

1. GLOSSARY

A. Acronyms, Abbreviations and Symbols

3C	Continuing, Cooperative, Comprehensive planning process
3R	Resurfacing, Restoration and Rehabilitation projects
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
ARMS	Automated Right-of-Way Management System
BCT	Breakaway Cable Terminals
CA	Certification Acceptance Program Agreement
CADD	Computer-Aided Drafting and Design
CE	Categorical Exclusion
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CRT	Controlled Releasing Terminals
DA	Drainage Area
DDI	Diverging Diamond Interchange
DEA	Draft Environmental Assessment
DEIS	Draft Environmental Impact Statement
DDHV	Directional Design Hourly Volume
DHV	Design Hourly Volume
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESAL	Equivalent Single Axle Load
e	Superelevation rate
e_{max}	Maximum superelevation rate
f	Side friction factor
f_{max}	Limiting side friction factor
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding Of No Significant Impact

H rating	AASHTO bridge live load rating corresponding to weight of a two-axle truck or lane loading (a uniformly distributed and concentrated load)
HS Rating	AASHTO bridge live load rating representing a tractor truck with semitrailer, or the corresponding lane loading
HSIP	Highway Safety Improvement Program
HW	Headwater
IES	Illuminating Engineering Society
IJR	Interchange Justification Report
IMR	Interchange Modification Report
K	Rate of vertical curvature, the length of vertical curve per percentage change in the algebraic difference between two tangent grades
L	Length of curve, distance from the PC to PT along a curve
L_r	Superelevation runoff length
L_{min}	Minimum superelevation runoff length
MELT	Modified Eccentric Loader Terminals
MGS	Midwest Guardrail System
mph	Miles per hour
MPO	Metropolitan Planning Organization
MSE	Mechanically Stabilized Earth
MUTCD	The <u>Manual of Uniform Traffic Control Devices</u>
NC	Normal Crown section
NCHRP	National Cooperative Highway Research Program
NDEQ	Nebraska Department of Environmental Quality
NDOT	Nebraska Department of Transportation
NDOT Form 73	Highway Improvement Planning Request Form
NDOT Form 335	Design Decision Document Sheet
NDOT Form 342	Project Information Sheet
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPP	National Highway Performance Program
NWP	Nationwide Permits
OI	Nebraska Department of Transportation Operating Instruction
OSHA	Occupational Safety and Health Administration
P	Any point on a curve
P_o	The high or low point of the curve
PC	Point of Curvature for a horizontal curve
PCC	Point of Compound Curvature
PI	Point of Intersection of tangents for a horizontal curve

PRC	Point of Reverse Curvature
PS&E	Plans, Specifications and Estimates Section in the Construction Division
PSI	Pavement Serviceability Index
PSS	Preconstruction Scheduling System
PT	Point of Tangency for a horizontal curve
PVC	Point of Curvature for a Vertical curve
PVI	Point of Intersection of tangents for a Vertical curve
PVT	Point of Tangency for a Vertical curve
Q	Culvert capacity
Q _{design}	Overtopping frequency or the frequency based on the allowable water surface elevation, whichever is more critical
R	Radius of a horizontal curve
R-*	Right-of-way plan sheets
RBP	FHWA Risk Based Project
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-Way
RR	Railroad
RRZ	Rail Highway Crossings Program
SCS	Soil Conservation Service
SEE	Social, Economic and Environmental review
SHPO	State Historic Preservation Officer
SPUI	Single Point Urban Interchange
STBG	Surface Transportation Block Grant Program
STP	Surface Transportation Program
STIP	Statewide Transportation Improvement Program
T	Tangent length, distance from PC or PT to PI
TCP	Traffic Control Plan
TR	Tangent runout length
TRB	Transportation Research Board
TWLTL	Two-Way Left Turn Lane
USDOT	United States Department of Transportation
USGS	U.S. Geologic Survey
VC	Vertical Curves
VPD	Vehicles Per Day
X-*	Roadway cross-section sheets

B. Terms and Definitions

Abandonment	The act of abandoning an existing roadway and right-of-way when the road is not needed on the state highway system.
Access	A means of ingress or egress between a highway and abutting property or an intersecting local public road or street.
Access Control	Restriction of the number and location of access points along the highway; it varies by the functional classification of the roadway.
Accessibility	A measure of the ability of users to utilize the transportation system.
Adjusted Embankment	The volume of embankment that results from the balance factor being multiplied by the measured embankment.
Alignment Book	A construction book that provides a listing of alignment information for referencing and relocating the centerline.
Allocation	Assigning funds to particular uses.
Ambient Air Quality	The quality of the surrounding air measured in terms of presence of ozone, hydrocarbons, nitrogen oxide, and carbon monoxide based on national standards.
Annual General Stormwater Runoff Permit	A permit obtained annually by the Construction Division relative to stormwater discharge.
Archeological Resources	Prehistoric cultural assets.
Armor Coat	A surface treatment consisting of sequential applications of asphalt and stone chips which may be made either in one or more layers to build up a structure roughly one inch or more in thickness.
Arterial Highway	Defined by AASHTO as “A highway primarily for through traffic, usually on a continuous route.”
At-Grade Intersections	Locations where two or more roadways or entrances cross and/or meet each other at the same elevation.
Auxiliary Lanes	Lanes that are not considered through travel lanes that are intended for use by vehicular traffic for specific functions, such as left and right turns, climbing/passing, acceleration/deceleration, weaving, etc.
Annual Average Daily Traffic	The average traffic volume in both directions on a highway segment for one year, divided by the number of days in the year.
Average Daily Traffic	The average 24 hr. traffic volume in both directions collected over a number of days greater than one but less than a year.
Backslope	A cut slope, the segment of the roadside geometry that slopes up from the outside edge of a ditch to intersect with the existing ground.

Balance	When the amount of available excavation equals the amount of needed embankment.
Balance Points	A location along a roadway where an earthwork balance occurs.
Balance Factors	Multipliers applied to embankment volumes to adjust for shrinkage or swell of the soils used for embankment.
Barrier	A structure used to protect traffic from hazardous conditions along the roadside or medians.
Barrier Curb	Steep-face curb design to inhibit encroachment on state right-of-way.
Base Course	The layer or layers of specified or selected material of designed thickness placed on a subbase or a subgrade to support a pavement surface course.
Benefit-Cost Comparison	An economic evaluation to determine if a given design is warranted and justified based on the costs and benefits associated with it.
Bid	A contractor's written offer to construct a project based on the contract documents (plans, specifications, special provisions, etc.) at a specified price.
Blue Top Book	A construction book that provides a format for finish stake (blue top) notes to be recorded. Stations and subgrade elevations at the centerline, edge of surface and edge of subgrade shoulder are the information provided.
Borrow	Additional material required when the amount of embankment needed exceeds the amount of excavation available.
Borrow Pit	Areas that are approved by the state for the source of borrow; they can be either contractor-furnished or state-furnished.
Borrow Restoration	Upon completion of removal of borrow from a site, the pit is to be scarified and then stockpiled topsoil replaced and seeded.
Breakaway Support	A support used for traffic signs, traffic signals, streetlights, etc. that is designed to breakaway or bend on impact with an errant vehicle.
Bridge	A structure for carrying traffic erected over a depression or an obstruction and having an opening greater than 20 feet as measured along the centerline of the roadway.
Bridge Approach Section	A transition section from guardrail to a bridge rail.
Broken Back Curve	A curve consisting of two consecutive curves deflecting in the same direction joined by a short tangent section.
Budgeting	The process of outlining future funding needs based on anticipated highway projects.

Buffer Strip	Defined by AASHTO as “An area providing a degree of protection from certain highway or transportation effects for adjacent private property or protected natural resources.”
Bullnose Guardrail	A guardrail configuration in which the guardrail is curved around a hazard, forming a “nose”. It is often used in medians to shield a hazard from traffic in both directions.
Cable Guardrail	Guardrail constructed of multiple steel cables stretched between support posts.
CADD Coordination Policy	A schedule of required drafting activities for roadway design.
Capacity	The maximum flow in vehicles per hour that can be reasonably expected on a segment of highway during a given time period under prevailing roadway, traffic and control conditions.
Capacity Analysis	Study that estimates the amount of traffic that can be accommodated by a given facility while maintaining a predetermined level of service.
Categorical Exclusion	An environmental classification for a project indicating that no significant environmental impacts are anticipated (Class II project).
Center Of Gravity	The location where a vertical line divides an area of cut or fill into two equal areas; the area left of the center of gravity equals the area right of the center of gravity.
Center Pivot	A structure that pumps water from the ground to an aerial sprinkler system that rotates about the structure; used for crop irrigation.
Changes In Concept	Alterations in the original project idea during the planning and/or design stages.
Changes In Scope	Modifications in the extent or size of the project.
Change Order	A written order to the contractor covering changes in the contract.
Channelization	The physical separation of vehicular and/or pedestrian traffic movements to regulate conflicting movements.
Channelized Intersection	An intersection at which various traffic movements are separated by auxiliary lanes, medians, islands, etc.
Clarity	A computerized system that programs, schedules and monitors projects through preconstruction stages. The Project Scheduling Section of the Program Management Division manages it.
Class I Project	A project that may significantly impact the environment and for which an environmental impact statement is required.
Class II Project	A project that has been determined will not significantly affect the environment.

Class III Project	A project on which the environmental impact must be determined and for which an environmental assessment must be prepared.
Clean Air Act	A federal law passed to protect and enhance the quality of the nation's air resources.
Clean Water Act	A federal law passed in 1977 to protect the quality of the nation's water resources.
Clear Zone	AASHTO defines the clear zone as "that portion of the roadside that is free of obstructions and sufficiently flat to enable an errant vehicle to encroach without overturning. The clear zone width at any point along the roadway is measured from the edge of the traveled way to the nearest obstruction or the beginning of a non-traversable slope. Thus, shoulders are part of the roadside clear zone."
Climbing Lanes	Additional lane(s) provided on crest vertical curves to accommodate slow moving vehicles.
Cloverleaf Interchange	Four-leg interchanges with loop ramps to accommodate left turn movements. A full cloverleaf has loops in all quadrants.
Collector-Distributor Roads	An auxiliary road system parallel to but separate from a freeway/interstate that collects and distributes local traffic with the intent of limiting the number of entrance and exit points on a freeway while satisfying the demand for access to the freeway. Similar to frontage roads but collector-distributor roads do not provide access to abutting properties.
Comfort Criteria	Design consideration of motorists' willingness and/or ability to accept discomfort while traversing a roadway.
Complex Interchanges	A combination of two or more interchange configurations, within very limited spacing, connecting several different roadways.
Compound Curve	Two curves which join on the same side of a common tangent with no tangent length between the curves.
Comprehensive Plan	A plan developed for a local, regional or statewide area that considers social, economic, cultural, transportation, environment, and other concerns.
Condemnation	A legal proceeding NDOT pursues when an agreement cannot be reached with a landowner on the purchase of right-of-way.
Consolidation	The settling of existing ground under the weight of embankment, causing the embankment to settle.
Construction Joint	A joint made necessary by a prolonged interruption in the placing of concrete.

Construction Sequencing	The construction of a roadway in different phases so that the project may be built while maintaining through traffic and/or access to local residences or businesses.
Contaminated Soils	Soil that has unacceptable impurities in it.
Contour Grading Plans	Plans that show proposed contour lines for the areas adjacent to the roadway surfaces for use in construction.
Contract Plans	Plans used to bid on and construct a project.
Contraction Joint	A joint normally placed at recurrent intervals in a rigid slab to control transverse cracking.
Controlled Access Facility	A facility designed for through traffic and upon which NDOT may regulate, restrict or prohibit access for efficient traffic flow and the reduction of areas of traffic conflict.
Corridor Protection	A procedure whereby NDOT notifies appropriate local governmental agencies and the general public of the intent to acquire right-of-way along a highway corridor in order to restrict the amount of development which may occur adjacent to the intended improvement minimizing acquisition costs and design complexity.
Corridor Protection Plans	Plans, often aerial sheets, filed with the local government showing property ownership and the corridor width to be protected.
Corridor Studies	Studies of projects that may involve some relocation and/or community bypass. Study results usually are published in report form and include alignment location factors and cost estimates. Plan and profile sheets may also be included.
Cost Estimate	The anticipated cost of a project at different stages of planning and design.
Cost Sharing	The division of project expenses among governmental (and possibly other) entities involved in the project.
Covenant Agreement	A written agreement or contract between the state and local cities, towns or villages that outlines the respective responsibilities in planning, designing, constructing or maintaining a highway or their associated facilities, such as roadway lighting, traffic signals, etc.
Covenant Relinquishment Agreements	Agreements prepared prior to public hearings in which the provisions of relinquishment of roadway maintenance and operation functions to a local government are described.
Crash Cushions	A protective system that prevents errant vehicles from impacting roadside obstacles by decelerating the vehicle to a stop when the cushion is hit head on or redirecting the vehicle away from the obstacle when the cushions are hit from the side.

Critical Length Of Grade	The maximum length of a designated upgrade on which a loaded truck can operate without an unreasonable reduction in speed.
Critical Path	Tasks and activities that must be completed prior to the start of other activities.
Critical Slope	A slope that is considered non-recoverable, non-traversable and one on which a vehicle is likely to overturn. A slope steeper than 1:3.
Cross Slope (Roadway)	The slope across traffic lanes and shoulders perpendicular to the flow of traffic.
Crossover	Temporary pavement constructed on divided highways to temporarily route traffic across the median to the opposite lanes so that construction can occur on the vacated side.
Crowned Typical Section	A cross-section of roadway that has the high point of the pavement located at the center of the traveled way and slopes to both shoulders.
Cul-De-Sacs	A turning area provided at the closed end of a street opened at one end only.
Culvert	A structure under the roadway with a clear opening of less than 20 feet as measured along the center of the roadway.
Curb Cut	A depression in the curb that is provided at curb ramps and entrances.
Cut Slope	A positive grade side-slope generally going upward and outward from the shoulder edge or ditch bottom to intersect the natural ground.
Daylighting	Flattening the roadway backslope to intersect with the natural ground at a lower elevation than the typical backslope. This is done to gain excavation or to improve sight distance.
Decision Sight Distance	The distance required for a driver to complete the following actions: 1) detect an unexpected or otherwise difficult-to-perceive information source or obstacle in a roadway environment; 2) recognize the obstacle or its threat potential; 3) select an appropriate speed and path; and 4) initiate and complete the required maneuver.
Deed	A signed legal document to convey or transfer rights, ownership, etc.
Delineators	Retroreflective devices mounted at the side of the roadway used to guide traffic, especially at night.
Depressed Median	A median that is constructed at a lower elevation than the travel lanes. They are typically used on freeways and other divided arterials.

Design Checklist	A list of tasks associated with roadway design activities.
Directional Design Hourly Volume	The design hourly volume in number of vehicles travelling in one direction during the thirtieth highest hour for the design year.
Design Hourly Volume	The design hourly volume in number of vehicles travelling in both directions during the thirtieth highest hour for the design year.
Design Process Outline	An outline of regular roadway design activities.
Design Relaxation or Exception	A deviation from the design standards requiring approval by the appropriate state and/or federal officials.
Design Speed	The maximum speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern. Limits of curvature, sight distance, roadway clearance, maximum gradient and other geometric features are a function of design speed.
Design Vehicle	A theoretical motor vehicle whose weight, dimensions and operating characteristics are used to establish highway design controls such as radius returns and turning roadways.
Design Year	The year 20 years after the initial construction for New and Reconstructed projects and for 3R projects.
Detour	A signed alternate route within an existing roadway system that guides traffic around a construction zone outside of the project right-of-way instead of through the construction zone.
Diamond Interchange	A simple interchange with four ramps configured similarly to a diamond and having a stop condition on the side road.
Directional Island	Raised, flush or painted medians used to guide and protect traffic during turning movements. Also, known as channeling islands.
Directional Interchange	An interchange that provides continuous high-speed free-flow operations for both through and turning movements.
Distribution Analysis	An analysis of the volumes of excavation and embankment by station for the purpose of determining if the project earthwork will be balanced, borrow or waste.
Diverging Diamond Interchange	An interchange configuration that shifts left turning traffic to the opposite side of the road at two signalized intersections.
Dowel	A load transfer device in a rigid slab, usually consisting of a plain round steel bar.
Driver Expectancy	A drivers' memory of previous roadway experiences that he/she relies on when responding to new situations.
Driveways	Access openings to adjoining properties from roadways.
Dry Run	Rehearsal for public hearing.

Easement	A legal right afforded a person, agency, etc. to make limited use of another's land usually for specific purposes, such as construction, utility, access, etc. Easements may be permanent or temporary.
Embankment	Material that must be filled or placed to construct the proposed roadway and its associated components.
Embankment Foundation Report	A report by the Soils Mechanics Unit recommending steps to minimize settlement and slope stability problems in areas of poor foundation soils.
End Areas	The areas of cut and fill computed between cross-sections from which total volumes of embankment and excavation may be made for the entire project.
Endangered Species	A species that is in danger of extinction throughout all or any portion of its range.
Endangered Species Act	A federal law passed in 1973 to insure that actions authorized, funded or carried out by state or federal agencies do not jeopardize, destroy or critically modify the continued existence of endangered or threatened species and their habitat.
Engineering Review	A process by the Project Development Division Location Studies Section early in the project to establish the concept of work to be performed and the initial itemized cost estimate for major, non-interstate projects. The review summarizes the existing highway conditions, traffic, classification, adjacent sections, alignment, and environmental conditions. It is sometimes completed by the Roadway Design Division for smaller projects.
Enhancement Projects	Transportation infrastructure projects by local, regional and state governments that are not eligible for funding from other programs, e.g., historic preservation, trails and scenic byways projects.
Entrance Ramp	A ramp that provides access onto an expressway or interstate.
Environmental Assessment	A study required for environmental Class III projects for which the significance of environmental effects of a proposed project must be determined. If it is determined that the project will have no significant environmental impacts, it remains a Class III project and a finding of no significant impact (FONSI) statement is prepared. If significant effects are possible, the project is reclassified as a Class I project.
Environmental Classification	Federal designation of a project based on its potential impact on the environment.
Environmental Impacts	The possible effects of projects on the quality of the social, cultural or natural environment.
Environmental Impact Statement	A statement that describes the anticipated social, economic and environmental impacts of a Class I project (projects that may have significant impact on the environment).

Environmental Summary Sheet	A form from the Project Development Division that outlines the measures to be taken to mitigate the effects of a project on the environment, the applicable permits, etc.
Equivalent Single Axle Loads	Summation of equivalent 18,000-pound single axle loads used to combine mixed traffic to design pavement for traffic in the design period.
Erosion	A process in which soil and/or rock is loosened from its resting place and is carried by wind and/or runoff and deposited elsewhere.
Erosion Control	A program to control the displacement of soil particles by water, wind or other agents.
Erosion Control Permit	A part of the Section 404 permit process related to controlling water and siltation due to runoff into any water body including wetlands.
Established Quantities	Quantities of earthwork material determined from cross-sections by Design and used for the payment of earthwork.
Estimate Checklist	A listing of items required for a cost estimate.
Excavation	Material that must be cut to construct the proposed roadway, ditches, channels, entrances, etc.
Exempt Projects	Projects exempt from FHWA oversight.
Exit Ramp	A ramp that provides egress from an expressway or interstate.
Expansion Joint	A joint located to provide for the expansion of a rigid slab, without damage to itself, adjacent slabs or structures.
Exposure Factor	A factor used to evaluate whether grade separation of a railroad/roadway crossing is necessary based on the number of vehicles times the number of trains per day. If this factor is 50,000 or greater, a grade separation should be considered.
Expressway	A divided highway for through traffic with full or partial control of access with interchanges at major intersections and at-grade intersections at designated minor public road intersections. It serves urban centers of 15,000 population or more not served by the Interstate System.
Federal Aid Projects	Projects that are partially or entirely funded by the federal government. They must comply with federal regulations, including environmental regulations.
Federal Funding	Funds provided by the federal government from various funding appropriation sources for transportation-related projects. Depending on the appropriation restrictions, some portions of projects may be participating (federal funds may be used for those items) or nonparticipating (items are not eligible for those particular federal funds).
Fill Slope	A downward embankment slope connecting the graded shoulder at the hinge point to the ditch bottom or natural ground.

Final Plans	Contract plans used by contractors, inspectors, etc. to construct the project. Final Plans are issued by Construction .
Flare Rate	The allowable variable offset distance of a barrier to move the barrier end further from the traveled way.
Floodplain	The area adjoining a watercourse or drainage way that has been or may be covered by floodwaters.
Floodway	The channel of a watercourse or drainage way and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a reasonable height.
Flush Median	A median that is on the same plane as the travel lanes, it is usually delineated by paint stripping on the pavement.
Fog Seal	A surface application of dilute emulsion with no aggregate that seals the pavement surface and generally provides a very distinct delineation between the mainline pavement and the shoulder.
Foreslope	The segment of the roadway cross-section from the hinge point sloping downward to the inside edge of the ditch.
Foundation Course	The graded portion of a highway prepared as the foundation for the pavement structure and shoulder.
Foundation Report	A report that summarizes field investigations of foundation soils and makes recommendations to minimize settlement and slope stability problems.
Freeway	An arterial highway with full control of access.
Frontage Roads	Restricted access roads, paralleling the mainline, to maintain capacity on the mainline and provide access to adjoining property.
Functional Classification	The grouping of highways and roads by the primary service they provide, access, mobility or a combination of access and mobility. It is used to determine the design standards to be used.
Functional Design	The stage of design after the plan-in-hand inspection and prior to the public hearing.
Future Access	A future means of ingress or egress between a highway and abutting property or an intersecting local public road or street that will not be built by NDOT but will be built by the owner at some future date when the development of the property requires construction of the driveway.
Gore	The area between a through roadway and an exit/entrance ramp.
Gore Neutral Area	The triangular area between the gore nose and the physical nose and the triangular area between the physical nose and the painted nose.

Gore Nose	A point, having some dimensional width separating the shoulders of the through traveled way and the ramp, upstream from the gore area.
Grade Separation	The separation of traffic at an intersection of two or more roadways by constructing the roadways at different elevations; provides for free flow of traffic on all highways through the intersection but does not provide for access for turning traffic.
Granular Subdrain	A drain that is constructed of a porous, granular material designed to drain water from the foundation of the pavement.
Guardrail	A longitudinal barrier that shields roadside hazards from vehicles that may leave the traveled way.
Habitat	The place(s) a given species of animal or plant naturally lives or grows that has the necessary food, cover, water and other species-specific conditions essential to well-being.
Haul	The distance that excavated material is moved, as shown on the plans, from the location where the material is obtained to the location where the material is to be deposited.
Headwater	The depth of water impounded upstream of a culvert due to the influence of the culvert construction, friction and configuration.
Height Of Eye	The height of driver's eye above the road surface used for calculating sight distances. For stopping and passing sight distances, passenger vehicle height of eye is 3.5 feet.
Height Of Object	The height of an object within the roadway used for calculating sight distances.
Highway Commission Statement	An official communication from Roadway Design to the Highway Commission regarding a proposed project.
High-Speed Roadway	A roadway with a design speed ≥ 50 mph
Hinge Point	The point where the rate of slope either continues at 1:6 or changes to a steeper slope based on the difference in elevation between the edge of the finished shoulder and the end of the foreslope.
Horizontal Alignment	The line of roadway curvature as related to the horizontal direction.
Horizontal Sight Distance	The clearance required from the center of the inside lane to an obstruction located off the pavement area on the inside of a horizontal curve. The straight-line distance a driver can look through a horizontal curve to the road ahead.
Impact Attenuators	Barriers designed to act as cushions, absorbing most of the energy from errant vehicles that leave the roadway before striking a roadside hazard.

Intelligent Transportation Systems	“Intelligent Transportation Systems (ITS) is a combination of electronics, telecommunications, and information technology to the transportation sector for improving safety and travel times on the transportation system. It is not highways only but includes all modes of transportation.” (Source: Michigan DOT)
Inertial Barriers	Impact attenuators that are modules filled with sand used for protection of poles, column bases, lighting supports, etc.
Intercepting Dikes	Small dikes constructed at the top of cut slopes that prevent stormwater from flowing down the cut slopes by intercepting the runoff and redirecting the flow to where it can be discharged into a ditch, creek, stream, etc.
Interchange	A combination of ramps and grade separations designed to increase capacity, reduce or eliminate traffic conflicts, and reduce the potential for crashes at the junction of two or more roadways. They separate the through traffic movements and also provide for turning traffic movements.
Interchange Justification Report	The justification and documentation required by the FHWA to substantiate any proposed changes in access to the Interstate System. The IJR will focus on the technical feasibility of the proposed access; the social, economic, and environmental impacts will be addressed in the NEPA review.
Interchange Modification Report	The justification and documentation required by the FHWA to substantiate any proposed modifications in existing access to the Interstate System. The IMR will focus on the technical feasibility of the proposed access. Reconstruction or major modifications to existing interchanges that do not involve adding roadway capacity may be eligible for classification as a Categorical Exclusion.
Intergovernmental Agreements	Agreements prepared by the Agreements Section in the Project Development Division that outline the scope and participation of the governmental parties involved in a project and are executed for projects involving other units of government.
Intersection Sight Distance	The unobstructed sight distance along both road approaches at an intersection and across their included corners for a distance that will allow vehicle operators, approaching simultaneously, to see each other in time to prevent collisions.
Interstate	A national defense highway system established to connect most cities of 50,000 or more population in the U.S., with complete access control and a minimum of two 12 feet wide lanes in each direction, divided in most instances by wide medians.
Interval	A discrete portion of a traffic signal cycle during which signal indications do not change.
Island	A flush or raised channelizing device.

Joint Access	A single access provided to two or more properties.
Land Water Conservation Fund Act	An act administered by the National Park Service to preserve public parklands. The Act provides funds to purchase and develop public parklands, and to preserve those lands from conversion to other uses.
Landscaping	Plantings, scenic view development, retaining walls, median treatments, slope rounding or berms, aesthetic treatment, etc. for environmental, functional or aesthetic purposes.
Lane Balance	A condition in which there is a balance in the number of traffic lanes on a freeway and the number of lanes on ramps to provide for efficient traffic operations through and beyond interchanges. The number of lanes and the rate that lanes are added and dropped at interchanges are appropriate for the interchange.
Lateral Extent Of Hazard	The distance from the edge of the traveled way to the far side of a hazard, if the hazard is a fixed object, or to the outside edge of the clear zone if the hazard is an embankment or fixed object that extends beyond the clear zone.
Level Of Service	A rating system from A to F that classifies roads or highways according to the operating conditions of the roadway given the design traffic volumes, A being a roadway providing an optimum level of service and F being a roadway providing a very poor level of service. The operating conditions that characterize levels of service are described in terms of density, average travel speeds, volume to capacity ratios, and stop delays at intersections.
Life Cycle Cost Analysis	The economic analysis of pavement design alternatives based on initial construction costs, maintenance costs, salvage values at the end of the life of the pavement and replacement costs.
Limits Of Construction Plans	Design plans, developed after the public hearing, showing the extent of the area required for the construction of the project. They include culverts, driveways, intersections, dikes, etc. for use in right-of-way design.
Living Snow Fence	A barrier of trees and shrubs planted to reduce snow drifting along a highway, usually at or near the right-of-way line.
Load Transfer Device	Devices, e.g., steel dowel bars, used at transverse joints to properly distribute load stresses without offering resistance to longitudinal movement at the joint.
Local Roads	Rural roads not classified otherwise except minimum maintenance roads.
Location Studies	Studies to address social, economic, environmental and other issues associated with alternative project locations for specific "spot" projects or for longer corridors.
Longitudinal Slope	The slope of the travel lane along the length of the travel lane.

Longitudinal Joint	A joint normally placed between traffic lanes in rigid pavements to control longitudinal cracking.
Loop	A curved ramp that has a less direct travel path and distance than normal ramps and often will redirect the path of a vehicle almost 290°.
Low-Speed Roadway	A roadway with a design speed ≤ 45 mph
Lump Sum Funding Splits	A method of allocating funds from several funding sources by dividing the total costs on a pro rata basis.
Mailbox Turnout	A designated area, outside the travel lanes, provided for the use of vehicles accessing mailboxes.
Major Arterials	Roadways linking cities, towns and other traffic generators, that are capable of carrying long distance travel and form a network with higher systems to provide interstate and inter-county service.
Major Collectors	Roadways that serve the dual function of property access and feeding arterials; they generally consist of shorter trip lengths.
Markings	Traffic control devices, such as pavement markings, object markings or delineators, used to channelize traffic into proper lane position on the roadway. They may either supplement regulatory and warning signs or independently warn or regulate traffic.
Mass Diagram	A graphical representation of the amount of embankment and excavation on a project and the way in which the earth is to be moved. It shows balance point locations, direction of haul and amounts of earth taken from or to each location.
Mass Ordinate	The cumulative algebraic sums of volumes of cut and fill by station.
Medians	The portion of a divided highway separating the traveled ways for traffic in opposite directions.
Median Barrier	A longitudinal barrier placed on the left side of traffic lanes of a divided highway designed to redirect vehicles striking either side of the barrier.
Median Openings	A gap in a median provided for crossing and turning traffic.
Median Width	The distance between the inside edges of the inside travel lanes of a multi-lane divided highway.
Metropolitan Planning Organization (MPO)	Transportation planning organization composed of state and local government officials and citizens responsible for continuing, cooperative and comprehensive planning process in metropolitan areas.
Milling	A process in which asphalt is removed from the roadway by a machine that “scrapes” off the top layer of asphalt.
Minimum Maintenance Roads	Rural roads used occasionally by limited numbers of people as alternative access roads.

Maintenance Resurfacing Standards	Maintenance for each functional classification of roadway type as established by the Board of Public Roads Classifications and Standards .
Minor Arterials	Routes to provide linkage of cities, towns and other traffic generators, integrating interstate and inter-county service.
Mitigation	Measures taken to offset or minimize the impact of construction on the environment.
Mobilization	The costs associated with startup activities such as movement of personnel, equipment, supplies and other incidentals to the project site.
Moisture Content	The amount of water in the soil which impacts compaction.
Mountable Curb	A curb designed so that errant vehicles can cross them easily.
Mow Strip	A two feet surfaced section between the curb and a turf median or around area inlets.
MSE Wall	A mechanically stabilized earth retaining wall of blocks or panels.
Multi-Leg Intersections	Intersections having five or more legs.
Municipality	As defined by the Nebraska Revised Statutes, Chapter 13-3203, "Municipality means any county, city, or village in this state."
National Highway System	An interconnected system of principal arterial routes which will serve major population centers, international border crossings, ports, airports, public transportation facilities, other intermodal transportation facilities and other major travel destinations.
National Register Of Historic Places	A federal listing of places with significant historic value.
Nationwide Permits	A type of permit issued by the U.S. Army Corps of Engineers for projects that have minimal environmental impacts.
Needs Assessment	An annual review of the condition of existing roadways throughout the state conducted by the Classification, Needs, and Pavement Management Unit in the Materials and Research Division . A summary of the results are published in the <u>State Highway Inventory Report</u> .
New Jersey Barriers	Concrete rigid barriers generally used as median barriers and as barriers in work zones.
Noise	Unwanted sound.
Noise Abatement	Measures taken to reduce noise through design features or location of a project.
Noise Barriers	Devices installed beyond the Horizontal Clear Zone to reduce the effects of noise on nearby noise sensitive areas.

Nonparticipating	That portion of a project that a particular federal fund does not cover, e.g., federal bridge funds may not be used for mainline construction.
Nonpoint Source Pollution	Pollution that cannot be attributed to a specific source.
Non-Recoverable Slope	A slope on which a motorist will not be able to stop his/her vehicle or return to the roadway but generally will reach the bottom of the slope without overturning; a slope between 1:4 and 1:3.
No Passing Zones	Segments of two-lane, two-way highways that do not have sufficient passing sight distance for motorists to pass slower moving vehicles. Pavement markings and warning signs are used to inform drivers of no passing zones.
Object Markers	Traffic control devices that warn motorists of physical obstructions or roadside conditions within or adjacent to the roadway that pose a hazard to motorists. They are considered a maintenance item and are not included in roadway quantities and cost estimates.
Off-Street Parking	A parking facility, parking lot or garage that is provided outside of the roadway right-of-way and is not considered a part of the roadway.
Off-System County Roads	County roads that are not part of the federal or state highway system.
Off-System Rural Projects	Projects on rural roads for which local road standards have been developed.
Off-System Urban Projects	Urban transportation projects in cities of the first class that are eligible for specific federal funding.
On-Street Parking	Parking that is provided adjacent to the traveled way of a roadway within the roadway right-of-way; it is considered a part of the roadway.
Operating Speed	The highest overall speed at which a driver can travel on a given highway under favorable weather conditions and under prevailing traffic conditions without exceeding the design speed on a section-by-section basis.
Outer Separation	The area between the traveled way of a roadway for through traffic and a frontage road or street.
Overlay	The resurfacing of an existing pavement to a specified depth to extend the structural life of the pavement.
Painted Gore Nose	A point, having no dimensional width, occurring at the separation of the pavements at a ramp.
Parallel Fill Slope	A fill slope that parallels the roadway.
Partial Cloverleaf Interchange (Parclo)	A cloverleaf interchange with loops in some but not all quadrants.
Passing Sight Distance	The distance required for an overtaking vehicle to pass another vehicle on a two-lane, two-way roadway.

Pavement Markings	Traffic devices in the form of line markings, symbols, arrows, raised reflective markers, etc. that are on the roadway pavement to channelize the traffic and to warn motorists.
Pavement Structure	A combination of subbase, base course and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.
Pavement Serviceability Index	A numerical value derived by formula from measurements of certain physical features of the pavement.
Pavement Subdrain	Subgrade drainage treatments, which vary depending on the subgrade soils plasticity index.
Pedology	Study of the genesis and classification of soils.
Permanent Easement	A property easement in which NDOT has the use of or access to land that remains in private ownership. The owner may do as he/she chooses with the property as long as it does not conflict with the purpose of the easement.
Phasing	The division of a construction project into several stages over time.
Physical Gore Nose	A point, having a dimensional width separating the pavements, upstream of the gore area.
Pivot Irrigation System	Custom irrigation systems varying in size and configuration that consist of center pivot structure and a boom that holds the sprinkler heads and rotates around the center pivot.
Plan-In-Hand	A field inspection of the proposed project, after preliminary design, by NDOT representatives and others as appropriate.
Planning	Advance consideration, development and description of anticipated projects, activities and scheduling.
Point Of Convergence	The point of intersection of a ramp and the through travel lane.
Posted Speed	The speed limit on advisory signs posted on the roadway; usually the 85th percentile speed.
Preliminary Design	The initial design of a project following the engineering review.
Preliminary Plans	Plans developed prior to preliminary design, from a survey or as-built plans, showing existing features only.
Principal Arterials	Roadways that provide corridor movement with trip length and density compatible with significant statewide or interstate travel.
Priority Commercial System	A roadway designation for routes that carry heavy traffic volumes and/or large volumes of commercial vehicles. The Priority Commercial System consists of the non-Interstate NHS routes and the Expressway System.
Profile	The grade line of a roadway, usually along the roadway centerline.

Project Numbering	The assignment of a unique number to a transportation project which identifies the funding source, type of project, and project location.
Public Hearing	A formal process presided over by a Highway Commissioner to present the proposed project to the public and to obtain public input. Hearing guidelines must be followed for notice of hearing, information presented and hearing procedures. The hearing is recorded and a transcript is made of the verbal testimony.
Public Information Meetings	Informal meetings held to inform the public of the proposed project location and/or design, to obtain public input and to answer questions from the public. They are usually held for major relocations and location studies, right-of-way appraisal, design and scope changes and sometimes for engineering review.
Radius Return	The turning radius of an intersection.
Raised Median	A median that is elevated above the travel lanes to control access and left turns on urban highways and streets.
Ramp Angle	The angle the ramp makes with the mainline highway.
Ramps	Any type, arrangement and size of turning roadway that connects two or more legs at an interchange.
Ramp Terminal	The portion of a ramp adjacent to the through traveled way, including speed change lanes, tapers and islands.
Reconstructed Bridges	An existing bridge that is to be either widened, significantly remodeled or rehabilitated.
Recoverable Slope	A slope on which a motorist can stop his/her vehicle or slow it and then return to the roadway; a slope of 1:4 or flatter.
Recovery Taper	The taper downstream of a weaving section that enables motorists to merge with the traffic on the expressway.
Reimbursable Costs	The eligible non-betterment expenditures a utility owner incurs in relocating utilities to accommodate a proposed project.
Relinquishment	A process by which NDOT maintains ownership of right-of-way for utility easement purposes but cedes responsibility for maintenance and operation of the roadway to a local government.
Relocation Assistance	Financial assistance provided to residents and business entities that are relocated due to right-of-way acquisition.
Reverse Curves	Two curves on opposite sides of a common tangent with a relatively short tangent length between the curves.
Right-Of-Way	Land, property or interest therein, usually in strip, dedicated for transportation purposes.

Right-Of-Way Appraisal Plans	R.O.W. Ownership plans with the addition of limits of construction, construction details, right-of-way design, permanent and/or temporary easements, access control and summary of areas.
Right-Of-Way Certification	Certificate stating that the right-of-way is available to the contractor and clear of improvements or the estimated date when the non-complying tracts will be clear and available.
Right-Of-Way Costs	Costs associated with acquisition of right-of-way including real property, relocation assistance, fencing, improvements, etc.
Right-Of-Way Marker	A concrete monument, iron pipe, or pin marker used to indicate the location of a highway's right-of-way, where the right-of-way changes width or where a curve in the right-of-way begins or ends.
Right-Of-Way Negotiation Plans	Right-of-way plans that reflect right-of-way contracts and changes made during negotiations.
Right-Of-Way Ownership Plans	Right-of-way plans showing plotted section and quarter section lines, surveyed centerline, topography, property lines, existing R.O.W. boundaries, and ownership data.
Right-Of-Way Survey	A survey conducted to establish section corners, quarter-section corners and lot corners.
Rivers And Harbors Act	A federal act originally passed in 1899 to regulate structures or work affecting navigable waters of the U.S.
Roadside Geometry	The area outside of the hinge points; it is comprised of sideslopes, foreslopes, backslopes, ditch bottoms, benches, etc.
Roadway	AASHTO defines a roadway as "The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways."
Roadway Lighting	Lighting which is provided along a roadway or highway to improve nighttime visibility.
Rollover Rate	The algebraic difference in rate of cross slope between adjacent lanes.
Route Continuity	Providing a continuous through route on which the motorist is not expected to change lanes or "exit" a roadway. Route continuity of minor roadways should yield to preserve road continuity of major roadways.
Running Speed	The actual speed of a vehicle over specified section of highway; the distance traveled divided by the time the vehicle is in motion (running time).
Runout Length	The theoretical distance needed for an errant vehicle that has left the roadway to come to a stop.

Rural Area	An area where property abutting the roadway is predominately used for agricultural purposes and lies outside municipal boundaries. It may include isolated tracts devoted to light industrial purposes.
Safe Drinking Water Act	Federal regulations of potable water supply.
Safety Improvement Project	A project that is generally small in size and located at specific high accident sites.
Scenic Byways	A road or byway with roadsides or corridors of aesthetic, cultural or historic value.
Scoping	The initial estimation of project magnitude once a NDOT Form 73 has been initiated.
Section 4(f)	A portion of the 1966 Transportation Act which limits use of publicly owned parks, recreation areas, wildlife/waterfowl refuges, and lands having historic sites of national, state or local significance.
Section 6(f)	A portion of the Land and Water Conservation Fund Act restricting use of public park land funded with Section 6(f) monies.
Section 10 Permits	Permits for construction activity that impacts navigable waterways.
Section 401 Permits	Permits from the Nebraska Dept. of Environmental Quality for activities involving waters of Nebraska, including wetlands. This permit is generally acquired in conjunction with Section 404 individual permits.
Section 402 Permits	Permits required for projects with point source discharge, e.g., rest areas.
Section 404 Permits	Permits from the U.S. Army Corps of Engineers for activities involving waters of the U.S., including wetlands.
Segregation Damages	Damages that may occur to a landowner when property is split by the construction of a highway.
Select Placement	The setting aside of certain excavated soils and/or materials during earthwork construction for a specific placement within the limits of the project. For example, topsoil will often be excavated and separated from other soils for final placement in the top four inches within the construction area.
Semi-Directional Interchange	An interchange that has some high-speed free-flow connections but has one or more connections that are indirect in alignment yet more direct than loops.
Serviceability	The ability, at the time of observation, of a pavement to serve the traffic (autos and trucks) that uses the facility.
Service Interchange	An interchange that transfers traffic between an Interstate or freeway and a lower classification roadway.

Service Volumes	The number of vehicles traveling in a lane for a given time period. The number of vehicles “served” by a traffic lane for a given time period.
Shear Lines	Lines used for simplifying earthwork calculations at intersections and other locations where irregularly shaped excavations or embankments may be encountered due to channel changes, etc.
Shop Plans	Plans developed by the contractor to show how the contractor intends to construct specific structures, such as bridges, retaining walls, etc.
Shoulder	The area adjacent to the travel lanes for rural cross-sections or the area behind the curb and gutter for urban cross-sections.
Shrinkage	The decrease in volume of soil when it is excavated, hauled and compacted into an embankment.
Sight Distance	The length of roadway ahead that is visible to the driver.
Signalized Intersection	An intersection where traffic movement is controlled by traffic signals.
Single Axle Load	The total load transmitted by all wheels whose centers may be included between two parallel transverse vertical planes 40 inches apart, extending across the full width of the vehicle.
Single Point Urban Interchange	An interchange configuration where all legs of the interchange intersect at a single point.
Skew Angle	The degree of deviation from a 90° intersection.
Slope Stake Book	A construction notebook that provides elevation and distance information necessary for the construction of back slopes, fore slopes and side slopes.
Slurry Seal	An application of diluted asphalt emulsion mixed with sand-size aggregate and then squeegeed onto the pavement surface. It is generally less than 3/8-inch in depth.
Snowshots	Cut stations where the toe of the backslope is less than 60 feet from the centerline and the backslope elevation is greater than the centerline elevation.
Soil Horizon	The underlying formations of soil layers.
Soil Profile	The combined horizons or layers of soil.
Soil Survey	Research of the soil characteristics and water table condition provided by the Materials and Research Division .
Soil And Situation Report	A report of the results of the soil survey.
Spacing	The number of access locations to the mainline per mile between each mile road or county road.
Special Investigations	Research about specific topics for a proposed project (e.g. accident records, traffic counts).

Special Plans	Plans used for items subject to frequent change, e.g., guardrail.
Special Provisions	A document that outlines unique construction items or procedures not covered in the Standard Specifications.
Speed-Change Lane	An auxiliary lane, including taper, used primarily for the acceleration or deceleration of vehicles entering or exiting the through traffic lanes.
Spot Speed Studies	A traffic study that measures the individual speeds of a sample of vehicles passing a given point (spot) on a roadway.
Spread	The width of stormwater from the curb onto the roadway that flows along the pavement.
Stage Construction	The phasing of an entire construction project over several time periods.
Standard Details	Details not large enough to warrant a special plan or standard plan or details of items that are not paid for directly.
Standard Items	Construction and other items, as defined by NDOT that are common project materials or activities.
Standard Plans	Plans that have been developed for common construction items and have been approved by the Standard Plans Committee .
Standard Specifications	The definition and delineation of how activities, materials, etc. are to be provided for NDOT projects.
State-Funded Projects	Projects that are partially or entirely funded by state agencies. They are not required to comply with all federal regulations, but must address environmental concerns.
State Highway Commission	A group of individuals appointed by the Governor to conduct studies, advise the public, and hold public hearings regarding Nebraska highways and the activities of NDOT .
State Highway Inventory Report	A summary of results from the needs assessment.
Station Funding Definition	The identification of limits of funding source coverage by station location.
Stopping Sight Distance	The minimum length of roadway ahead visible to the driver that is long enough to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path. Stopping sight distance is the sum of the distance traversed by the vehicle from the instant the driver sights an object necessitating a stop to the instant that the brakes are applied and the distance required to stop the vehicle from the instant brake application begins.
Storage Area	The portion of a turn lane used for vehicle queuing.
Storage Length	The length of lane needed to store vehicles for a given time period.

Structural Snow Fence	Temporary or permanent fencing panels installed along a highway to reduce the snow drifting along a highway.
Subbase	The layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course (or in the case of rigid pavements, the Portland cement concrete slab).
Subgrade	The top surface of a roadbed on which the pavement structure and shoulders are constructed.
Subgrade Survey	A survey conducted for projects to surface previously graded roads to identify soil sections, stability, and other conditions.
Subgrade And Situation Report	A report issued when there is a period of time between grading and preparation of paving plans. The report describes existing surface conditions, foundation course requirements, existing topography and pedology, drainage, compaction requirements, etc.
Subsidiary Earthwork	Earthwork that is not paid for directly but is included in other earthwork or other construction pay items.
Subsoil	Soils beneath the topsoil that vary in thickness from a few inches to three or more feet. They are characterized by the presence of additional clay and soluble material that has been removed from the topsoil.
Substructure	The part of a structure below the bearings of simple and continuous spans, skewbacks or arches and the top of footings of rigid frames including backwalls, wingwalls, and wing protection railings.
Superelevation	Raising the outer edge of a curve to offset the tendency for vehicles to slip on the outward sloping of a crowned roadway, allowing the driver to maintain average speed through the curve without having to overcorrect steering.
Superelevation Runoff Length	The length of highway needed to accomplish the change in cross slope from a section with adverse crown removed to a fully superelevated section, or vice versa.
Superstructure	The part of a structure above the bearings of simple and continuous spans, skewbacks of arches and top of footings of rigid frames, excluding backwalls, wingwalls and wing protection railings.
Surcharge	The placement of additional embankment on top of a fill to account for settlement or to speed up settlement.
Surcharge Loading	The loading or forces a retaining wall may experience from embankment and traffic.
Surface Transportation Program	A federal funding program which includes public roads not on the NHS and not functionally classified as minor rural collectors or local roads or streets.
Swell	The increase in volume of rock when it is excavated, broken and placed into the embankment.

System Interchange	An interchange that transfers traffic from freeway to freeway and/or Interstate to Interstate.
Tangent Runout	The distance required to transition a roadway from a normal crown section to a section with the adverse crown removed, or vice versa.
Tangent Section	A segment of roadway that has a “straight” horizontal alignment with no curvature.
Tangent Typical Section	A cross-section of a roadway that has the high point of the pavement on the inside shoulder and slopes continuously from the inside shoulder to the outside shoulder.
Taper Ramp	A ramp that only consists of a taper either before or after the point of convergence depending on whether it is an exit or entrance ramp, respectively. On taper entrance ramps, acceleration occurs before the point of convergence. On taper exit ramps, deceleration occurs after the point of convergence.
Temporary Easements	Easements that permit the use of private property for a time period not to exceed the duration of the project and for specific purposes such as channel cleanout.
Temporary Road	Temporary detours within the project right-of-way, generally on temporary embankments, to bypass a construction site.
Threatened Species	A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its habitat.
Thrie Beam Guardrail	A roadside barrier system similar to W-beam but with an additional rib in the rail to accommodate a wider range of vehicle sizes.
Tie Bar	A deformed steel bar or connector embedded across a joint in a rigid slab to prevent separation of abutting slabs.
Title	Legal evidence of right to property or the right itself.
Title Research	A search conducted by a right-of-way agent of records for property ownership, existing easements, encumbrances and other interests. Provides information for plotting property lines and identifying ownership.
Toe Of Slope	The intersection of the foreslope with level ground or with a backslope, forming a ditch.
Topsoil	Soil, usually dark in color, that extends from the surface of the ground to a depth of as much as two feet.
Traffic Barrier	AASHTO defines a traffic barrier as” a device used to prevent a vehicle from striking a more severe obstacle or feature located on the roadside. Traffic barriers include roadside barriers, median barriers, bridge railings, and crash cushions.”
Traffic Control Device	A sign, signal, marking or other device on or adjacent to a roadway to regulate, warn or guide traffic.

Traffic Control Plan	An essential part of the overall design of the roadway that provides for the routing of traffic through and/or around the construction zone while providing an adequate working area for the contractor.
Traffic Signals	Traffic control devices used to direct conflicting movements of vehicles and/or pedestrians by assigning the right-of-way to various movements at different times.
Transit	A public transportation service.
Transition Length	The distance required transitioning a roadway from a normal crown section to full superelevation. It consists of the tangent runoff and the superelevation runoff length.
Transition Section	A section of roadway that provides a gradual change between different typical cross-sections.
Transverse Contraction Joint	Contraction joints in concrete pavement placed either perpendicular to the centerline with load transfer devices across the joint or skewed from the perpendicular for noise reduction and riding comfort.
Transverse Construction Joint	Joints placed at the end of each day's work or when paving ceases for over 30 minutes. They are placed perpendicular to the centerline.
Transverse Fill Slope	A fill slope that is perpendicular to the roadway and is associated with cross roads, entrances, median crossings or ditch plugs, etc. It is generally more critical to vehicles than parallel fill slopes because errant vehicles tend to run into the transverse slope head on.
Travel Way	AASHTO defines Travel Way as "The portion of roadway for the movement of vehicles, exclusive of shoulders."
Trumpet Interchange	An interchange configuration used where there are only three approaches to be served.
Turning Roadways	Channelized turn lanes at at-grade intersections to provide free flow turn movements.
Unchannelized Intersection	An at-grade intersection consisting of two crossing roadways connected by radius returns, without channelizing devices.
Underdrain Pipe	A pipe in a granular trench, that parallels the edge of pavement and base course, designed to intercept water that gets into the base and subgrade and carry it away from the pavement structure.
Unsuitable Material	Materials (soil, rock, muck, debris, etc.), which are inappropriate for use in the embankment.
Urban Area	A built-up area located adjacent to or within municipal boundaries.

Utility	A privately, publicly or cooperatively owned line, facility or system for producing, transmitting or distributing communications, cable television, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, or other similar commodity including a fire or police signal system or street lighting system.
Valley Gutter	A depressed pavement area that is constructed across a side road at an intersection to carry runoff across the side road.
Vertical Alignment	The line of the roadway curvature as related to the vertical direction.
Vertical Clearance	The clearance provided above the roadway to allow vehicles to successfully pass under a structure.
Vertical Sight Distance	The distance a driver can see along a vertical curve to the roadway ahead.
Visual Impacts	Impacts of the proposed project on potential viewers of and from the project.
Volume Studies	Traffic studies conducted to determine the levels of traffic during specified time periods, e.g., average daily traffic (ADT), peak hour traffic, etc.
W-Beam Guardrail	A roadside barrier system with railing that is W-shaped.
Waste	The situation where the amount of available excavation exceeds the amount of needed embankment.
Waste Sites	Areas established for the disposal of excess excavation or unsuitable materials.
Waterway Permit Data Sheet	A data form from the Environmental Permits Unit that includes information about waterway permits, historic bridges and other environmental issues.
Weaving Sections	Highway segments where the pattern of traffic entering and leaving at contiguous points of access/egress result in vehicle paths crossing each other.
Wetlands	Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

