

plasticity

the ability of a material to withstand permanent deformation without failure

proof stress

a value calculated to substitute for yield strength when no obvious yield point exists for a material

second moment of area

a calculation based on cross-sectional areas used to predict the resistance of a beam to bending and deflection

shear

movement of a material in which parallel internal surfaces slide past one another

stiffness

a measure of rigidity; may also refer to a resistance to flexing

strain	the amount of deformation an object experiences compared to its original length
stress	the relationship between force and the cross-sectional area of a material
superstructure	items related to bridges including the roadway, footpaths, railings and supporting structural members
tension	forces applied to a body that attempt to stretch or make the body longer
timber	a naturally occurring composite material made up of cellulose and lignin

truss

a supportive structure consisting of beams or girders with members arranged in a triangulated configuration

ultimate tensile strength

the maximum stress a material can withstand before failing

vitreous

a term which describes a material that is glass-like in structure

wrought iron

a material consisting of a soft, ductile matrix of iron with large inclusions of slag, elongated by the forming process

yield point

the first point (load) at which a specimen yields and where an increase in strain occurs without an increase in strength

yield stress

the maximum engineering stress, in Mpa, at which permanent, non-elastic deformation begins

Young's modulus

the ratio of stress to strain within the elastic region of the stress-strain curve (prior to the yield point)
