

DRAFTER, CIVIL**RAPIDS: 0128D**

O*NET/SOC: 17-3011.02

REVISION DATE: 09/2019

TRADE DESCRIPTION: Prepare drawings and topographical and relief maps used in civil engineering projects, such as highways, bridges, pipelines, flood control projects, and water and sewerage control systems.

TASK PERFORMANCE: Demonstrate knowledge and skill for qualifying as Journeyman. Applicable Job Qualification Requirements will be used as a guide in performing tasks and demonstrating knowledge in the following skill areas. Actual work time must be recorded in the Work Experience Log; each skill area must be completed.

Applicable Ratings/MOS/NEC**USMC MOS:** 1361**USCG:** None**USN:** EA**USA MOS:** 12T, 12Y**Related Instruction:**

Trade related On-The-Job-Training (OJT) or Any Trade related schools/courses totaling 288 or more hours.

Additional Requirement:

None.

Total Hours: **4000**

Skill	Description	Hours
A	FUNDAMENTALS OF DRAFTING	1500

	<ul style="list-style-type: none"> -- Draft plans and detailed drawings for structures, installations, and construction projects such as highways, sewage disposal systems, and dikes, working from sketches or notes. -- Determine the order of work and method of presentation, such as orthographic or isometric drawing. -- Review rough sketches, drawings, specifications, and other engineering data received from civil engineers to ensure that they conform to design concepts. -- Calculate weights, volumes, and stress factors and their implications for technical aspects of designs. 	
B	<p>ADMINISTRATION</p> <ul style="list-style-type: none"> -- Supervise and train other technologists, technicians and drafters. -- Supervise or conduct field surveys, inspections or technical investigations to obtain data required to revise construction drawings. -- Determine quality, cost, strength and quantity of required materials, and enter figures on materials lists. -- Explain drawings to production or construction teams and provide adjustments as necessary. 	500
C	<p>LAND WORK DRAFTING</p> <ul style="list-style-type: none"> -- Draw maps, diagrams, and profiles, using cross-sections and surveys, to represent elevations, topographical contours, subsurface formations and structures. -- Finish and duplicate drawings and documentation packages, according to required mediums and specifications for reproduction using blueprinting, photography, or duplicating methods. -- Calculate excavation tonnage and prepare graphs and fill-hauling diagrams for use in earth-moving operations. -- Correlate, interpret, and modify data obtained from topographical surveys, well logs, and geophysical prospecting reports. -- Locate and identify symbols located on topographical surveys to denote geological and geological and geophysical formations or oil field installations. 	500
D	<p>CAD EQUIPMENT OPERATIONS</p> <ul style="list-style-type: none"> -- Produce drawings using computer-assisted drafting systems (CAD) or drafting machines, or by hand using compasses, dividers, protractors, triangles and other drafting devices. 	1500