

## EXHIBIT D

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### “ARTICLE 1 PURPOSES AND DEFINITIONS

#### Sec. L-XVII 1.3 Definitions

In these Standards, the intent and meaning of the terms that are used shall be defined in Section I of the State Specifications except as modified or added herein.

- A. AVERAGE DAILY TRAFFIC, OR AVERAGE DAILY TRIPS (“ADT”): The weighted average vehicle traffic or trips occurring during a twenty-four (24)-hour period on a weekday. The future ADT shall be computed using the sum of the existing traffic, plus any additional traffic generated from land uses allowed under the County’s General Plan and Chapter II of this Code. A vehicle trip is a single or one-direction vehicle movement.
- B. COLLECTOR ROAD: An urban road connecting principal and minor arterial roads to local roads. Equivalent in function to a (rural) major collector road.
- C. CONSULTING ENGINEER: Any person or persons, firm, partnership or corporation legally authorized to practice engineering in the State of California. For the purpose of this Chapter, “Consulting Engineer” shall refer to an engineer retained by a project proponent or developer.
- D. COUNTY: The County of Nevada.
- E. DEAD END ROAD: A road which has only one point of vehicular ingress/egress, including cul-de-sac and looped roads.
- F. DEPARTMENT: The Nevada County Department of Public Works. (Ord. 2239)
- G. DEVELOPER: Any person or persons, firm, partnership, corporation or combination thereof financially responsible for the improvements.
- H. DIRECTOR: The Director of the Department of Public Works of the County of Nevada. (Ord. 2239)
- I. DRIVEWAY: A vehicular access constructed pursuant to Chapter XVI, Fire Safety Regulations, of the Land Use and Development Code, that serves up to two (2) parcels with no more than two (2) residential units and any number of non-commercial or industrial buildings on each parcel.
- J. ENGINEER: The Director of the Department of Public Works of the County of Nevada or his or her designee. (Ord. 2239)
- K. FIRE STANDARD ACCESS ROAD: Minimum standard road for new construction. A Fire Standard Access Road serves more than two parcels with no more than two dwellings on each, and any number of accessory buildings.
- L. FUEL MODIFICATION AREA: An area where the volume of flammable vegetation has been reduced, providing reduced fire intensity and duration.
- M. GATE: A means of vehicular entrance or exit to a parcel or dwelling, including an opening in a wall, fence, or driveway abutments. A security gate is defined as a gate that is manually or electronically secured.
- N. HAMMERHEAD/T: A road or driveway that provides a “T”-shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

- O. IMPROVEMENT: Work performed in accordance with these Road Standards.
- P. INTERSTATE HIGHWAYS AND FREEWAYS: Limited access highways.
- Q. LABORATORY: Any testing agency or testing firm which has been approved by the Department.
- R. LOCAL ROAD: A road that functions primarily to provide access to individual properties.
- S. MAJOR COLLECTOR ROAD: A (rural) road connecting local roads and (rural) minor collector roads to arterial roads.
- T. MINOR ARTERIAL ROAD: A road providing primary access from freeways and principal arterials to major origins and destinations.
- U. MINOR COLLECTOR EQUIVALENT LOCAL ROAD: A local road that is projected to serve a buildout volume in excess of 2,000 Average Daily Trips but is not classified as a minor collector on the General Plan Circulation Plan Map.
- V. MINOR COLLECTOR ROAD: A rural road connecting local roads to major collector and arterial roads
- W. PRINCIPAL ARTERIAL ROAD: A road carrying some regional traffic and connecting the major population centers within the County or immediate counties.
- X. PROJECT: The proposed improvements by the County or others.
- Y. RESIDENTIAL UNIT: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for one or more persons. Manufactured homes, mobilehomes, and factory-built housing are considered residential units for the purposes of mandatory measures required in 14 CCR § 1270.01 (c).
- Z. ROADS: Vehicular access to more than two (2) parcels; more than four (4) residential units; or access to any industrial or commercial occupancy. Includes private streets and lanes under the jurisdiction of the County of Nevada.
- AA. ROADWAY: Any surface designed, improved, or ordinarily used for vehicle travel.
- BB. ROADWAY STRUCTURES: Bridges, culverts, and other appurtenant structures which supplement the roadway bed or shoulders.
- CC. SHOULDER: Roadbed or surface adjacent to the traffic lane.
- DD. SPECIAL CIRCUMSTANCES: Unusual circumstances not covered by these Road Standards which require additional specific review and evaluation by the Engineer in order to determine appropriate design standards.
- EE. SPECIAL PROVISIONS: Specific clauses setting forth conditions or requirements peculiar to the work and supplementary to these Road Standards.
- FF. SPECIFICATIONS: The directions, provisions and requirements contained in these Road Standards.
- GG. STANDARD DRAWINGS: The latest edition of the Nevada County Standard Drawings kept on file in the Department of Public Works and adopted by a Resolution of the Nevada County Board of Supervisors.

- HH. STATE SPECIFICATIONS: Shall mean the latest edition of the State of California, Department of Transportation (CALTRANS) Standard Specifications and Standard Plans, the CALTRANS Highway Design Manual, and the CALTRANS Traffic Manual.
- II. TRAFFIC LANE: The portion of a roadway that provides a single line of vehicle travel.
- JJ. TURNAROUND: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb.
- KK. TURNOUT: A widening in a road or driveway to allow vehicles to pass. Minimum twelve (12) feet wide and thirty (30) feet long with a twenty-five (25) foot taper on both ends.
- LL. VERTICAL CLEARANCE: The minimum specified height of a bridge or overhead projection above the roadway.”

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**“Sec. L-XVII 3.4 Design Geometrics**

**A. DESIGN WIDTHS AND SPEEDS**

The minimum design widths, speeds and other major design criteria for road construction are as follows in the chart on the following page. Further details are provided in the County’s Standard Drawings which supplement this Chapter.

**TABLE II  
NEVADA COUNTY STANDARD SPECIFICATION SUMMARY CHART**

Functional Classification	Min. Right-of-Way Width Note 4	Standard Lane Width	Standard Shoulder Width	Fuel Mod. Area Width	Standard Design Speed	Standard Max. Grade Below 3500’	Standard Max. Grade Above 3500’	Required Surface
Minor Arterial (Urban)	60-100’	12’	Varies	10’ min.	35 mph	10%	8%	Note 1
Minor Arterial (Rural)	60’	12’	6’	10’ min.	35 mph	10%	8%	Note 1
Collector (Urban)	60-100’	12’	Varies	10’ min.	35 mph	10%	8%	Note 1
Major Collector (Rural)	60’	12’	4’	10’ min.	35 mph	10%	8%	Note 1
Minor Collector (Rural)	60’	12’	4’	10’ min.	35 mph	10%	8%	Note 1
Local Class 3 Over 2000 ADT	60’	12’	4’	10’ min.	35 mph	10%	8%	Note 1
Class 2 401-2000 ADT	50’	10’	4’	10’ min.	25 mph	10%	8%	Note 1, 5, 6
Class 1 101-400 ADT	50’	10’	2’	10’ min.	20 mph	10%	8%	Note 1, 5, 6
Fire Standard Access Road Up to 100 ADT Two-Way	50’	10’	2’	10’ min.	20 mph	16%	16%	Note 2, 5, 6
One-Way Driveway	36’	12’	2’	10’ min.	20 mph	16%	16%	Note 2,5 Note 3

Note 1: All structural sections for this classification based on future year traffic and estimated percentage of that traffic which will be heavy vehicle.

- Note 2: Surface capable of supporting a 75,000 lb. vehicle with a minimum 6-inch A.B. compacted to 95% with subgrade compacted to 95%.
- Note 3: Driveway standard specifications are contained in Chapter XVI of the Nevada County Land Use and Development Code, Fire Safety Regulations.
- Note 4: Intersection channelization may increase the minimum right-of-way at spot locations.
- Note 5: If approved by the Engineer, all grades over 10% will require minimum 3" A.C. surface (Section L-XVII 3.4[C])
- Note 6: All roads shall be constructed to provide a minimum of a two ten (10) foot traffic lanes, not including shoulder and striping.

The Nevada County Department of Public Works Standard Drawings, available from the Nevada County Department of Public Works, illustrate and clarify the standard specifications contained within this Chapter, as well as the Driveway specifications. (Ord. 2239)

#### B. HORIZONTAL ALIGNMENT

Changes in horizontal alignment of roads shall be made with horizontal circular curves with the edges of the pavement parallel to and equidistant from the centerline. Design of the horizontal alignment of roads shall be in accordance with the standards outlined in the California Department of Transportation "Highway Design Manual" in accordance with the appropriate design speed. Unless otherwise approved by the Engineer, the centerline of the road improvement shall coincide with the right-of-way centerline or other previously approved alignment.

#### C. VERTICAL ALIGNMENT

Grade changes in the vertical alignment greater than 2% shall be designed with parabolic vertical curves. The maximum grade, unless otherwise specified or approved by the Engineer, is 10% below 3,500-foot elevation and 8 percent above 3,500-foot elevation. The maximum grade without an Exception shall be 16%. The minimum grade for all classes of roads is 0.5%. The design of the vertical alignment of roads shall be in accordance with the standards outlined in the California Department of Transportation "Highway Design Manual" in accordance with the appropriate design speed.

The minimum vertical curve data to be complete and shown on the improvement plans shall identify the point of intersection elevation, the tangent gradients, the middle ordinate and the length of curve.

The minimum length of a vertical curve shall be one hundred (100) feet.

#### D. CROSS SLOPE DESIGN

The standard cross slope for all roads shall be 2.0%, sloping both directions from the "crown" or high-point at the centerline towards road edge. Any deviation from this standard requires prior approval from the Engineer.

Superelevated cross sections in horizontal curves shall have a maximum rate of superelevation of 6% for roads below 3,500 elevation. For roads at elevation 3,500 or above, the maximum rate of superelevation shall be 4%.

#### E. INTERSECTION DESIGN

Intersecting roads shall not exceed 6% grade for a minimum of thirty (30) feet from the edge of the traveled way of the intersecting road.

All roads shall intersect as nearly as possible at right angles, but in no case shall the angle of intersection be less than sixty (60) degrees.

Roads intersecting any road from opposite sides shall have their centerlines directly opposite, or the offset between intersections shall be a minimum of one hundred fifty (150) feet.

Minimum sight distances for intersections shall be designed to meet all standards as shown in the Nevada County Standard Drawings, Required Sight Distance at Intersection/Driveways.

F. CURVE WIDENING

No road or roadway structure shall have an inside radius of less than fifty (50) feet. In cases where the centerline radius of a road is less than or equal to two hundred (200) feet, the inside edge of pavement shall be widened by four (4) feet. In cases where the centerline radius is one hundred (100) to two hundred (200) feet, the inside edge of pavement shall be widened by two (2) feet.

G. ADDITIONAL RIGHTS-OF-WAY

The advisory agency may require additional rights-of-way to accommodate traffic or parking on business or major traffic streets. The advisory agency may also require right-of-way for non-vehicular traffic (i.e., bikeway, equestrian path, foot path, if the right-of-way is shown on an adopted master plan or specific plan).

H. SLOPE EASEMENTS

Slope easements shall be provided wherever they are needed to contain the cut or fill slopes. The slope easement line shall be set at the toe of the fill or top of the cut plus ten (10) feet.

I. CUL-DE-SAC

Roads that dead end or transition to a driveway or non-standard road shall be terminated with a bulb-shaped cul-de-sac at the point where the road ends or transitions as shown in Standard Drawings. Cul-de-sacs shall have a minimum forty (40) foot radius surfaced bulb, measured from the center of the bulb to the edge of the surfacing if parking is not allowed on the road. If parking is allowed on the road, a minimum fifty (50) foot radius surfaced bulb shall be provided. Said surfacing shall be the same as required for the terminating road.

Hammerhead turnaround designs may be utilized subject to approval by the Engineer for local class roads when unusual topographic or other conditions prevent cul-de-sac construction. If a hammerhead-T is used, the top of the "T" shall be a minimum of sixty (60) feet in length.

The maximum length for a cul-de-sac or other dead end road, including all dead end roads accessed from that dead end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

Parcels zoned for less than one acre	800 ft.
Parcels zoned for 1 acre to 4.99 acres	1320 ft.
Parcels zoned for 5 acres to 19.99 acres	2640 ft.
Parcels zoned for 20 acres or larger	5280 ft.

All lengths shall be measured from the edge of the road surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the shortest allowable length shall apply.

For parcels zoned for 5 acres or larger, turnarounds shall be provided at maximum 1,320-foot intervals.

Each dead end road, including gated access roads, shall have a turnaround constructed at its terminus.

J. UTILITIES PLACEMENT

In no case shall utility poles, light standards, guy wires, etc. be placed closer than six feet (6') to the edge of the traveled way. Manhole covers, grates, valve boxes, etc. shall be set so as not to interfere with snow removal.

K. ONE-WAY ROADS

One-way roads may be permitted subject to the approval of the Engineer. In no case shall one-way roads serve more than 10 dwelling units or exceed 2,640 feet in length. Standard one-way road structural sections are as shown on the Nevada County Standard Specifications Summary Chart. The surfacing requirements for one-way roads shall be the same as for the overall project of which they are a part. One-way roads shall serve only one direction of traffic and shall be signed appropriately and to the satisfaction of the entity responsible for fire protection. One-way roads shall connect on both ends to a two-way road.

L. MINIMUM VERTICAL CLEARANCE

The minimum vertical clearance over all roadways shall be fifteen (15) feet.

M. GATES ON ACCESS ROADS

1. Gate entrances shall be at least two feet wider than the width of the traffic lanes serving the gate, and shall have a minimum gate opening of fourteen (14) feet.
2. All gates providing access from a road to a driveway or another road shall be located at least thirty (30) feet away from the primary road right-of-way or easement and shall open to allow a vehicle to stop without obstructing traffic on that primary road.
3. All gates installed on emergency access roads after May 14, 2010 shall be subject to the following provisions:
  - a. At no time shall a gate on an emergency access road be locked.
  - b. The following standard signage shall be required on all gates on emergency access roads: "Emergency Access Only. This Gate Shall Remain Unlocked."
  - c. Pursuant to the enforcement powers established by the Nevada County Land Use and Development Code Section L-XVII 8.3 and 8.4, the County, or an agent of the County, reserves the right to remove locks from gates or to remove other encumbrances, including but not limited to boulders, ditches, and berms, that inhibit the use of an emergency access road for its intended purpose.
4. All gates installed prior to May 14, 2010, shall be subject to the legal requirements, standards and/or conditions that were applicable at the time of original approval and installation.
5. Security gates shall not be installed without approval of the Fire Marshal's Office of the fire authority having jurisdiction. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times.

**Sec. L-XVII 3.5 Structural Section Design**

**A. MINIMUM STRUCTURAL SECTION STANDARDS ACCORDING TO ROAD CLASS AND PARCEL SIZE**

Streets within the parcel(s) being developed and offsite non-county maintained access to the parcel(s) are to be brought/constructed to the minimum structural section condition indicated in the following table for the classes of streets within the parcel and the offsite access street and the parcel size being created. Higher standards are required if dictated by the projected traffic from the project.

**TABLE III  
MINIMUM SURFACING STANDARDS BY PARCEL SIZE AND FUNCTIONAL CLASSIFICATION**

Parcel Size Acres	Fire Standard Access Rd <100 ADT Note 2	Local Class 1 101-400 ADT Note 1	Local Class 2 401-2000 ADT Note 1	Collector Minor >2000 ADT Note 1	Collector Major & Urban	Arterial Minor	Elevation
0-2.999	N/A	N/A	3"A.C./8"A.B	3"A.C./8"A.C	Engineered Design	Engineered Design	
3-4.999	6" A.B. plus improve. plans and Right-of-Way	3"A.C./6"A.B 3"A.C./8"A.B	3"A.C./8"A.B.	3"A.C./8"A.B.	Engineered Design	Engineered Design	<3500' >3501'
5-9.999	6" A.B. plus improve. plans and Right-of-Way	6" A.B, Note 2, plus improve. plans and Right-of-Way	6" A.B, Note 2, plus improve. plans and Right-of-Way	3"A.C./8"A.B.	Engineered Design	Engineered Design	
10-39.999	6" A.B. plus improve. plans and Right-of-Way	6" A.B. plus improve. Plans and Right-of-Way	6" A.B. plus improve. Plans and Right-of-Way	6" A.B. plus improve. Plans and Right-of-Way	6" A.B. plus improve. Plans and Right-of-Way	6" A.B. plus improve. plans and Right-of-Way	
40 UP	6" A.B. plus Right-of-Way	6" A.B. plus Right-of-Way	6" A.B. plus Right-of-Way	6" A.B. plus Right-of-Way	6" A.B. plus Right-of-Way	6" A.B. plus Right-of-Way	

Note 1: Minimum requirements. Actual structural section design to be based on "R" value and "T.I."

Note 2: 6" A.B. = 6" A.B. at 95% compaction over subgrade compacted to 90%. If grade exceeds 10%, surface shall be 3"A.C. over 6"A.B.

Higher Standards are required if dictated by projected traffic from project.

**B. STRUCTURAL SECTION DESIGN**

The structural section design shall be based on the R-value of the underlying material, with the minimum structural sections as shown above and on the Standard Drawings. The location of R-value tests within the project area shall be selected so as to provide representative samples for the entire project area. Additional testing may be required in specific soil areas as directed by the Engineer.

**C. AGGREGATE BASE (AB) OR BASE**

Class 2 Aggregate Base is aggregate base in conformance with the provisions of Section 26, "Aggregate Bases" of the CALTRANS Standard Specifications.

D. DOUBLE SEAL

Double seal coat is seal coat in conformance with the provisions of Section 37, "Bituminous Seals" of the CALTRANS Standard Specifications.

E. ASPHALT CONCRETE (AC) PAVING OR PAVEMENT

Type B asphalt concrete is asphalt concrete in conformance with the provisions of Section 39, "Asphalt Concrete" of the CALTRANS Standard Specifications."

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**"Sec. L-XVII 3.12 Petition for Exception**

Modification of the required standard, except as provided within this Chapter, for the construction of specific roads shall follow the petition for exception process as specified in Section L-IV 2.6 of this Code. Otherwise, the Advisory Agency, in the case of petitions for exceptions from the Road Standards, shall be required to make findings of fact in support of the following in addition to those findings of fact specified in Section L-IV 2.6:

That an exception to any Fire Safe Standard, including those standards adopted by Chapter XVI of this Code and the Chapter XVII Fire Standard Access Road improvements, will provide the same practical effect of fire protection and is supported by the entity responsible for assuring compliance with California Code of Regulations Title 14, Natural Resources Division 1.5, Department of Forestry and Fire Protection Chapter 7, Subchapter 2, Articles 1-5.

The same practical effect can be met in some cases by incremental improvements of offsite access roads proportional to the intensity of development proposed.

It is intended that every effort be made to grant a petition for exception that includes feasible road improvement requirements for tentative parcel maps for living persons, or the testamentary disposition of deceased persons, who owned their property prior to March 4, 1972. The Board finds that such property owners have contributed significantly to the public trust through open space conservation by avoiding development of their property in prior years.

All requests for design exceptions shall be reviewed and approved by the County Engineer. In the case of requests for design exceptions for privately funded improvement projects, the Advisory Agency shall take action on the recommendation of the County Engineer and the findings for or against the exception shall be noted in the finding of facts either approving or denying the petition. All Petitions for Exceptions shall contain, at a minimum, the information requested on a Design Exception Information Form to be provided by the Department. (Ord. 2161)"

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