Glossary

AAR  after action review
AFJPAM  Air Force joint pamphlet
AFJ MAN  Air Force joint manual
aggregate  a clustered mass of individual soil particles varied in shape, ranging in size from a microscopic granule to a small crumb, and considered the basic structural unit of soil
AR  Army regulation
atomize  to reduce to a fine spray
Atterberg limits  water contents at certain critical stages in soil behavior; they can be used to describe the plasticity of a soil and if the soil is cohesive or cohesionless
attn  attention
ballast  a heavy substance (such as wet sand) used to increase the weight of rollers
base course or base  important element in a road structure; it functions as the primary load-bearing component of the road, ultimately providing the pavement (or surface) strength; therefore, it is made of higher quality material than subbase material
BCY  bank cubic yard(s)
binder  a material that produces cohesion in loosely assembled substances; for example, tar, cement, and cohesive soil material passing a Number 40 sieve
borrow pit  an area where material is excavated for use as fill at another location
CCY  compacted cubic yard(s)
cfm  cubic feet per minute
chock  motionless; for blocking the movement of a wheel
clay  a cohesive soil that exhibits plasticity within a range of water contents and whose particles are less than 0.005 millimeters in size
coefficient  any of the factors of a product considered in relation to a specific factor, especially a constant factor of a term as distinguished from a variable
cohesion  the act or state of sticking together tightly
cycle time  cycle time is the time required for a machine to complete one cycle of operation
DA  Department of the Army
desired dry density  usually expressed as an acceptable density range but stated as a single value when used to determine soil stabilizing requirements

DEUCE  deployable universal combat earthmover
dredging  method of moving material from below a body of water
DRMO  Defense Reutilization Management Office
efficiency factor  a percentage factor (60-minute working hour = 100 percent) used to adjust production estimates for normal production delays

EM  engineer manual
EVW  empty vehicle weight
F  Fahrenheit
finishing  the final grading of an embankment or other earthwork or the smoothing of a wearing surface after it is placed

FM  field manual
FMTV  family of medium tactical vehicles
fpm  foot, feet per minute
FSN  federal stock number
ft  foot, feet
gantry  a triangular frame on top of a crane superstructure, which carries sheaves for the boom support lines; also, a platform (usually supported by towers) made to carry a traveling crane on parallel tracks
gap graded  see soil gradation
GPM  gallons(s) per minute
gradation  see soil gradation
granular  consisting of particles having a bulky shape
gravel  see soil
GVW  gross vehicle weight
heaped  material piled above the sides of a restricting container (such as an excavator bucket, a scraper bowl, or a dump-truck carrying box)
HM  hazardous material
hopper  usually, a funnel-shaped receptacle for holding and loading material (grain, sand, crushed rock, or coal); also, any of various other receptacles for the temporary storage of material
HQ  headquarters
HW  hazardous waste
in situ  soil in its natural (undisturbed) state
in-place mixing  mixing done at the construction site
inst  institute
kph  kilometers(s) per hour
lb  pound(s)
LCY loose cubic yard(s)

lift the depth of material that may be placed or compacted at one time

load time the time it takes the loading equipment to actually load the haul unit, plus any time lost by the loading equipment while waiting for the haul unit to be spotted

loam a general agricultural term applied most frequently to sandy, silty topsoils that contain a trace of clay

M-Kg meters to kilograms

mph mile(s) per hour

MSDS material safety data sheet

NA not applicable

NATO North Atlantic Treaty Organization

NAVFAC naval facility

NCOIC noncommissioned officer in charge

NSN national stock number

No. number

OMC optimum moisture content

OPLAN operation plan

OPORD operation order

optimum moisture content the moisture content at which the soil's highest density can be obtained for a given amount of compactive input energy; soils compacted at moisture contents below optimum do not compact as completely as those at optimum moisture; those above optimum approach a plastic stage and begin to act like liquids, distributing an applied force equally in all directions and not moving particles into the voids

outriggers stabilizers used on cranes and backhoes to prevent tipping while loading or digging

pcf pounds per cubic foot

PCSA Power Crane and Shovel Association

PI plasticity index

pintle a pivot pin (usually upright) on which another part turns

plasticity the ability of a soil to deform without cracking or breaking; see also optimum moisture content

POL petroleum, oils, and lubricants

psi pound(s) per square inch

push loading loading a scraper with dozer (push tractor) assistance

push tractor or pusher assistance a dozer pushing a scraper during earthmoving operations

rimpull the usable force developed between the driving tires and the travel surface
rippling  
digging or tearing hard material using shanks (teeth) mounted on  
a dozer, grader, or other machine; the number of shanks mounted  
on the back of a dozer can usually be changed to engage one, two,  
or three shanks

ROPS  
rollover protective system

rpm  
revolution(s) per minute

RPR  
rimpull required

SCIP  
scarify and compact in place

SEE  
small emplacement excavator

shore  
(1) to give support to; brace; (2) a prop for preventing sinking or  
sagging; (3) a prop placed against or beneath equipment to restrict  
movement

shoulder  
that part of the top surface of an approach embankment,  
causeway, or cut immediately adjoining the roadway that  
accommodates stopped vehicles in emergencies and laterally  
supports base and surface courses

side casting  
to push or throw to the side, using with the blade or bucket

soil  
soil is classified by particle size and type; gravel has large, coarse,  
blocky-shaped particles, while clay has small, fine, platy-shaped  
particles; sand and silt have particle sizes between these two  
extremes; (for earthmoving, soil is placed in three categories: rock,  
soil, and rock soil)

soil gradation  
soil is either well-graded or poorly graded; well-graded soil is  
capable of being tightly compacted; it contains a variety of particle  
sizes; during compaction, smaller particles are worked between  
and around larger particles to reduce the percentage of voids,  
making the soil denser and stronger; poorly graded soil is difficult  
or impossible to compact; it contains a high percentage of similar-  
size particles (called uniformly gapped) or a poor relationship of  
the percentage of sizes (called gap -graded); such soil has a  
relatively high percentage of voids after compaction; therefore, it  
lacks density and strength

SOP  
standing operating procedure

sq  
square

STP  
soldier training publication

struck  
a full load of material that is level with the top of its container,  
(such as a scraper bowl or a dump-truck body)

tandem  
a group of two or more arranged one behind the other or used or  
acting in conjunction

TB  
technical bulletin

TC  
training circular

tine  
a slender, pointed projecting part; a prong

TM  
technical manual
| **torque**     | a force that produces or tends to produce rotation or torsion (such as an auto engine delivers to the drive shaft) |
| **TRADOC**    | United States Army Training and Doctrine Command |
| **US**        | United States |
| **USAES**     | United States Army Engineer School |
| **USCS**      | Unified Soil Classification System |
| **vpm**       | vibrations per minute |
| **windrows**  | a long, low ridge of material scraped to the side, using a blade, when moving earth |
| **yd**        | yard(s) |