Training and Evaluation Outline Report

Status: Approved
30 Mar 2021
Effective Date: 30 Mar 2021

Task Number: 05-PLT-5305

Task Title: Install Underground Pipeline Crossing Site

Distribution Restriction: Approved for public release; distribution is unlimited.
Destruction Notice: None
Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the MSCoE foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary	Source Information
	ATP 3-34.40	General Engineering (http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp3_34x40.pdf)	Yes	No	
	ATP 4-43	Petroleum Supply Operations	Yes	Yes	
	ATP 5-19	RISK MANAGEMENT, with change 1 dated 8 Sep 2014	Yes	No	
	TM 3-34.70	Plumbing, Pipe Fitting, and Sewerage	Yes	No	

Conditions: The element is directed to install underground pipeline crossing site in order to protect the pipeline from traffic. Plans, specifications and unit tactical operating procedures (TACSOP) are available. All required equipment, materials, and personnel are available. Security will be provided.

Note: The Commander must still determine at what level of training they would want the element to perform. Crawl, walk or run. This can only be determined after consideration as to the units training level.

The Commander prior to evaluating an element in the conduct of the task must determine if it will be conducted in a Live, Virtual, or Constructive environment, additionally it must also be determined which condition as described below that the element will conduct the task. The selection made for this task is at a trained level of proficiency. The commander must determine which of the environments below will best suit the unit and the proficiency level at which the unit is. When conducting crawl or walk level training units should not increase the intensity until the unit has achieved the standards and then unit trainers should include variables that increase proficiency in all conditions.

Note: The condition statement for this task is written assuming the highest training conditions reflected on the Task Proficiency matrix required for the evaluated unit to receive a "fully trained" (T) rating.

Note: Condition terms definitions:

Dynamic Operational Environment: Three or more operational and two or more mission variables change during the execution of the assessed task. Operational variables and threat Tactics, Techniques, and Procedures (TTPs) for assigned counter-tasks change in response to the execution of Blue Forces (BLUFOR) tasks.

Complex Operational Environment: Changes to four or more operational variables impact the chosen friendly COA/mission. Brigade and higher units require all eight operational variables of Political, Military, Economic, Social, Infrastructure, Information, Physical environment, and Time (PMESII-PT) to be replicated in varying degrees based on the task being trained.

Single threat: Regular, irregular, criminal or terrorist forces are present.

Hybrid threat: Diverse and dynamic combination of regular forces, irregular forces, and/or criminal elements all unified to achieve mutually benefiting effects.

This task should not be trained in MOPP 4.

Standards: The element installs an underground pipeline crossing site for a road in accordance with the directive, TACSOP, plans and specifications . Within the time provided in the directive.

Note: Leaders are defined as the Platoon Leaders, Platoon Sergeants, Squad Leaders, and Team Leaders.

Live Fire: No

Objective Task Evaluation Criteria Matrix:

Plan and Prepare			Execute						Assess	
Operational Environment		Training Environment (L/V/C)	Leaders Present at Training/Required	Present at Training/Required	External Eval	Performance Measures	Critical Performance Measures	Leader Performance Measures	Evaluator's Observed Task Proficiency Rating	Commander's Assessment
SQD & PLT										
Dynamic (Single Threat)	Day	IAW unit CATS statement.	>=85%	>=80%	Yes	>=91%	All	>=90%	**T**	**T**
			75-84%			80-90%		80-89%	**T-**	**T-**
Static (Single Threat)			65-74%	75-79%	No	65-79%			**P**	**P**
			60-64%	60-74%		51-64%	<All	<=79%	**P-**	**P-**
			<=59%	<=59%		<=50%			**U**	**U**

Remarks: None

Notes: None

Safety Risk: Medium

Task Statements

Cue: None

DANGER

Leaders have an inherent responsibility to conduct Risk Management to ensure the safety of all Soldiers and promote mission accomplishment.

WARNING

Risk management is the Army's primary decision-making process to identify hazards, reduce risk, and prevent both accidental and tactical loss. All Soldiers have the responsibility to learn and understand the risks associated with this task.

CAUTION

Identifying hazards and controlling risks across the full spectrum of Army functions, operations and activities is the responsibility of all Soldiers.

Performance Steps and Measures

NOTE: Assess task proficiency using the task evaluation criteria matrix.

NOTE: Asterisks (*) indicate leader steps; plus signs (+) indicate critical steps.

STEP/MEASURE	GO	NO-GO	N/A
+* 1. The element leader conducts troop-leading procedures.			
a. Conducts preliminary construction planning.			
b. Requests augmentation support if required.			
+* 2. The element leader determines if the element will use an existing culvert or install a new one.			
+ 3. The element conducts construction operations if installing a new culvert.			
+ 4. The element prepares the work site.			
+ 5. The element excavates a trench for the culvert.			
a. Identifies, marks, and clears the pipeline right-of-way.			
b. Ensures that the trench has the proper depth for the bed, culvert, and cover.			
Note: The depth of the culvert bed should be at least one-tenth of the culvert diameter. The cover should be equal to or greater than one-half of the culvert diameter or 12 inches and ensures that the trench width provides for the culvert diameter, side spacing and, if multiple pipes are installed, inter-culvert spacing. Side and inter-culvert spacing should be one-half of the culvert diameters.			
+ 6. The element installs the culvert and coupled pipeline.			
a. Nestable culvert.			
(1) Installs the bottom half of the culvert.			
(2) Assembles the pipeline inside the nestable culvert.			
(3) Supports the pipeline inside the culvert using anchors, after correct alignment has been checked.			
(4) Completes the assembly of the culvert.			
(5) Places and compacts the cover.			
(6) Places signs advising drivers that there is a pipeline crossing at that point.			
b. Solid culvert.			
(1) Installs the culvert.			
(2) Places and compacts the cover.			
(3) Assembles the pipeline and pushes it through the culvert.			
(4) Supports the pipeline inside the culvert using anchors, after correct alignment has been checked.			
(5) Places signs advising drivers that there is a pipeline crossing at that point.			
+ 7. The element constructs headwalls using materials available.			
+* 8. The element leader submits status reports to higher headquarters according to the unit standing operating procedure (SOP).			

Task Performance Summary Block										
Training Unit			ITERATION							
_____			1		2		3		4	
Date of Training per Iteration:										
Day or Night Training:			Day / Night		Day / Night		Day / Night		Day / Night	
			#	%	#	%	#	%	#	%
Total Leaders Authorized		% Leaders Present								
Total Soldiers Authorized		% Soldiers Present								
Total Number of Performance Measures		% Performance Measures 'GO'								
Total Number of Critical Performance Measures		% Critical Performance Measures 'GO'								
Live Fire, Total Number of Critical Performance Measures		% Critical Performance Measures 'GO'								
Total Number of Leader Performance Measures		% Leader Performance Measures 'GO'								
MOPP LEVEL										
Evaluated Rating per Iteration T, T-, P, P-, U										

Mission(s) supported: None

MOPP 4: Never

MOPP 4 Statement: None

NVG: Never

NVG Statement: None

Prerequisite Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
	05-CO-5250	Perform Construction Operations	05 - Engineers (Collective)	Approved

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
1.	71-CO-5100	Conduct Troop Leading Procedures	71 - Mission Command (Collective)	Approved
1.	05-CO-5001	Perform Project Management	05 - Engineers (Collective)	Approved
5.	05-PLT-5302	Excavate a Pipeline Trench	05 - Engineers (Collective)	Approved
6.	05-PLT-5106	Install a Culvert	05 - Engineers (Collective)	Approved
6.	05-PLT-5111	Provide Construction Site Compaction Support	05 - Engineers (Collective)	Approved
7.	05-PLT-5221	Construct a Headwall	05 - Engineers (Collective)	Approved
8.	05-CO-0018	Conduct Report Procedures	05 - Engineers (Collective)	Approved

OPFOR Task(s):

Task Number	Title	Status
71-CO-8502	OPFOR Execute an Ambush	Approved
71-CO-8504	OPFOR Execute a Reconnaissance Attack	Approved

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	052-120-5111	Develop Project Design Utilizing Standard Capability Tools	052 - Engineer (Individual)	Approved
	052-120-5113	Coordinate Engineer Support	052 - Engineer (Individual)	Approved
	052-239-3001	Prepare a Bill of Materials	052 - Engineer (Individual)	Approved
	052-239-3029	Schedule Work	052 - Engineer (Individual)	Approved
	052-239-3030	Read Construction Prints	052 - Engineer (Individual)	Approved
	052-239-3036	Supervise the Installation of Pipelines	052 - Engineer (Individual)	Approved
	052-248-1013	Install a Coupled Pipeline	052 - Engineer (Individual)	Approved
	052-248-1040	Interpret Plumbing Prints and Drawings	052 - Engineer (Individual)	Approved
	052-248-2005	Install Pipeline (Underground)	052 - Engineer (Individual)	Approved
	052-251-3029	Direct the Construction of a Retaining or Head Wall	052 - Engineer (Individual)	Approved
	052-253-1203	Excavate an Area Using a Small-Emplacement Excavator (SEE)	052 - Engineer (Individual)	Approved
	052-256-3020	Interpret a Construction Print	052 - Engineer (Individual)	Approved
	052-256-3046	Direct Compaction Operations	052 - Engineer (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 4.1.7.2.6	Construct Petroleum Distribution Systems

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
E27792	EXC MULTI CRAWL W/AOA	1
T34437	Tractor Wheeled: Diesel 4x4 wExcavator and Front Loader	1
T64911	Truck Dump: MTV W/E: M1090	1
W34648	Tool Kit, Carpenters, Engineer Squad with Chest	1
W76816	Tractor Full Tracked Low Speed: Diesel Med DBP wBULDOZ wSCARIF Winch	1
W94536	Trailer Bolster: General Purpose 4 Ton 4 Wheel WE	1

Materiel Items (NSN)

NSN	LIN	Title	Qty
No materiel items specified			

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training

resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card. .

Safety: In a training environment, leaders must perform a risk assessment in accordance with current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW current CBRN doctrine. .