> required to get hired for the job?		3.A.1	KN35	NO	NO	YES
On-Site or In-Plant Training	Amount of <u>on-site or in-plant training</u> (e.g, organized class room instruction) required to perform the job?		3.A.2	KN36	NO	NO	YES
On-the-Job Training	Amount of <u>on the job training</u> required to perform the job?		3.A.3	KN37	NO	NO	YES
Apprenticeship	Length of <u>apprenticeship</u> required to perform the job?		3.A.4	KN38	NO	NO	YES
Basic Skills - Entry Requirement	Entry requirement for developed capacities that facilitate learning or the more rapid acquisition of knowledge	Domain	3.B				
Content - Entry Requirement	Entry requirement for background structures needed to work with and acquire more specific skills in a variety of different domains	1st Level	3.B.1				
Reading Comprehension - Entry Requirement	Entry requirement for understanding written sentences and paragraphs in work related documents	NOT USED	3.B.1.a		NO	NO	NO
Active Listening - Entry Requirement	Entry requirement for listening to what other people are saying and asking questions as appropriate	NOT USED	3.B.1.b		NO	NO	NO
Writing - Entry Requirement	Entry requirement for communicating effectively with others in writing as indicated by the needs of the audience	NOT USED	3.B.1.c		NO	NO	NO
Speaking - Entry Requirement	Entry requirement for talking to others to effectively convey information	NOT USED	3.B.1.d		NO	NO	NO
Mathematics - Entry Requirement	Entry requirement for using mathematics to solve problems	NOT USED	3.B.1.e		NO	NO	NO
Science - Entry Requirement	Entry requirement for using scientific methods to solve problems	NOT USED	3.B.1.f		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Process - Entry Requirement	Entry requirement for procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains	1st Level	3.B.2				
Critical Thinking - Entry Requirement	Entry requirement for using logic and analysis to identify the strengths and weaknesses in different approaches	NOT USED	3.B.2.a		NO	NO	NO
Active Learning - Entry Requirement	Entry requirement for working with new material or information to grasp its implications	NOT USED	3.B.2.b		NO	NO	NO
Learning Strategies - Entry Requirement	Entry requirement for using multiple approaches when learning or teaching new things	NOT USED	3.B.2.c		NO	NO	NO
Monitoring - Entry Requirement	Entry requirement for assessing how well one is doing when learning or doing something	NOT USED	3.B.2.d		NO	NO	NO
Cross-Functional Skills - Entry Requirement	Entry requirement for developed capacities that facilitate performance of activities that occur across jobs	Domain	3.C				
Social Skills - Entry Requirement	Entry requirement for developed capacities used to work with people to achieve goals	1st Level	3.C.1				
Social Perceptiveness - Entry Requirement	Entry requirement for being aware of others' reactions and understanding why they react the way they do	NOT USED	3.C.1.a		NO	NO	NO
Coordination - Entry Requirement	Entry requirement for adjusting actions in relation to others' actions	NOT USED	3.C.1.b		NO	NO	NO
Persuasion - Entry Requirement	Entry requirement for persuading others to approach things differently	NOT USED	3.C.1.c		NO	NO	NO
Negotiation - Entry Requirement	Entry requirement for bring others together and trying to reconcile differences	NOT USED	3.C.1.d		NO	NO	NO
Instructing - Entry Requirement	Entry requirement for teaching others how to do something	NOT USED	3.C.1.e		NO	NO	NO
Service Orientation - Entry Requirement	Entry requirement for actively looking for ways to help people	NOT USED	3.C.1.f		NO	NO	NO
Complex Problem Solving Skills - Entry Requirement	Entry requirement for developed capacities used to solve novel, ill-defined problems in complex, real-world settings	1st Level	3.C.2				
Problem Identification - Entry Requirement	Entry requirement for identifying the nature of problems	NOT USED	3.C.2.a		NO	NO	NO
Information Gathering - Entry Requirement	Entry requirement for knowing how to find information and identifying essential information	NOT USED	3.C.2.b		NO	NO	NO
Information Organization - Entry Requirement	Entry requirement for finding ways to structure or classify multiple pieces of information	NOT USED	3.C.2.c		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Synthesis/Reorganization - Entry Requirement	Entry requirement for reorganizing information to get a better approach to problems or tasks	NOT USED	3.C.2.d		NO	NO	NO
Idea Generation - Entry Requirement	Entry requirement for generating a number of different approaches to problems	NOT USED	3.C.2.e		NO	NO	NO
Idea Evaluation - Entry Requirement	Entry requirement for evaluating the likely success of an idea in relation to the demands of the situation	NOT USED	3.C.2.f		NO	NO	NO
Implementation Planning - Entry Requirement	Entry requirement for developing approaches for implementing an idea	NOT USED	3.C.2.g		NO	NO	NO
Solution Appraisal - Entry Requirement	Entry requirement for observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts	NOT USED	3.C.2.h		NO	NO	NO
Technical Skills - Entry Requirement	Entry requirement for observing developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems	1st Level	3.C.3				
Operations Analysis - Entry Requirement	Entry requirement for analyzing needs and product requirements to create a design	NOT USED	3.C.3.a		NO	NO	NO
Technology Design - Entry Requirement	Entry requirement for generating or adapting equipment and technology to serve user needs	NOT USED	3.C.3.b		NO	NO	NO
Equipment Selection - Entry Requirement	Entry requirement for determining the kind of tools and equipment needed to do a job	NOT USED	3.C.3.c		NO	NO	NO
Installation - Entry Requirement	Entry requirement for installing equipment, machines, wiring, or programs to meet specifications	NOT USED	3.C.3.d		NO	NO	NO
Programming - Entry Requirement	Entry requirement for writing computer programs for various purposes	NOT USED	3.C.3.e		NO	NO	NO
Testing - Entry Requirement	Entry requirement for conducting tests to determine whether equipment, software, or procedures are operating as expected	NOT USED	3.C.3.f		NO	NO	NO
Operation Monitoring - Entry Requirement	Entry requirement for watching gauges, dials, or other indicators to make sure a machine is working properly	NOT USED	3.C.3.g		NO	NO	NO
Operation and Control - Entry Requirement	Entry requirement for controlling operations of equipment or systems	NOT USED	3.C.3.h		NO	NO	NO
Product Inspection - Entry Requirement	Entry requirement for inspecting and evaluating the quality of products	NOT USED	3.C.3.i		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Equipment Maintenance - Entry Requirement	Entry requirement for performing routine maintenance and determining when and what kind of maintenance is needed	NOT USED	3.C.3.j		NO	NO	NO
Troubleshooting - Entry Requirement	Entry requirement for determining what is causing an operating error and deciding what to do about it	NOT USED	3.C.3.k		NO	NO	NO
Repairing - Entry Requirement	Entry requirement for repairing machines or systems using the needed tools	NOT USED	3.C.3.l		NO	NO	NO
Systems Skills - Entry Requirement	Entry requirement for developed capacities used to understand, monitor, and improve socio-technical systems	1st Level	3.C.4				
Visioning - Entry Requirement	Entry requirement for developing an image of how a system should work under ideal conditions	NOT USED	3.C.4.a		NO	NO	NO
Systems Perception - Entry Requirement	Entry requirement for determining when important changes have occurred in a system or are likely to occur	NOT USED	3.C.4.b		NO	NO	NO
Identifying Downstream Consequences - Entry Requirement	Entry requirement for determining the long-term outcomes of a change in operations	NOT USED	3.C.4.c		NO	NO	NO
Identification of Key Causes - Entry Requirement	Entry requirement for entry requirement for identifying the things that must be changed to achieve a goal	NOT USED	3.C.4.d		NO	NO	NO
Judgment and Decision Making - Entry Requirement	Entry requirement for weighing the relative costs and benefits of a potential action	NOT USED	3.C.4.e		NO	NO	NO
System Evaluation - Entry Requirement	Entry requirement for looking at many indicators of system performance, taking into account their accuracy	NOT USED	3.C.4.f		NO	NO	NO
Resource Management Skills - Entry Requirement	Entry requirement for developed capacities used to allocate resources efficiently	1st Level	3.C.5				
Time Management - Entry Requirement	Entry requirement for managing one's own time and the time of others	NOT USED	3.C.5.a		NO	NO	NO
Management of Financial Resources - Entry Requirement	Entry requirement for determining how money will be spent to get the work done, and accounting for these expenditures	NOT USED	3.C.5.b		NO	NO	NO
Management of Material Resources - Entry Requirement	Entry requirement for obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work	NOT USED	3.C.5.c		NO	NO	NO
Management of Personnel Resources - Entry Requirement	Entry requirement for motivating, developing, and directing people as they work, identifying the best people for the job	NOT USED	3.C.5.d		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Licensing	Licenses, certificates, or registrations that are awarded to show that a job holder has gained certain skills. This includes requirements for obtaining these credentials, and the organization or agency requiring their possession.	Domain	3.D				
License, Certificate or Reg. Required	At least one license, certificate, or registration is required to perform in this job, including a driver's or vehicle operator's license. The specific license(s), certificate(s), or registration(s) are listed.	Linked	3.D.1		NO	NO	NO
Specific License or Cert. Required	Specific education, training, examination, or other requirements for obtaining the licenses, certificates, or registration needed to perform in this job	1st Level	3.D.2				
Post-Secondary Degree	Obtaining the licenses, certificates, or registration needed to perform in this job requires a post-secondary degree, for example an Associate's or Bachelor's degree.	Linked	3.D.2.a		NO	NO	NO
Graduate Degree	Obtaining the licenses, certificates, or registration needed to perform in this job requires a graduate degree, for example, a Master's or Doctoral degree.	Linked	3.D.2.b		NO	NO	NO
On-the-Job Training	Obtaining the licenses, certificates, or registration needed to perform in this job requires on-the-job training, including apprenticeships, internships, and other supervised experiences.	Linked	3.D.2.c		NO	NO	NO
Examination	Obtaining the licenses, certificates, or registration needed to perform in this job requires an examination, for example, written, oral, or performance assessments.	Linked	3.D.2.d		NO	NO	NO
Character References	Obtaining the licenses, certificates, or registration needed to perform in this job requires one or more character references from other individuals.	Linked	3.D.2.e		NO	NO	NO
Additional Education and Training	Retaining the licenses, certificates, or registration needed to perform in this job requires additional course work.	Linked	3.D.4		NO	NO	NO
Organization and Agency Requirements	Organizations or agencies requiring the specific licenses, certificates, or registration needed to perform in a job	1st Level	3.D.5				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Legal Requirement	Federal, state, or local law requires possessing specific licenses, certificates, or registration for performance in this job.	Linked	3.D.5.a		NO	NO	NO
Employer Requirement	Employers require possessing specific licenses, certificates, or registration for performance in this job.	NOT USED	3.D.5.b		NO	NO	NO
Union, Guild, or Professional Assoc.	A union or professional association requires possessing specific licenses, certificates, or registration for performance in this job.	NOT USED	3.D.5.c		NO	NO	NO
OCCUPATIONAL REQUIREMENTS	OCCUPATIONAL REQUIREMENTS	CATEGORY	4				
Generalized Work Activities	General types of job behaviors occurring on multiple jobs	Domain	4.A				
Information Input	Where and how are the information and data gained that are needed to perform this job?	1st Level	4.A.1				
Looking for/Receiving Job-Related Information	How is information obtained to perform this job?	2nd Level	4.A.1.a				
Getting Information	Observing, receiving, and otherwise obtaining information from all relevant sources.		4.A.1.a.1	GW01	YES	YES	YES
Monitor Processes, Materials, or Surroundings	Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.		4.A.1.a.2	GW03	YES	YES	YES
Identify/Evaluating Job-Related Information	How is information interpreted to perform this job?	2nd Level	4.A.1.b				
Identifying Objects, Actions, and Events	Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.		4.A.1.b.1	GW02	YES	YES	YES
Inspecting Equipment, Structures, or Material	Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.		4.A.1.b.2	GW04	YES	YES	YES
Estimating the Quantifiable Characteristics of Products, Events, or Information	Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.		4.A.1.b.3	GW05	YES	YES	YES
Mental Processes	What processing, planning, problem-solving, decision-making, and innovating activities are performed with job-relevant information?	1st Level	4.A.2				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Information/Data Processing	How is information processed to perform this job?	2nd Level	4.A.2.a				
Judging the Qualities of Things, Services, or People	Assessing the value, importance, or quality of things or people.		4.A.2.a.1	GW06	YES	YES	YES
Processing Information	Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.		4.A.2.a.2	GW08	YES	YES	YES
Evaluating Information to Determine Compliance with Standards	Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.		4.A.2.a.3	GW07	YES	YES	YES
Analyzing Data or Information	Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.		4.A.2.a.4	GW09	YES	YES	YES
Reasoning/Decision Making	What decisions are made and problems solved in performing this job?	2nd Level	4.A.2.b				
Making Decisions and Solving Problems	Analyzing information and evaluating results to choose the best solution and solve problems.		4.A.2.b.1	GW10	YES	YES	YES
Thinking Creatively	Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.		4.A.2.b.2	GW11	YES	YES	YES
Updating and Using Relevant Knowledge	Keeping up-to-date technically and applying new knowledge to your job.		4.A.2.b.3	GW12	YES	YES	YES
Developing Objectives and Strategies	Establishing long-range objectives and specifying the strategies and actions to achieve them.		4.A.2.b.4	GW13	YES	YES	YES
Scheduling Work and Activities	Scheduling events, programs, and activities, as well as the work of others.		4.A.2.b.5	GW14	YES	YES	YES
Organizing, Planning, and Prioritizing Work	Developing specific goals and plans to prioritize, organize, and accomplish your work.		4.A.2.b.6	GW15	YES	YES	YES
Work Output	What physical activities are performed, what equipment and vehicles are operated/controlled, and what complex/technical activities are accomplished as job outputs?	1st Level	4.A.3				
Performing Physical and Manual Work Activities	What activities using the body and hands are done to perform this job?	2nd Level	4.A.3.a				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Performing General Physical Activities	Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.		4.A.3.a.1	GW16	YES	YES	YES
Handling and Moving Objects	Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.		4.A.3.a.2	GW17	YES	YES	YES
Controlling Machines and Processes	Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).		4.A.3.a.3	GW18	YES	YES	YES
Operating Vehicles, Mechanized Devices, or Equipment	Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.		4.A.3.a.4	GW20	YES	YES	YES
Performing Complex/Technical Activities	What skilled activities using coordinated movements are done to perform this job?	2nd Level	4.A.3.b				
Interacting With Computers	Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.		4.A.3.b.1	GW19	YES	YES	YES
Drafting, Layingout, and Specifying Technical Devices, Parts, and Equipment	Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.		4.A.3.b.2	GW21	YES	YES	YES
Implementing Ideas, Programs, Systems, or Products	Conducting or carrying out work procedures and activities in accord with one's own ideas or information provided through directions/instructions for purposes of installing, modifying, preparing, delivering, constructing, integrating, finishing, or completing programs, systems, structures, or products.	DELETED	4.A.3.b.3		YES	NO	NO
Repairing and Maintaining Mechanical Equipment	Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.		4.A.3.b.4	GW22	YES	YES	YES
Repairing and Maintaining Electronic Equipment	Servicing, repairing, calibrating, regulating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or		4.A.3.b.5	GW23	YES	YES	YES

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	electronic (not mechanical) principles.						
Documenting/ Recording Information	Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.		4.A.3.b.6	GW24	YES	YES	YES
Interacting With Others	What interactions with other persons or supervisory activities occur while performing this job?	1st Level	4.A.4				
Communicating/ Interacting	What interactions with other people occur while performing this job?	2nd Level	4.A.4.a				
Interpreting the Meaning of Information for Others	Translating or explaining what information means and how it can be used.		4.A.4.a.1	GW25	YES	YES	YES
Communicating with Supervisors, Peers, or Subordinates	Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.		4.A.4.a.2	GW26	YES	YES	YES
Communicating with Persons Outside Organization	Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.		4.A.4.a.3	GW27	YES	YES	YES
Establishing and Maintaining Interpersonal Relationships	Developing constructive and cooperative working relationships with others, and maintaining them over time.		4.A.4.a.4	GW28	YES	YES	YES
Assisting and Caring for Others	Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.		4.A.4.a.5	GW29	YES	YES	YES
Selling or Influencing Others	Convincing others to buy merchandise/goods or to otherwise change their minds or actions.		4.A.4.a.6	GW30	YES	YES	YES
Resolving Conflicts and Negotiating with Others	Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.		4.A.4.a.7	GW31	YES	YES	YES
Performing for or Working Directly with the Public	Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.		4.A.4.a.8	GW32	YES	YES	YES

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Coordinating/ Developing/Managing/ Advising	What coordinating, managerial, or advisory activities are done while performing this job?	2nd Level	4.A.4.b				
Coordinating the Work and Activities of Others	Getting members of a group to work together to accomplish tasks.		4.A.4.b.1	GW33	YES	YES	YES
Developing and Building Teams	Encouraging and building mutual trust, respect, and cooperation among team members.		4.A.4.b.2	GW34	YES	YES	YES
Training and Teaching Others	Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.		4.A.4.b.3	GW35	YES	YES	YES
Guiding, Directing, and Motivating Subordinates	Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.		4.A.4.b.4	GW36	YES	YES	YES
Coaching and Developing Others	Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.		4.A.4.b.5	GW37	YES	YES	YES
Provide Consultation and Advice to Others	Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.		4.A.4.b.6	GW38	YES	YES	YES
Administering	What administrative, staffing, monitoring, or controlling activities are done while performing this job?	2nd Level	4.A.4.c				
Performing Administrative Activities	Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.		4.A.4.c.1	GW39	YES	YES	YES
Staffing Organizational Units	Recruiting, interviewing, selecting, hiring, and promoting employees in an organization.		4.A.4.c.2	GW40	YES	YES	YES
Monitoring and Controlling Resources	Monitoring and controlling resources and overseeing the spending of money.		4.A.4.c.3	GW41	YES	YES	YES
Organizational Context	Characteristics of the organization that influence how people do their work	Domain	4.B				
Structural Characteristics	A functional subsystem of organization structure subsuming constructs of (a) organizational structure, and (b) human resources systems and practices	1st Level	4.B.1				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Organizational Structure	The architecture or anatomy of an organization, affecting the behavior of organizational members as well as the ability of organizations to adapt effectively to their environments. Elements of organizational structure include the hierarchy of the organization, the degree of centralization, and the nature of work groups used to accomplish organizational objectives	2nd Level	4.B.1.a				
Decision Making System	The amount of autonomy and involvement in decision making that employees have	3rd Level	4.B.1.a.1				
Decentralization and Employee Empowerment	Indicates the degree to which employees are provided with different types of information and participate in decision-making	4th Level	4.B.1.a.1.a				
Have Control Over Unit/Department	You have a great deal of control over what happens in your unit or department	NOT USED	4.B.1.a.1.a.1		NO	NO	NO
Have Influence Over Decisions	You have a great deal of influence over decisions that are made in your unit or department.	NOT USED	4.B.1.a.1.a.2		NO	NO	NO
Monitor Data on Quality/Costs/Waste/etc.	You monitor data on quality, costs, waste, and productivity	NOT USED	4.B.1.a.1.a.3		NO	NO	NO
Determine Work Flow/Order of Tasks	You determine work flow or the order in which tasks are performed	NOT USED	4.B.1.a.1.a.4		NO	NO	NO
Invest in New Equipment and Technology	You invest in new equipment and technology	NOT USED	4.B.1.a.1.a.5		NO	NO	NO
Develop New Products, Services, etc.	You develop new products, services, and procedures	NOT USED	4.B.1.a.1.a.6		NO	NO	NO
Individual versus Team Structure	Identifies the extent to which employees work in intact teams	4th Level	4.B.1.a.1.b				
Percent of Time in Intact Team	Approximately what percentage of your time do you spend working in an intact team? By intact team we mean a group of 3 or more employees who are jointly responsible for whole work processes and work toward shared goals (e.g., production team; development team; project team).	NOT USED	4.B.1.a.1.b.1		NO	NO	NO
Job Characteristics	Indicates the level of skill variety, task significance, task identity, autonomy, and feedback in this job	3rd Level	4.B.1.a.2				
Skill Variety	The variety of skills required of people in this job	4th Level	4.B.1.a.2.a				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Job Variety	How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?	NOT USED	4.B.1.a.2.a.1		NO	NO	NO
Complex or High Level Skills Required	Your job requires you to use a number of complex or high-level skills.	NOT USED	4.B.1.a.2.a.2		NO	NO	NO
Variety of Tasks Required	Your job requires you to perform a variety of tasks.	NOT USED	4.B.1.a.2.a.3		NO	NO	NO
Task Significance	The importance or significance of the tasks performed on this job, as reflected by its effect on the lives or well-being of others	4th Level	4.B.1.a.2.b				
Significance or Importance of Job	In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?	NOT USED	4.B.1.a.2.b.1		NO	NO	NO
Job Quality Affects Lots of People	Your job is one where a lot of people can be affected by how well the work gets done.	NOT USED	4.B.1.a.2.b.2		NO	NO	NO
Job Itself Is Very Significant	Your job itself is very significant and important in the broader scheme of things.	NOT USED	4.B.1.a.2.b.3		NO	NO	NO
Task Identity	The extent to which tasks performed on this job can be perceived as contributing to the final product	4th Level	4.B.1.a.2.c				
Job Involves "Whole" Piece of Work	To what extent does your job involve doing a 'whole' and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or automatic machines? [If your job involves many different tasks or pieces of work, try to think about your typical tasks or the tasks you spend the most time on.]	NOT USED	4.B.1.a.2.c.1		NO	NO	NO
Can Do Entire Piece of Work	Your job is arranged so that you can do an entire piece of work from beginning to end.	NOT USED	4.B.1.a.2.c.2		NO	NO	NO
Can Finish What You Start	Your job provides you a chance to completely finish the piece of work you began.	NOT USED	4.B.1.a.2.c.3		NO	NO	NO
Autonomy	The amount of freedom in the job, as reflected in a person being able to exercise personal initiative and judgment in task performance	4th Level	4.B.1.a.2.d				
Autonomy and Freedom in Job	How much autonomy and freedom are there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing your job?	NOT USED	4.B.1.a.2.d.1		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Chance for Initiative and Judgment	Your job gives you a chance to use your personal initiative and judgment in carrying out the work.	NOT USED	4.B.1.a.2.d.2		NO	NO	NO
Opportunity for Independence/ Freedom	Your job gives you considerable opportunity for independence and freedom in how you do your job.	NOT USED	4.B.1.a.2.d.3		NO	NO	NO
Feedback	The extent to which this job provides information about how well one is performing	4th Level	4.B.1.a.2.e				
Extent of Feedback From Doing Job Itself	To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing--aside from any 'feedback' co-workers or supervisors may provide?	NOT USED	4.B.1.a.2.e.1		NO	NO	NO
Doing Job Provides Chances for Feedback	Just doing the job provides many chances for you to figure out how well you are doing.	NOT USED	4.B.1.a.2.e.2		NO	NO	NO
After Finishing Job, Know Own Performance	After you finish a job, you know whether you performed well.	NOT USED	4.B.1.a.2.e.3		NO	NO	NO
Job Stability and Rotation	The amount of stability in the job and the extent of job rotation	3rd Level	4.B.1.a.3				
Number of Supervisors in Past Year	How many different supervisors have you had in the past year?	NOT USED	4.B.1.a.3.a		NO	NO	NO
Number of Work Teams in Past Year	Approximately how many different work teams have you belonged to during the past year?	NOT USED	4.B.1.a.3.b		NO	NO	NO
Number of Work Group Reorgs. in Past Year	In the past year, how many times has your primary work group gone through some kind of reorganization?	NOT USED	4.B.1.a.3.c		NO	NO	NO
No. of Times Nature of Job Changed	In the past year, how many times has the nature of your job duties changed dramatically?	NOT USED	4.B.1.a.3.d		NO	NO	NO
Job Rotation Practices	Which statement best describes the job rotation practices in your job and your work group?	NOT USED	4.B.1.a.3.e		NO	NO	NO
Human Resources Systems and Practices	Organizational practices and policies designed to ensure that an organization has employees who are capable of meeting its goals	2nd Level	4.B.1.b				
Recruitment and Selection	Organizational practices, decisions, and processes that affect (a) the capability of an organization to make hiring, promotion, and other personnel decisions, and (b) the number or types of individuals who are willing to apply for or accept a given	3rd Level	4.B.1.b.1				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
	vacancy						
Recruitment Operations	Activities involved in implementing recruitment plans (e.g., selecting sources, realistic job preview)	4th Level	4.B.1.b.1.a				
Sources of People for Current Job	Which of the sources listed below are used to recruit people for your current job?	NOT USED	4.B.1.b.1.a.1		NO	NO	NO
Selection Assessment Methods Used	The methods used for selection or promotion of employees	4th Level	4.B.1.b.1.b				
Assessment Methods Used to Select for Job	Which of the following assessment methods are used to select people for your current job?	NOT USED	4.B.1.b.1.b.1		NO	NO	NO
Training and Development	The systematic acquisition of attitudes, concepts, knowledge, roles, or skills that result in improved performance at work	3rd Level	4.B.1.b.2				
Training Methods	The methods used in training programs	4th Level	4.B.1.b.2.a				
Training Methods Used in Company	Which of the following training methods have been used in company training courses you have attended in the last two years?	NOT USED	4.B.1.b.2.a.1		NO	NO	NO
Training Topics/Content	What trainers intend to teach trainees through training programs	4th Level	4.B.1.b.2.b				
Areas of Recent Formal Training	In which of the following content areas have you received formal training in the last two years?	NOT USED	4.B.1.b.2.b.1		NO	NO	NO
Extent/Support of Training Activities	The extent to which an organization makes training available to its employees and provides financial support for training activities	4th Level	4.B.1.b.2.c				
Recent Technical Skill Training	In the last two years, how often have you attended company sponsored job-related technical training (i.e., technical skill training)?	NOT USED	4.B.1.b.2.c.1		NO	NO	NO
Reward System	Monetary compensation and monetary and non-monetary benefits organizations provide to their employees	3rd Level	4.B.1.b.3				
Basis of Compensation	The extent to which organizations reward individuals based on: (a) their knowledge, skills, and performance, (b) seniority, (c) team performance, (d) organizational performance, and (e) job attributes	4th Level	4.B.1.b.3.a				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Compensation Package Components	Which of the following is part of your compensation package (i.e., pay)?	NOT USED	4.B.1.b.3.a.1		NO	NO	NO
Benefits	The extent to which employees' compensation includes benefits such as pensions, insurance, paid leave, awards and bonuses, pay for time not worked, etc.	4th Level	4.B.1.b.3.b				
Benefit Components	Which of the following is part of your benefits?	NOT USED	4.B.1.b.3.b.1		NO	NO	NO
Social Processes	A functional subsystem of organization structure subsuming processes linking people (employees) to their work and to each other and includes elements such as values, goals, leadership, and roles	1st Level	4.B.2				
Goals	Individual goal setting.	2nd Level	4.B.2.a				
Individual Goal Characteristics	The extent to which an individual's goal is made explicit, and the probability that an individual can attain the goal	3rd Level	4.B.2.a.1				
Achieve Most Important Individ. Goal	Realistically, the probability that you will achieve your most important individual work goal this year is:	NOT USED	4.B.2.a.1.a		NO	NO	NO
How Many Quantitative Individual Goals	How many of your individual work goals are quantitative (e.g., selling \$100,000 worth of merchandise as opposed to selling as much merchandise as possible).	NOT USED	4.B.2.a.1.b		NO	NO	NO
Goal Feedback	The extent to which an individual is given periodic feedback regarding his or her progress against a goal	3rd Level	4.B.2.a.2				
How Many Specific Individual Goals	How many of your individual work goals are specific -- that is, you will know exactly when you have achieved them?	NOT USED	4.B.2.a.2.a		NO	NO	NO
When Get Info. on Individual Goals	How often do you get information regarding how close you are to achieving your most important individual work goal (for example, an interim financial report or data on number of units sold)?	NOT USED	4.B.2.a.2.b		NO	NO	NO
Informal, Job-Relevant Feedback	To what extent do you receive informal, job-relevant feedback from your supervisor?	NOT USED	4.B.2.a.2.c		NO	NO	NO
Meet 1-on-1 With Supervisor on Goals, etc.	During the past year, how often have you met one-on-one with your immediate supervisor to discuss issues such as your performance, goals, training and development?	NOT USED	4.B.2.a.2.d		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Roles	Characteristics of job incumbents' roles, such as the extent to which they involve conflict and overload	2nd Level	4.B.2.b				
Role Conflict	The extent to which an individual has to deal with conflicting demands	3rd Level	4.B.2.b.1				
Often Receive Conflicting Requests	You often receive conflicting requests from two or more people at work.	NOT USED	4.B.2.b.1.a		NO	NO	NO
Work With Groups With Different Focuses	You work with two or more groups who want you to focus on different things.	NOT USED	4.B.2.b.1.b		NO	NO	NO
You and Your Supervisor Agree About Job	You and your supervisor agree about what your job should be.	NOT USED	4.B.2.b.1.c		NO	NO	NO
Supervisor Makes Conflicting Requests	Your supervisor often asks you to do two or more things that conflict (for example, save a large amount of money while at the same time dramatically increasing quality).	NOT USED	4.B.2.b.1.d		NO	NO	NO
Role Negotiability	the extent to which an individual can negotiate his/her role in an organization	3rd Level	4.B.2.b.2				
Negotiate Changes in Role w/Supervisor	You have negotiated changes in the nature of your role at work with your supervisor.	NOT USED	4.B.2.b.2.a		NO	NO	NO
Significant Input Into Way You Do Job	You have significant input into the way you do your job.	NOT USED	4.B.2.b.2.b		NO	NO	NO
Role Overload	A discrepancy between the job's demands and one's ability to meet those demands	3rd Level	4.B.2.b.3				
Get Assignments w/o Adequate Resources	You receive assignments at work without adequate resources and materials to complete them properly.	NOT USED	4.B.2.b.3.a		NO	NO	NO
Given Enough Time to Do Work	You are given enough time to do what is expected of you at work.	NOT USED	4.B.2.b.3.b		NO	NO	NO
Too Much for One Person to Do	It often seems like you have too much work for one person to do.	NOT USED	4.B.2.b.3.c		NO	NO	NO
Culture	Patterns of behaviors and social relationships reflecting the assumptions, values, norms, and artifacts shared by members of the organization	2nd Level	4.B.2.c				
Organizational Values	Indicates the importance of different organizational values such as tradition, stability, innovation, and collaboration	3rd Level	4.B.2.c.1				
Guiding Principles of Organization	How important are each of the following concepts, or values, as a guiding principle for your organization as a whole.	4th Level	4.B.2.c.1.a				
Taking Chances; Going Out on a Limb	Taking chances; going out on a limb	NOT USED	4.B.2.c.1.a.1		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Fairness; Justice	Fairness; justice	NOT USED	4.B.2.c.1.a.2		NO	NO	NO
Precision	Precision; paying attention to even the smallest details	NOT USED	4.B.2.c.1.a.3		NO	NO	NO
Stability	Stability; keeping things on an even keel	NOT USED	4.B.2.c.1.a.4		NO	NO	NO
Getting Things Done	Getting things done; taking decisive or quick action	NOT USED	4.B.2.c.1.a.5		NO	NO	NO
Caring About Employees	Caring about employees; showing concern for their well-being	NOT USED	4.B.2.c.1.a.6		NO	NO	NO
Innovation	Innovation; finding new and better ways of doing things; openness to new ideas	NOT USED	4.B.2.c.1.a.7		NO	NO	NO
Aggressiveness	Aggressiveness; forcefully going after what you want	NOT USED	4.B.2.c.1.a.8		NO	NO	NO
Valuing Customers	Valuing customers; emphasizing customer service	NOT USED	4.B.2.c.1.a.9		NO	NO	NO
Providing High Quality Products	Providing high quality products or services; meeting high standards of excellence	NOT USED	4.B.2.c.1.a.10		NO	NO	NO
Openness and Honesty	Openness; honesty; keeping employees well informed	NOT USED	4.B.2.c.1.a.11		NO	NO	NO
Flexibility, Adapting to Change	Flexibility, adapting to change	NOT USED	4.B.2.c.1.a.12		NO	NO	NO
Supervisor Role	The nature of supervisory leadership	2nd Level	4.B.2.d				
Supervisor Friendly and Supportive	To what extent does your supervisor act in a friendly and supportive manner? For example, does he/she show concern for members of your work group and respect for your ideas?	NOT USED	4.B.2.d.1		NO	NO	NO
Supervisor Takes Active Role	To what extent does your supervisor take an active role in directing your work group's activities by setting goals, planning and scheduling work, assigning tasks, and making sure that each person knows what he/she should be doing?	NOT USED	4.B.2.d.2		NO	NO	NO
Supervisor Provides Clear Vision	To what extent does your supervisor provide members of your work group with a clear vision of where the group is going and keep everyone fully committed to the work at hand?	NOT USED	4.B.2.d.3		NO	NO	NO
Supervisor Solves Problems	To what extent does your supervisor quickly and effectively solve problems, even difficult problems, that come up in your work group?	NOT USED	4.B.2.d.4		NO	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Work Context	Physical and social factors that influence the nature of work	Domain	4.C				
Interpersonal Relationships	This category describes the context of the job in terms of human interaction processes	1st Level	4.C.1				
Communication	Types and frequency of interactions with other people that are required as part of this job.	2nd Level	4.C.1.a				
Formality of Communication	How formal is most of the job-related information that the worker gives and receives on this job?	DELETED	4.C.1.a.1		NO	NO	NO
Communication Methods	How frequently does this job require the use of the following communication methods?	3rd Level	4.C.1.a.2				
Face-to-Face With Individuals	Face-to-Face (individuals)	ROLLED-UP (see 4.C.1.a.2.l)	4.C.1.a.2.a		NO	NO	NO
Face-to-Face With Groups	Face-to-Face (group/team meetings)	ROLLED-UP (see 4.C.1.a.2.l)	4.C.1.a.2.b		NO	NO	NO
Public Speaking	How often do you have to perform <u>public speaking</u> in this job?		4.C.1.a.2.c	WC02	NO	NO	YES
Video Conference	Video conference	DELETED	4.C.1.a.2.d		NO	NO	NO
Voice Mail	Voice mail	DELETED	4.C.1.a.2.e		NO	NO	NO
Telephone	How often do you have <u>telephone conversations</u> in this job?		4.C.1.a.2.f	WC03	NO	NO	YES
Interactive	Interactive (same-time) computer communication	DELETED	4.C.1.a.2.g		NO	NO	NO
Electronic Mail	How often do you use <u>electronic mail</u> in this job?		4.C.1.a.2.h	WC04	NO	NO	YES
Handwritten Notes or Messages	Handwritten notes or messages	DELETED	4.C.1.a.2.i		NO	NO	NO
Letters and Memos	How often does the job require <u>written letters and memos</u> ?		4.C.1.a.2.j	WC05	NO	NO	YES
Written Reports	Written reports	DELETED	4.C.1.a.2.k		NO	NO	NO
Face-to-Face Discussions	How often do you have to have <u>face-to-face discussions</u> with individuals or teams in this job?	ROLL-UP	4.C.1.a.2.l	WC01	NO	NO	YES
Objective or Subjective Information	How objective or subjective is the information communicated in this job?	DELETED	4.C.1.a.3		YES	NO	NO
Contact With Others	How much does this job require the worker to be in <u>contact with others</u> (face-to-face, by telephone, or otherwise) in order to perform it?		4.C.1.a.4	WC06	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Privacy of Communications	To what extent can an individual's work materials and communications (face-to-face, phone, fax, E-mail, etc.) be monitored by others?	DELETED	4.C.1.a.5		NO	NO	NO
Role Relationships	Importance of different types of interactions with others both inside and outside the organization	2nd Level	4.C.1.b				
Job Interactions	How important are interactions requiring the worker to:	3rd Level	4.C.1.b.1				
Supervise, Coach, Train Others	Supervise, coach, train, or develop other employees?	DELETED	4.C.1.b.1.a		YES	NO	NO
Persuade Someone to a Course of Action	Persuade someone to a course of action (informally) or influence others to buy something (to sell)?	DELETED	4.C.1.b.1.b		YES	NO	NO
Provide a Service to Others	Provide a service to others (e.g., customers)?	DELETED	4.C.1.b.1.c		YES	NO	NO
Take a Position Opposed to Others	Take a position opposed to coworkers or others?	DELETED	4.C.1.b.1.d		YES	NO	NO
Work With Work Group or Team	How important is it to <u>work with others in a group or team</u> in this job?		4.C.1.b.1.e	WC07	NO	NO	YES
Deal With External Customers	How important is it to work with <u>external customers or the public</u> in this job?		4.C.1.b.1.f	WC08	YES	YES	YES
Coordinate or Lead Others	How important is it to <u>coordinate or lead others in accomplishing work activities</u> in this job?		4.C.1.b.1.g	WC09	YES	YES	YES
Responsibility for Others	Amount of responsibility the worker has for other workers as a part of this job	2nd Level	4.C.1.c				
Responsible for Others' Health and Safety	How much responsibility is there for the <u>health and safety of others</u> in this job?		4.C.1.c.1	WC10	YES	YES	YES
Responsibility for Outcomes and Results	How responsible is the worker for <u>work outcomes and results</u> of other workers?		4.C.1.c.2	WC11	YES	YES	YES
Conflictual Contact	Amount of conflict that the worker will encounter as part of this job	2nd Level	4.C.1.d				
Frequency of Conflict Situations	How often are there <u>conflict situations</u> the employee has to face in this job?		4.C.1.d.1	WC12	YES	YES	YES
Deal With Unpleasant/Angry People	How frequently does the worker have to <u>deal with unpleasant, angry, or discourteous individuals</u> as part of the job requirements?		4.C.1.d.2	WC13	YES	YES	YES
Deal With Physically Aggressive People	How frequently does this job require the worker to <u>deal with physical aggression of violent individuals</u> ?		4.C.1.d.3	WC14	YES	YES	YES
Physical Work Conditions	This category describes the work context as it relates to the interactions between the worker and the physical job environment	1st Level	4.C.2				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Work Setting	Description of physical surroundings that the worker will face as part of this job	2nd Level	4.C.2.a				
Frequency Required to Work:	How frequently does this job require the worker to work:	3rd Level	4.C.2.a.1				
Indoors, Environmentally Controlled	How often does this job require <u>working indoors in environmentally controlled conditions?</u>		4.C.2.a.1.a	WC15	NO	YES*	YES
Indoors, Not Environmentally Controlled	How often does this job require <u>working indoors in non-controlled environmental conditions</u> (e.g., warehouse without heat)?		4.C.2.a.1.b	WC16	NO	NO	YES
Outdoors, Exposed to Weather	How often does this job require <u>working outdoors, exposed to all weather conditions?</u>		4.C.2.a.1.c	WC17	NO	YES**	YES
Outdoors, Under Cover	How often does this job require <u>working outdoors, under cover</u> (e.g., structure with roof but no walls)?		4.C.2.a.1.d	WC18	NO	NO	YES
In an Open Vehicle or Equipment	How often does this job require <u>working in an open vehicle or equipment</u> (e.g., tractor)?		4.C.2.a.1.e	WC19	NO	NO	YES
In an Enclosed Vehicle or Equipment	How often does this job require <u>working in a closed vehicle or equipment</u> (e.g., car)?		4.C.2.a.1.f	WC20	NO	NO	YES
Indoors	Indoors	DELETED	4.C.2.a.1.g		YES***	NO	NO
Outdoors	Outdoors	DELETED	4.C.2.a.1.h		YES***	NO	NO
Privacy of Work Area	How private is the work area for this job?	DELETED	4.C.2.a.2		NO	NO	NO
Physical Proximity	To what extent does this job require the worker to perform job tasks in <u>close physical proximity</u> to other people?		4.C.2.a.3	WC21	NO	NO	YES
Environmental Conditions	Description of extreme environmental conditions the worker will be placed in as part of this job	2nd Level	4.C.2.b				
Frequency in Environmental Conditions	How often during a usual work period is the worker exposed to the following conditions:	3rd Level	4.C.2.b.1				
Sounds, Noise Levels Are Distracting, etc.	How often does this job require <u>working exposed to sounds and noise levels that are distracting or uncomfortable?</u>		4.C.2.b.1.a	WC22	YES	YES	YES

* This element was judged to be sufficiently close in meaning to that of the analysts rating of Indoors (4.C.2.a.1.g) used in O*NET 3.1.

** This element was judged to be sufficiently close in meaning to that of the analysts rating of Outdoors (4.C.2.a.1.g) used in O*NET 3.1.

*** Ratings in O*NET 3.1 were collected from occupational analysts using the broad terms, Indoors or Outdoors.

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Very Hot or Cold Temperatures	How often does this job require working in <u>very hot (above 90 F degrees) or very cold (below 32 F degrees) temperatures?</u>		4.C.2.b.1.b	WC23	YES	YES	YES
Extremely Bright or Inadequate Lighting	How often does this job require working in <u>extremely bright or inadequate lighting conditions?</u>		4.C.2.b.1.c	WC24	YES	YES	YES
Exposed to Contaminates	How often does this job require working exposed to <u>contaminants</u> (such as pollutants, gases, dust or odors)?		4.C.2.b.1.d	WC25	YES	YES	YES
Cramped Work Space, Awkward Positions	How often does this job require working in <u>cramped work spaces that requires getting into awkward positions?</u>		4.C.2.b.1.e	WC26	YES	YES	YES
Exposed to Whole Body Vibration	How often does this job require exposure to <u>whole body vibration</u> (e.g., operate a jackhammer)?		4.C.2.b.1.f	WC27	YES	YES	YES
Job Hazards	Descriptions of types of hazardous conditions the worker could be exposed to as part of this job. This includes the frequency of exposure, and the likelihood and degree of injury if exposed.	2nd Level	4.C.2.c				
Frequency of Exposure to Job Hazards	How often does this job require the worker to be exposed to the following hazards?	3rd Level	4.C.2.c.1				
Exposed to Radiation	How often does this job require exposure to <u>radiation</u> ?		4.C.2.c.1.a	WC28	YES	YES	YES
Exposed to Disease/Infections	How often does this job require exposure to <u>disease/infections</u> ?		4.C.2.c.1.b	WC29	YES	YES	YES
Exposed to High Places	How often does this job require exposure to <u>high places</u> ?		4.C.2.c.1.c	WC30	YES	YES	YES
Exposed to Hazardous Conditions	How often does this job require exposure to <u>hazardous conditions</u> ?		4.C.2.c.1.d	WC31	YES	YES	YES
Exposed to Hazardous Equipment	How often does this job require exposure to <u>hazardous equipment</u> ?		4.C.2.c.1.e	WC32	YES	YES	YES
Exposed to Minor Burns, Cuts, Bites or Stings	How often does this job require exposure to <u>minor burns, cuts, bites, or stings</u> ?		4.C.2.c.1.f	WC33	YES	YES	YES
Likelihood of Injury From Job Hazards	What is the likelihood that the worker would be injured as a result of being exposed to the following hazards while performing this job?	3rd Level	4.C.2.c.2				
Radiation	Radiation	DELETED	4.C.2.c.2.a		YES	NO	NO
Diseases /Infections	Diseases/Infections (e.g., patient care, some laboratory work, sanitation control, etc.)	DELETED	4.C.2.c.2.b		YES	NO	NO

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
High Places	High Places (e.g., heights above 8 feet on ladders, poles, scaffolding, catwalks, etc.)	DELETED	4.C.2.c.2.c		YES	NO	NO
Hazardous Conditions	Hazardous Conditions (e.g., high voltage electricity, combustibles, explosives, chemicals; do not include hazardous equipment or situations)	DELETED	4.C.2.c.2.d		YES	NO	NO
Hazardous Equipment	Hazardous Equipment (e.g., saws, machinery/mechanical parts include exposure to vehicular traffic, but not driving a vehicle)	DELETED	4.C.2.c.2.e		YES	NO	NO
Hazardous Situations	Hazardous Situations involving likely cuts, bites, stings, or minor burns	DELETED	4.C.2.c.2.f		YES	NO	NO
Degree of Injury	If injury, due to exposure to the following hazards, were to occur while performing this job, how serious would be the likely outcome?	3rd Level	4.C.2.c.3				
Radiation	Radiation	DELETED	4.C.2.c.3.a		YES	NO	NO
Diseases /Infections	Diseases/Infections (e.g., patient care, some laboratory work, sanitation control, etc.)	DELETED	4.C.2.c.3.b		YES	NO	NO
High Places	High Places (e.g., heights above 8 feet on ladders, poles, scaffolding, catwalks, etc.)	DELETED	4.C.2.c.3.c		YES	NO	NO
Hazardous Conditions	Hazardous Conditions (e.g., high voltage electricity, combustibles, explosives, chemicals; do not include hazardous equipment or situations)	DELETED	4.C.2.c.3.d		YES	NO	NO
Hazardous Equipment	Hazardous Equipment (e.g., saws, machinery/mechanical parts include exposure to vehicular traffic, but not driving a vehicle)	DELETED	4.C.2.c.3.e		YES	NO	NO
Hazardous Situations	Hazardous Situations involving likely cuts, bites, stings, or minor burns	DELETED	4.C.2.c.3.f		YES	NO	NO
Body Positioning	Amount of time the worker will spend in a variety of physical positions on this job	2nd Level	4.C.2.d				
Time Spent in Body Positions	How much time in a usual work period does the worker spend:	3rd Level	4.C.2.d.1				
Spend Time Sitting	How much does this job require <u>sitting</u> ?		4.C.2.d.1.a	WC34	YES	YES	YES
Spend Time Standing	How much does this job require <u>standing</u> ?		4.C.2.d.1.b	WC35	YES	YES	YES
Spend Time Climbing Ladders, Scaffolds, Poles	How much does this job require <u>climbing ladders, scaffolds, or poles</u> ?		4.C.2.d.1.c	WC36	YES	YES	YES
Spend Time Walking and Running	How much does this job require <u>walking and running</u> ?		4.C.2.d.1.d	WC37	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Spend Time Kneeling, Crouching, Stooping or Crawling?	How much does this job require <u>kneeling, crouching, stooping or crawling</u> ?		4.C.2.d.1.e	WC38	YES	YES	YES
Spend Time Keeping or Regaining	How much does this job require <u>keeping or regaining your balance</u> ?		4.C.2.d.1.f	WC39	YES	YES	YES
Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls	How much does this job require <u>using your hands to handle, control, or feel objects, tools or controls</u> ?		4.C.2.d.1.g	WC40	YES	YES	YES
Spend Time Bending or Twisting the Body	How much does this job require <u>bending or twisting your body</u> ?		4.C.2.d.1.h	WC41	YES	YES	YES
Spend Time Making Repetitive Motions	How much does this job require <u>making repetitive motions</u> ?		4.C.2.d.1.i	WC42	YES	YES	YES
Work Attire	Dress requirements of this job	2nd Level	4.C.2.e				
Frequency of Wearing Work Attire	How often does the worker wear:	3rd Level	4.C.2.e.1				
Business Clothes	Business clothes, such as neckties and dresses that are often worn in offices?	DELETED	4.C.2.e.1.a		NO	NO	NO
Special Uniform	A special uniform, such as that of a commercial pilot, nurse, police officer, or military personnel?	DELETED	4.C.2.e.1.b		YES	NO	NO
Work Clothing	Work clothing such as that worn by production or maintenance workers?	DELETED	4.C.2.e.1.c		NO	NO	NO
Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats or Life Jackets	How much does this job require <u>wearing common protective or safety equipment</u> such as safety shoes, glasses, gloves, hard hats or life jackets?		4.C.2.e.1.d	WC43	YES	YES	YES
Wear Specialized Protective or Safety Equipment such as Breathing Apparatus, Safety Harness, Full Protection Suits, or Radiation Protection	How much does this job require wearing <u>specialized protective or safety equipment</u> such as breathing apparatus, safety harness, full protection suits, or radiation protection?		4.C.2.e.1.e	WC44	YES	YES	YES
Structural Job Characteristics	This category involves the relationships or interactions between the worker and the structural characteristics of the job	2nd Level	4.C.3				
Criticality of Position	Amount of impact the worker has on final products and their outcomes	3rd Level	4.C.3.a				

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Consequence of Error	How serious would the result usually be if the worker made a mistake that was not readily correctable?		4.C.3.a.1	WC45	YES	YES	YES
Impact of Decisions	The frequency and nature of the impact of worker's decisions on the organization	3rd Level	4.C.3.a.2				
Impact of Decisions on Co-workers or Company Results	How do the decisions an employee makes <u>impact the results</u> of co-workers, clients or the company?		4.C.3.a.2.a	WC46	NO	NO	YES
Frequency of Decision Making	How frequently is the worker required to <u>make decisions</u> that affect other people, the financial resources, and/or the image and reputation of the organization?		4.C.3.a.2.b	WC47	NO	NO	YES
Responsibility/Accountability	To what extent is this job assigned accountability for final work outcomes or results?	DELETED	4.C.3.a.3		NO	NO	NO
Freedom to Make Decisions	How much <u>decision making freedom</u> , without supervision, does the job offer?		4.C.3.a.4	WC48	NO	NO	YES
Routine versus Challenging Work	The relative amounts of routine versus challenging work the worker will perform as part of this job	2nd Level	4.C.3.b				
Frustrating Circumstances	To what extent do frustrating circumstances ('road blocks' to work that are beyond the worker's control) hinder the accomplishment of this job?	DELETED	4.C.3.b.1		YES	NO	NO
Degree of Automation	How <u>automated</u> is the job?		4.C.3.b.2	WC49	YES	YES	YES
Task Clarity	To what extent is the worker clear about what is to be done on this job and how work performance is to be evaluated?	DELETED	4.C.3.b.3		NO	NO	NO
Importance of Being Exact or Accurate	How important is <u>being very exact or highly accurate</u> in performing this job?		4.C.3.b.4	WC50	YES	YES	YES
Importance of Being Sure All Is Done	How important is it to be sure that all the details of this job are performed and everything is done completely?	DELETED	4.C.3.b.5		YES	NO	NO
Importance of Being Aware of New Events	How important is being constantly aware of either frequently changing events (e.g. security guard watching for shoplifters) or infrequent events (e.g. radar operator watching for tornadoes) to performing this job?	DELETED	4.C.3.b.6		YES	NO	NO
Importance of Repeating Same Tasks	How important is <u>repeating the same physical activities</u> (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job?		4.C.3.b.7	WC51	YES	YES	YES

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Element Name	Element Description	Status Within 4.0	Element ID	Survey Booklet Location	Data Within O*NET 3.1	Data Within O*NET 4.0	Data Within O*NET 5.0
Structured versus Unstructured Work	To what extent is this job <u>structured for the worker</u> , rather than allowing the worker to determine tasks, priorities, and goals?		4.C.3.b.8	WC52	NO	NO	YES
Competition	Amount of competition that the worker will face as part of this job	2nd Level	4.C.3.c				
Level of Competition	To what extent does this job require the worker <u>to compete or to be aware of competitive pressures?</u>		4.C.3.c.1	WC53	NO	NO	YES
Pace and Scheduling	Description of the role that time plays in the way the worker performs the tasks required by this job	2nd Level	4.C.3.d				
Time Pressure	How often does this job require the worker to <u>meet strict deadlines?</u>		4.C.3.d.1	WC54	NO	NO	YES
Work Under Frequent Distractions	How important is working under frequent distractions or interruptions to performing this job?	DELETED	4.C.3.d.2		NO	NO	NO
Pace Determined by Speed of Equipment	How important is it to this job that the <u>pace is determined</u> by the speed of equipment or machinery? (This does not refer to keeping busy at all times on this job.)		4.C.3.d.3	WC55	YES	YES	YES
Work Schedules	How regular are the <u>work schedules</u> for this job?		4.C.3.d.4	WC56	NO	NO	YES
Work Shift	Usual work shift for this job	DELETED	4.C.3.d.5		NO	NO	NO
Work Shift Duration	Usual work shift duration	DELETED	4.C.3.d.6		NO	NO	NO
Type of Overtime (if any)	Usual overtime work	DELETED	4.C.3.d.7		NO	NO	NO
Duration of Typical Work Week	Number of hours <u>typically</u> worked in one week.		4.C.3.d.8	WC57	NO	NO	YES
Work Cycle	Usual work cycle for this job	DELETED	4.C.3.d.9		NO	NO	NO
Length of Work Cycle	Number of days usually worked in the cycle	DELETED	4.C.3.d.10		NO	NO	NO
OCCUPATION-SPECIFIC INFORMATION	OCCUPATION-SPECIFIC INFORMATION	CATEGORY	5.				
Tasks	Occupation-Specific Tasks	Domain	5.A				
Task List	List of tasks for each occupation		5.A.1 (1 to X)		YES	YES	YES

O*NET Database Release 4.0 Content Model and Database Summary

LABOR MARKET CHARACTERISTICS	LABOR MARKET CHARACTERISTICS	CATEGORY	6				
Labor Market Information	Labor Market Information	Domain	6.A				
Occupational Statistics	Information related to economic conditions and labor force characteristics of occupations	Linked	6.A.1		NO	NO	NO
Occupational Projections	Projections of future economic conditions and labor force characteristics of occupations	Linked	6.B.1		NO	NO	NO