

Gossary of Terms

A

- **AASHTO** American Association of State Highway and Transportation Officials
- **ABD** Anchor Bolt Diameter
- **ADVERTISING means of** communication with end users of a product or service
 - www.adpoles.com
 - www.advertisingpole.com
- **A/F** Across the Flats or outside diameter
- **AIRPORT** Aerodrome with extended facilities for commercial air transport
 - www.airportpoles.com
- **AISC** American Institute of Steel Construction
- **ALLOWABLE STRESS** Maximum permissible stress as defined by design criteria.
- **ALLOY** Mixture of metals or a mixture of a metal and another element
- **AMERICAN POLES** Buy America and Buy American
 - www.americanpoles.com
- **ANCHOR BASE** Non-breakaway pole-to-foundation attachment
- **ANCHOR BOLT** Steel threaded rod embedded into concrete to connect the pole to the foundation
 - www.poleanchors.com
 - www.polelineaccessories.com
 - www.poleline.info
- **ANSI** American National Standards Institute
- **AREA LIGHTING ADVERTISING**
 - www.arealightingadvertising.com
- **AREA LIGHTING POLE**
 - www.arealighting.info
 - www.arealighting.org
 - www.arealightingpoles.com
- **ARM** Extension of a cross section used to mount a single fixture
- **ARM RISE** Vertical distance from the center line of the simplex connection to the center line of the arm end
- **ASTM** American Society for Testing and Materials
- **ASTRO BRACKET** Attach a traffic signal to the pole or mast arm, rigid mounted or free swinging
- **AWS** American Welding Society

B

- **BACK-UP-BAR** Steel bar used to secure the handhole cover
- **BACK-PLATE** Border surrounding traffic signal heads
- **BANNER ARMS** Parallel pipe extensions bolted to pole shaft to mount a special banner
- **BARRIER** Roadside **barriers** blocks suitable for highways and infrastructure
 - www.bishopblock.com
 - www.bishopblocks.com
- **BARRIER SADDELE** Roadside barrier sign support system

- www.barriersaddle.com
- **BASE COVER** Shroud used to enclose the base plate and anchor bolts
 - www.roundbasecover.com
 - www.squarebasecover.com
- **BASEPLATE** Steel plate welded to the bottom of the pole shaft to connect the pole to the foundation
 - www.baseplatetemplate.com
- **BCD** Bolt Circle Diameter
- **BEARING PLATE** Steel plate attachment of an anchor bolt designed to prevent bolt pull-out
- **BEND RADIUS** Radial dimension of a curvature of a bend, typically measured from the inside surface
- **BENDING MOMENT** Product of a wind force or weight force multiplied by its distance from a section
- **BOLLARD** Ornamental post used as a pedestrian or traffic barrier
- **BOLT** Metal rod or pin for fastening pole accessories together
- **BOLT CIRCLE** Dimension from one anchor bolt to another which intersects the center line of the pattern
- **BOLT COVER** Ornamental cover fastened to the base plate covering the anchor bolts
 - www.plasticnutcaps.com
 - www.rubbernutchaps.com
- **BOLT PROJECTION** Length of anchor bolt extending above the base plate surface
- **BRANDING** name, slogan, sign or design elements that identify products or services of a company
 - www.brandpoles.com
 - www.poletopbranding.com
- **BREAKAWAY SIGN SUPPORT**
 - www.breakawaysignpost.com
 - www.breakawaysignsupport.com
 - www.breakawaysignsupports.com
- **BSQ** Bolt Square - center to center distance on a square base plate
- **BULLHORN** Pipe bent 90 degrees upward to mount light fixtures and pole accessories
- **BUMP FORMED** Pressing a flat steel plate at equal spacing forming a geometrically correct shape
 - www.formedpoles.com
 - www.multisidedpoles.com
 - www.octagonpoles.com
- **BUTT WELD** Circumferential weld joint used to connect two pole shaft sections

C

- **C-HOOK** Steel rod formed into shape of a "C" for support or handling purposes.
- **CBC** Canadian Building Code
- **CSA** Canadian Standards Association
- **CWB** Canadian Welding Bureau
- **CAD** Computer-Aided Design
- **CAMBER** Curving of sign structure, mast arms or poles during the manufacturing process
- **CAPITAL** Ornamental pole top
- **CANTILEVER** Vertical and horizontal cantilevers poles and arms affixed at one end free at the other
 - www.cantileverpoles.com
- **CASTING** Products produced by molding in a form with a molten alloy
- **COMMUNICATION POLE**
 - www.communicationpoles.com

- **CERTIFICATION Documents** confirming products and/or designs meets or exceeds specified conditions
- **CLEARANCE** The vertical distance from the road surface to the lowest point of an overhanging device
- **COATING** Covering a pole product with galvanizing, painting and/or metallizing
- **COBRA HEAD** Generic term for some street lighting fixtures
- **COD**
- **COIL MATERIAL** Steel which is rolled into coil form after processing from the steel mill
- **COIL SET** Curvature of the material stock from being wound under tension,
- **COR-TEN** Trade name by United States Steel Company for high strength, low alloy, self-weathering steel
- **COUPLING** Internally threaded steel fitting for wiring access of controller cabinets and junction boxes
- **CRITERIA** Written specification used in control stages of the design procedure
- **CROSSARM** Steel tubing or angle that attaches to a pole shaft for mounting a single row of lighting fixtures.

D

- **DD** Double Davit pole with two arms
- **DAMPER** Mechanical device to eliminate or reduce harmonic vibrations
- **DAVIT** Radial formed pole/luminaire arm
 - www.davitpoles.com
- **DEAD LOAD** Total weight of structure and all added appurtenances
- **DECORATIVE POLE**
 - www.decorativelampposts.com
- **DEFLECTION** Movement of pole/arm as a displacement or rotation, from dead loads or other applied loads
- **DERATE** Material's loss of physical or mechanical properties due to a manufacturing process such as welding
- **DIE CASTING** Molten metal is forced under pressure into the cavity of a mold to form shapes
- **DODECAGONAL** Cross-section consisting of 12 equal sides
- **DRAG COEFFICIENT** Numerical factor used in wind force calculations applied to the EPA
- **DRILL PATTERN** Layout of hole size and spacing for a given fixture
- **DRIVE RIVET** steel or aluminum fastener utilized on square sign posts
 - www.aluminumdriverivet.com
 - www.steeldriverivet.com
- **DUNNAGE**
 - www.polecradles.com
 - www.rubberdunnage.com

E

- **EFFECTIVE PROJECTED AREA (EPA)** Area of a given fixture and/or structure resisting wind force
- **ELEVATION** Distance above or below sea level, ground level or another referenced surface
- **ELLIPTICAL** Having the shape of an oval
- **EMBEDDED POLE** fixed into concrete or compacted soil by means of an extended portion
- **EMERGENCY** Immediate risk to health, life, property, or environment.
 - www.emergencypoles.com
- **EV STATION** Electric vehicle charging station

- www.evpoles.com

- **EXTRUSION** The process of forcing material through a die to form a desired cross-section shape

F

- **FASTENER** Part used to attach or secure two components together
- **FINIAL** Sculptured ornament located at pole top or end of arm
- **FINIAL CAP** Cast or spun ornamental pole top cap
- **FINISH** Protective and usually decorative coating applied to structures and their components
- **FIXED BASE** Type of pole-to-foundation attachment not designed to breakaway if impacted by a vehicle
- **FIXTURE** A lighting fixture, which provides area light
- **FLANGE PLATE** Connection plate between two pole sections or bottom pole and arms
- **FLOOD LIGHT** Projecting a broad beam in parking lots, sports fields, and other area lighting applications
- **FLUTING** Formation of rounded grooves to create a ornamental motif on the shaft or column
 - www.flutedpoles.com
- **FOB** Free on Board or Freight on Board. Shipping terms, transferring title to the customer.
- **FORCE** Vector quantity that tends to produce stress and deflection in the structure to which it is applied
- **FOUNDATION** Support for a pole structure, consisting of concrete, steel reinforcing bars and anchor bolts
- **FRANGIBLE BASE** Designed to breakaway when struck by a vehicle
- **FULL BASE COVER Ornamental** shroud used to enclose the base plate and anchor bolts

G

- **GALVANIZE** Zinc coating applied by a hot dip process or other approved methods
- **GASKET** Natural or synthetic rubber seal used between piece parts to prevent the intrusion of moisture
- **GAUGE** Whole number representing an equivalent decimal thickness
- **GROMMET** Natural or synthetic rubber ring placed in drilled wire way holes to prevent damage to wires
- **GROSS** without tax or other contributions having been deducted
- **GROUND ROD** A rod driven into the ground to carry current safely away from a circuit
- **GROUNDING** Pole for connecting a cable which makes an electrical connection with the earth
- **GROUND STUD** Bolt attached inside of the hand hole providing the means for electrical grounding
- **GROUT** Mortar used for filling space between the bottom of the pole base plate
- **GUSSET** Steel plate used to strengthen a welded connection
- **GUST FACTOR** Numerical factor applied to a constant wind velocity for an instantaneous outburst of wind
- **GUY WIRE** a tensioned cable designed to add stability to a free-standing structure.

H

- **HAND HOLE** Reinforced opening providing internal access to a structure
 - www.aluminumhandholecover.com
 - www.plastichandholecover.com
 - www.steelhandholecover.com
- **HARDWARE**
 - www.cornerbolt.com
 - www.poleaccessories.com

- www.signposthardware.com
- www.squaresignposthardware.com
- www.roundpostsignhardware.com
- **HARMONIC VIBRATION** Motion of a member moving the same distance in opposite directions
- **HEAT TREAT** Heating and cooling a material in a controlled manner to develop different mechanical properties
- **HEXDECAGONAL** Cross-section consisting of sixteen equal sides
- **HEXAGONAL** Cross-section consisting of six equal sides
- **HEIGHT COEFFICIENT** Increased wind pressure due to smoother flow of air at higher elevations
- **HIGH MAST** Light large areas by fixture attachment higher than an average area lighting structure
 - www.highmastpoles.com
- **HIGHWAY**
 - www.highwaypoles.com
 - www.roadwaypoles.com
- **HINGED POLE** Top access using a hinge by which the pole top can be lowered to ground level
 - www.hingedpoles.com
- **HSS** Hollow Structure Section

I

- **IOT** Internet of Things
 - www.iotpole.com
- **ISOMETRIC DRAWING** 3 faces of a solid object shown with the lines parallel to the edges drawn in true length
- **ISOTACH** Line on a map connecting points of equal wind speed

J

- **J-HOOK** Steel rod in the shape of a "J" used for wire support or handling purposes
- **JACKING LUGS** Steel nuts welded to a pole shaft to assist in slip fitting pole sections together
- **JUNCTION BOX** In-ground plastic wiring vaults

K

- **KEEPER PLATE** Thin steel plate to keep the connecting bolts of a slip base assembly in place
- **KIP** Unit of measure equivalent to 1000 pounds.
- **KSI** Kips per Square Inch

L

- **LADDER BAR** Ornamental tenon with provision for resting a ladder
- **LAMINATED SHAFT** Firmly pressing two tapered tubes, one inside the other, to increase wall thickness
- **LAMP POST**
- **LED** Light emitting diode
 - www.ledpoles.com
 - www.ledstreetlight.org
- **LIGHTNING ROD** Metallic rod attached to a pole structure creating a continuous conducting path to the ground

- **LIQUID COAT** Finish applied to a material in a liquid form
- **LMA** Luminaire Mast Arm
- **LOCK WASHER** Split washer used to prevent loosening by exerting pressure on a nut
- **LOCKNUT** A nut tightened down on another
- **LOWERING DEVICE** Apparatus capable of lowering fixtures to ground level for ease of maintenance
- **LUG WASHER** Steel plate washer used in transformer base connections
- **LUMINAIRE** Complete lighting unit

M

- **MANUFACTURING EQUIPMENT**
 - www.polemachinery.com
- **MAGNETIC PARTICLE INSPECTION** Non-destructive method of detecting cracks
- **MANDREL FORMED** Produce round tapered tubes by forming steel coil around a mandrel
- **MAST ARM** Horizontal member typically used to support luminaires, traffic signals or roadway signs
 - www.lightingmasts.com
- **MILD STEEL** Comparatively soft and easily worked steel capable of being extended or shaped
- **MILL CERTIFICATION** Document issued by the steel mill stating the physical and chemical properties
- **MOMENT** Force multiplied by the distance to the point of rotation
- **MONO TOWER** Tubular self supporting structure
 - www.monotowers.com
- **MOUNTING HEIGHT** Vertical distance to a particular part of a pole structure

N

- **NEMA** National Electrical Manufacturers Association
- **NEMA BOX** An enclosure mounted to a pole used for breaker switches and terminal blocks
- **NET** Free from all charges or deductions
- **NOISE BARRIER PANEL**
 - www.noisebarrierpanel.com
 - www.rubberfences.com
- **NUT CAP** Ornamental cover usually fastened to the pole covering the anchor bolt
 - www.plasticnutcaps.com
 - www.rubbernutchaps.com
- **NUT HOLDER** Small bracket usually welded to the inside of a pole for grounding purposes

O

- **O-RING** Ring made from natural or synthetic rubber, used as an air-tight or water-tight seal
- **OBSTRUCTION LIGHT** mounted on a structure to warn aircraft of its presence
- **OCTAGONAL POLE** having an eight-sided cross section
- **ONE PIECE SLIP OVER BASE** One-piece shell base, which slips over the pole during installation
- **OPTICON** Control device acting as a switch upon sensing motion or light
- **ORNAMENTAL POLE**
 - www.ornamentalpole.com
- **OXIDATION** Chemical reaction of a material when exposed to oxygen

P

- **PARKING LOT** Area, usually divided into individual spaces, intended for parking motor vehicles.
 - www.parkinglotpoles.com
- **PARKING STOP**
 - www.parkingstop.co
 - www.parkingstop.info
- **PEC** Photo Electric Cell
- **PSI** Pounds per Square Inch
- **PED POLE** designed to support pedestrian signal heads
- **PIPE** Hollow steel cylinder manufactured to a specific nominal inside diameter
- **POLE** Vertical member of a structure
 - www.poledesigns.com
- **POLE DESIGNS**
 - www.poledesigns.com
- **POLE TOP** Steel rubber or plastic cap mounted to the top of a pole for weather protection
 - www.octagonalpoletop.com
 - www.poletops.com
 - www.squarepoletop.com
 - www.roundpoletop.com
- **POLYCARBONATE** Lightweight thermoplastic used for traffic signal housings and back plates
- **POWDER COAT** Electrostatically applied dry powder coating, oven-baked for a smooth, durable finish
- **PLASTIC** Synthetic material made from a wide range of organic polymers
 - www.plasticpoles.com
- **PROJECTED AREA** Surface area subjected to wind pressures
- **PROJECTION** Length of anchor bolt protruding beyond the top of a foundation

Q

- **QUOTE** Estimated cost for a particular job or service

R

- **RADIAL INDEX** Illustration showing the orientation of appurtenances
- **REBAR** Deformed steel reinforcing bar
- **RECYCLE** Return material to a previous stage in a cyclic process
 - www.recycledpoles.com
- **REST AREA** Interstate Highway motor vehicle and highway tractor operator recovery facility
 - www.restareapoles.com
- **RFQ** Request for quotation
- **RIV-NUT** Metal fastener serving as the female threaded portion of a bolted connection
- **ROUND POLE** Hollow Pipe uniform in shape from base to top
 - www.roundpoles.com
- **RUMBLE MAT**
 - www.rubberrumblemat.com
- **RUMBLE STRIP**

- www.rubberrumblestrip.com

S

- **SAG** Distance a wire or cable droops from its attachment point
- **SD** Single Davit pole with one arm
- **SBC** Standard Building Code
- **SECURITY POLES**
 - www.securitypoles.com
- **SETBACK** Distance from the roadway edge to the location of the pole
- **SHEAR FORCE** within a member that acts perpendicular to the axis of the member
- **SHOE BOX** Term used for describing a rectangular shaped outdoor lighting fixture
- **SIGN STRUCTURE** designed to support signs, signals or other devices
 - www.overheadsignsupport.com
 - www.signbridges.com
 - www.signsupport.info
- **SLEEVE** Additional layer of steel wrapped around a specific area of a pole shaft
- **SLIP BASE ASSEMBLY** Connects the pole to the anchor bolts, designed to breakaway upon impacted
- **SLIP FITTER** Short piece of pipe/tube used as the internal portion of a connection
- **SLIP JOINT** Friction connection between two tapered shafts
- **SMA** Signal Mast Arm
- **SMART POLE**
 - www.poletopolelink.com
 - www.smartpolemedia.com
 - www.smartpolelink.com
- **SPEED BUMP** Ridge set in a road surface, typically at intervals, to control the speed of vehicles
 - www.rubberspeedbump.co
 - www.rubberspeedbump.info
- **SPEED HUMP** Parabolic, circular, or sinusoidal in shape and a gentle version of the speed bump
 - www.rubberspeedhump.com
- **STEEL UTILITY POLE**
 - www.steelutilitypoles.com
- **STRAIN POLE** To support wires or cables from which traffic signals or signs are suspended
 - www.strainpoles.com
- **SPECIFICATIONS** Organized listing of requirements for materials, products, design or testing
- **SPORTS FIELD POLES** Hold large lighting banks to illuminate playing fields
 - www.sportsfieldpoles.com
- **SQUARE POLE** Hollow Structural Steel tube consisting of four equal sides
 - www.squarepoles.com
- **STATIC LOAD** Constant or non-varying load
- **STEPPED POLE** An enlarged pole base with incrementally smaller sections up to the top
 - www.steppedpoles.com
- **STEPS** Removable headed bolts fastened to pole shafts used for climbing
- **STRAIGHT POLES** Tapered or non tapered poles without any curvature
 - www.straightpoles.com

- **STREETLIGHT STANDARD** Steel pole and light fixture for illuminating a roadway or highway
 - www.streetlightstandards.com
- **STRESS** Internal force per unit area within a member, usually expressed in PSI
- **STRUCTURAL BASE** Welded to the shaft and contributes to the structural integrity of the pole

T

- **TAMPER RESISTANT SCREW** Fastener that requires a unique driver for removal
- **TAPERED POLE** Continuous gradual reduction of a shaft's diameter from base to top
 - www.roundtaperedpoles.com
 - www.squaretaperedpoles.com
 - www.taperedpoles.com
- **TAPPING** Formation of an internal screw thread in a hole
- **TELESCOPIC TUBING** perforated welded steel tubing in various sizes and gauges
 - www.nonperforatedsignpost.com
 - www.perforatedsignpost.com
 - www.telescopingsquaresignpost.com
- **TEMPLATE** Guide or pattern used for the proper placement of anchor bolts
 - www.anchorbolttemplate.com
 - www.rubbertemplate.com
- **TENON** Short length of pipe or tubing used to mount luminaries, signals or brackets
- **TORSIONAL MOMENT** Action of external forces causing twist in a structure
- **TRAFFIC SIGNAL** Automatically operated colored lights for controlling traffic junctions and crosswalks
 - www.trafficsignalpoles.com
- **TRANSFORMER** apparatus for reducing or increasing the voltage of an alternating current
- **TRANSFORMER BASE** Box used under a pole for wiring access
 - www.transformerbases.com
- **TRANSMISSION POLE** Structure to carry high voltage power lines over great distances
 - www.transmissionlines.com
- **TROLLEY POLE** to transfer electricity from overhead wire to the control and the electric traction motors
 - www.trolley poles.com
- **TRUSS ARM** two main supporting members with one or more struts between them
- **TUBE** Generic term used for hollow steel shafts

U

- **UPRIGHT** Vertical pipe portion of a sports lighting cage
- **UL** American Safety Consulting and Certification company
- **UTILITY POLE** a tall **pole** that is used to support telephone wires and electrical wire
 - www.utilitypolestructures.com

V

- **VEHICLE POLE** designed to support vehicular and/or pedestrian signal heads
- **VIBRATION DAMPER** Device placed on or inside a pole or arm to reduce or prevent harmonic vibration caused by wind

W

- **Wi-fi** computers or smartphones ability to connect to the Internet wirelessly
 - www.wifipoles.com
- **WIND ENERGY**
 - www.americanwindenergy.com
 - www.canadianwindenergy.com
 - www.windenergypoles.com
- **WIND LOADING** Live load pressures of wind acting on a structure
- **WIND SPEED** Velocity of wind (MPH) noted either as a basic/isotach speed or as a gust/maximum velocity
- **WROUGHT** Beaten out or shaped by hammering.
- **WROUGHT ALLOY** Mixture of base elements whose physical and mechanical properties favor wrought

X

- **Xylene** Used as a solvent in industrial applications with a mixture of isomers

Y

- **YIELD** The stress in a material at which plastic deformation occurs
- **YIELD MOMENT** in a pole or arm that will cause the member to yield

Z

- **Zinc** Chemical element in hot-dip galvanizing for corrosion barrier protection to steel.