

# EXHIBIT A (Ordinance – Redlined Version)

## CHAPTER XVII: ROAD STANDARDS

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**ARTICLE 1**  
**PURPOSE AND DEFINITIONS**

**Sections:**

**Sec. L-XVII 1.1 Purpose**

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**Sec. L-XVII 1.1 Purpose**

It is the purpose of these Improvement Standards to set design and construction standards for public and private works under the jurisdiction of Nevada County in order to provide for the coordinated development of facilities to be used by and for the protection of the public. These Nevada County Road Standards shall set the guidelines for the design, plan preparation and construction of roads, drainage and related improvements. These Nevada County Road Standards are not meant to apply to work within any other governmental jurisdiction's highways, streets, or roads unless adopted separately or by reference by that jurisdiction. These Nevada County Road Standards shall apply to applications deemed complete after ~~May 11, 1995~~February 15, 2021.

**Sec. L-XVII 1.2 Scope**

This Chapter shall be known as and may be referred to as "Nevada County's Road Standards" or "Road Standards". Unless modified by these Road Standards, design and construction shall be performed in accordance with the latest editions of the State of California, Department of Transportation's "Highway Design Manual", "Traffic Manual", "Standard Specifications" and "Standard Plans". References in the State Standards to State maintained roads shall be construed to apply to County roads unless different provisions are specified in these Nevada County Road Standards.

Any details of road construction not specifically included in these Road Standards, including the above-referenced State Standards, shall be designed in accordance with accepted engineering practice, subject to approval by the Engineer. The Board of Supervisors may adopt by separate Resolution "Nevada County Standard Drawings" or "Standard Drawings" for the purpose of delineating what constitutes accepted practices for those minor details of road construction not set forth in this Chapter, but necessary for complete design of improvements. The Standard Drawings, in supplementing the Road Standards, may also graphically depict said Road Standards, but shall not supersede them and in the case of conflict, the provisions of this Chapter shall prevail. All construction shall comply with the standards of this Chapter as supplemented by the Standard Drawings adopted by Resolution, unless a Petition for Exception, pursuant to Sec. L-XVII 3.12 of this Code, has been granted for a specific standard.

**A. PRECEDENCE**

These Standard Specifications and Standard Plans, CALTRANS Standard Specifications and Plans, and any special provisions or supplementary documents are essential parts of Nevada County's Standard Specifications, and a requirement occurring in one is as binding

as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

Nevada County's Road Standards and Construction Specifications shall govern over CALTRANS' Standard Specifications and Plans in right-of-way under Nevada County's jurisdiction. Special provisions shall govern over both of these Standard Specifications in right-of-way under Nevada County's jurisdiction.

In the event of any discrepancy between any drawing and the figures written thereon, the figures shall be taken as correct. Detail drawings shall prevail over general drawings.

### **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.
- N. IMPROVEMENT: Work performed in accordance with these Road Standards.
- O. INTERSTATE HIGHWAYS AND FREEWAYS: Limited access highways.
- P. LABORATORY: Any testing agency or testing firm which has been approved by the Department.
- Q. LOCAL ROAD: A road that functions primarily to provide access to individual properties.
- R. MAJOR COLLECTOR ROAD: A (rural) road connecting local roads and (rural) minor collector roads to arterial roads.
- S. MINOR ARTERIAL ROAD: A road providing primary access from freeways and principal arterials to major origins and destinations.
- T. 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.
- U. MINOR COLLECTOR ROAD: A rural road connecting local roads to major collector and arterial roads
- V. PRINCIPAL ARTERIAL ROAD: A road carrying some regional traffic and connecting the major population centers within the County or immediate counties.
- W. PROJECT: The proposed improvements by the County or others.
- X. 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).
- Y. 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.
- Z. ROADWAY: Any surface designed, improved, or ordinarily used for vehicle travel.
- AA. ROADWAY STRUCTURES: Bridges, culverts, and other appurtenant structures which supplement the roadway bed or shoulders.
- BB. SHOULDER: Roadbed or surface adjacent to the traffic lane.
- CC. 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.

- DD. SPECIAL PROVISIONS: Specific clauses setting forth conditions or requirements peculiar to the work and supplementary to these Road Standards.
- EE. SPECIFICATIONS: The directions, provisions and requirements contained in these Road Standards.
- FF. 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.
- GG. 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.
- HH. TELECOMMUNICATION: Refers to data, voice, video or other information provided by wire, fiber optic cable or other technology.
- IIHH. TRAFFIC LANE: The portion of a roadway that provides a single line of vehicle travel.
- JJH. 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.
- KKH. 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.
- LLK. VERTICAL CLEARANCE: The minimum specified height of a bridge or overhead projection above the roadway.

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**ARTICLE 3**  
**ROAD DESIGN STANDARDS**

**Sections:**

- Sec. L-XVII 3.1 General**
- Sec. L-XVII 3.2 Road Classification**
- Sec. L-XVII 3.3 Construction of Major Roads**
- Sec. L-XVII 3.4 Design Geometrics**
- Sec. L-XVII 3.5 Structural Section Design**
- Sec. L-XVII 3.6 Signing**
- Sec. L-XVII 3.7 Curb, Gutter and Sidewalk**
- Sec. L-XVII 3.8 Bikeways**
- Sec. L-XVII 3.9 Snow Stakes**
- Sec. L-XVII 3.10 Snow Storage Easements**
- Sec. L-XVII 3.11 Maintenance Agreements**
- Sec. L-XVII 3.12 Petition for Exception**

**Sec. L-XVII 3.1 General**

The following standards for the design of roads represent the minimum values or the lowest acceptable limit in design of roads. These standards apply to both public and private construction. In cases where California State Laws, Nevada County Codes, Resolutions or Ordinances or Project Conditions of Approval provide for more stringent standards than those shown herein, the more restrictive standard shall prevail.

**Sec. L-XVII 3.2 Road Classification**

Roadways within Nevada County are designated by a functional classification system. Minimum road design standards are based upon the classification of the road or roads being constructed or improved. Roads functionally classified as Minor Collector or greater may be constructed to a standard of a lessor classified road when it can be demonstrated to the Director's satisfaction that the minimum level of service (LOS) criteria of the Nevada County General Plan can be met for the street or road in question at buildout of the General Plan. Routine repair, maintenance, and safety enhancement projects are exempted from strict compliance with these standards.

**A. GENERAL PLAN CLASSIFICATIONS**

Interim Classification Map) Until final adoption by the Nevada County Board of Supervisors of the revised Nevada County General Plan, the 1992 Functional Classification Map approved by the Federal Highway Administration (FHWA) on September 8, 1993, shall be the map referred to by the following paragraph. Upon final adoption of the Nevada County General Plan that map will be superseded by the Nevada County General Plan Land Use and Circulation Maps. The FHWA maps served as a basis for the recommended classification of County roads in the Nevada County General Plan. Upon final adoption of the General Plan, requests will be submitted to amend the FHWA Maps to be consistent with the Nevada County General Plan.

Regionally significant roads are classified by the General Plan or addendum to the General Plan. These roads are identified on General Plan or specific plan maps or other descriptions. Some of these roads may be maintained by the state or by the cities.

1. Interstate Highways and Freeways. Limited access highways (e.g., Interstate 80 and the Golden Center Freeway).
2. Principal Arterials. Roadways carrying some regional traffic and connecting the major population centers within the County (e.g., State Route 49 south of Grass Valley and State Route 20 west of Grass Valley).
3. Minor Arterials. Roadways providing primary access from freeways and principal arterials to major origins and destinations (e.g., Nevada City Highway, Brunswick Road and State Route 174).
4. Collectors (Major and Minor). Streets connecting arterials to local roads. Collectors are broken down into the subcategories of Major and Minor in the rural area of the County (e.g., [Urban] Collector, Sutton Way; [Rural] Major Collector, Alta Sierra Drive; [Rural] Minor Collector, Norlene Drive).
5. Local Road Classifications. The classification of roads not classified as Minor Collector and above by the General Plan Circulation Map is Local Road. These roads function primarily to provide access to individual properties. The standard to which these roads are to be constructed is determined by the type and intensity of the adjacent land uses. The class of local road will be determined by the estimated future Average Daily Traffic (ADT). The future ADT shall be computed using the sum of existing traffic, plus any additional traffic generated from land uses allowed under the County's current General Plan and Chapter II of this Code. For the purpose of implementing the General Plan, local roads can be broken into the following subcategories:
  - a. Minor Collector Equivalent (Local Class 3) Road: Serves a buildout volume in excess of 2,000 Daily Trips (A.D.T.) and is constructed to the same standard as those roads classified as Minor Collector on the General Plan Circulation Plan.
  - b. Local Class 2: Serves a buildout volume of 401 to 2,000 Average Daily Trips (A.D.T.).
  - c. Local Class 1: Serves a buildout volume of 101 to 400 A.D.T.
  - d. Fire Standard Access Road: Is the minimum standard for access to a driveway for new construction and serves a maximum of 100 A.D.T.

## B. FUTURE TRAFFIC GENERATION

Future traffic generation from allowed land uses will be based on the trip generation factors in the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual unless specific local studies have been conducted and accepted for conditions unique to Nevada County. In the case of uses not specifically listed in the ITE Trip Generation Manual or for which local studies have not been conducted, the most similar use will be used.

The Chart on the following page summarizes the above Classifications.

**TABLE I**

**NEVADA COUNTY ROAD CLASSIFICATION SYSTEM**

<b>Functional Classification</b>	<b>Jurisdiction</b>	<b>Criteria</b>	<b>Example</b>	<b>Purpose</b>
Interstate	State	See Purpose	I-80	Limited access highways carrying regional and interstate traffic
Other Freeways or Expressways	State	See Purpose	Golden Center Freeway	Limited access highways carrying regional traffic
Other Principal Arterials	State	See Purpose	SR 49 South of Grass Valley	Major roadways providing access from rural to urban areas and access to freeways
Minor Arterial	State, County or City	See Purpose	Nevada City Hwy., SR 174	Streets providing through service to industrial and commercial areas and between cities and/or providing access to highways and freeways
Collector (Urban)	County or City	See Purpose	Sutton Way	Serves high density urban, industrial or commercial areas
Major Collector (Rural)	County	See Purpose	Alta Sierra Dr.	Roads that collect traffic from minor collectors and local roads
Minor Collector (Rural)	County	See Purpose	Bitney Springs Road	Roads that collect traffic from local roads and individual parcels
Local Class 2	County	401-2000 ADT	Jones Bar Rd.	Roads whose primary purpose is to provide access to individual properties
Class 1	County	101-400 ADT	Augustine Road	Roads whose primary purpose is to provide access to individual properties
Fire Standard Access Road	County	Up to 100 ADT		Minimum standard vehicular access to a driveway for new construction
Driveway	County	Up to 2 parcels		Minimum standard vehicular access to a dwelling. See Chapter XVI: Fire Safety Regulations, Nevada County Land Use and Development Code, for complete driveway specifications

**Sec. L-XVII 3.3 Construction of Major Roads**

When a subdivider is required to provide as an improvement a road functionally classified as a Minor Collector or greater within or adjacent to his or her development, the right-of-way shall conform to the width and alignment standards contained herein for functionally classified roads. Oversizing of improvements may be required due to the eventual capacity needs of cumulative growth beyond the infrastructure needs generated by an individual project. Such oversized improvement may be subject to a reimbursement agreement pursuant to Sections L-IX 3.2 and



L-IX 3.5 of this Code. If the project needed to accommodate cumulative growth is contained within the list of projects upon which development fees are based, credit towards an individual project's development fees may be given in lieu of entering into a reimbursement agreement for the oversized improvement. All construction, including cut and fill slopes, shall be contained within the right-of-way offered for dedication.

**A. OFFSITE ACCESS**

The subdivider shall provide proof of adequate offsite right-of-way. Adequate offsite right-of-way is defined as the legal right of the developer and his assignees to use of a road that is of sufficient width to contain the entire road prism (including cut and fill slopes) which is required under this Chapter and which provides access to a County road or State highway. When the parcels being created are less than three (3) acres in size, the subdivider shall improve offsite County roads to a minimum of the local class road standard appropriate to the project based on the future ADT. In the case that an existing offsite County maintained access road is not within the Nevada County Department of Public Works Five Year Road Capital Improvement Program for upgrading to be adequate in capacity to accommodate the additional traffic to be generated by a specific project, the developer shall be responsible for upgrading the offsite County road to the standard appropriate to the existing traffic plus the traffic calculated to be produced by the project. (Ord. 2239)

**B. EXISTING COUNTY ROADS**

The subdivider shall surface existing onsite County roads in accordance with the standards based on the traffic that will be generated by his or her subdivision. The minimum road prism, including cut and fill slopes, to be constructed shall be that standard appropriate to accommodate cumulative growth and shall be subject to the oversizing provisions as discussed above under "Construction of Major Roads".

**C. STREET EXTENSIONS**

Streets which are to be extended in the future are not required to be constructed providing they do not exceed one lot in depth and provided all lots adjacent to such streets have adequate frontage on and access to another street. Right-of-way and slope easements sufficient for construction shall be provided.

**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**

<b>Functional Classification</b>	<b>Min. Right-of-Way Width Note 4</b>	<b>Standard Lane Width</b>	<b>Standard Shoulder Width</b>	<b>Fuel Mod. Area Width</b>	<b>Standard Design Speed</b>	<b>Standard Max. Grade Below 3500'</b>	<b>Standard Max. Grade Above 3500'</b>	<b>Required Surface</b>
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	36'	12'	2'	10' min.	20 mph	16%	16%	Note 2,5
Driveway								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

1. 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.

2. New utilities shall be located as follows:

a. Water – 3 feet from edge of pavement on the north or west side of the road

b. Sewer – 5 feet from the road centerline on the south or east side of the road

c. Storm Drains - 5 feet from the road centerline on the north or west side of the road

d. Joint trenches, telecommunications and other utilities – either side of the road and at least 6 feet from the centerline of roadside ditches

3. Telecommunication Requirements - The installation of conduit for telecommunication purposes is required for all Capital Improvement Projects, development projects and Encroachment Permit work that includes any of the following:

- a. All new arterial/collector road and bridge construction.
- b. All new subdivision roads where underground utilities are required.
- c. Arterial/Collector road reconstruction/widening involving reconstruction of the base and/or subbase on sections of a road spanning:1) between two road intersections or more; or 2) 1,000 feet in length or more.
- d. Bridge reconstruction.
- e. Trench work on arterial/collector roads spanning:1) between two road intersections or more; or 2) 1,000 feet in length or more.

An exception may be granted in writing by the Director per the following:

- a. Capital Improvement Projects: Separate alternative bid items will be required for all projects where telecommunication conduit is required per the above. If funding is not identified from the County or others upon award of a construction contract or upon commencement of the work by the County, an exception may be granted.
- b. Development project, non-County maintained road and/or Encroachment Permit work: An applicant may request funding from the County for the cost to construct telecommunication conduit if other funding sources are not available, less any costs shared by other utilities. Requests must include the associated project name, associated County permit numbers, an engineer or contractor estimate with a separately identified cost for construction of conduit for telecommunication use, the amount requested and any additional pertinent information. Approval of funding from the County will require Board of Supervisor approval of a funding agreement. In addition, an applicant may request to install conduit on other roads (other than arterials and collectors) for County consideration.
- c. Any location where trenching is not advisable per a stamped and signed report from a licensed Geologist, Geotechnical Engineer or Civil Engineer.

Conduit for telecommunication purposes shall be a minimum of 4" HDPE constructed per County trench backfill requirements with pull boxes every 250 feet. Telecommunication conduit must be constructed in road right of way or in Public Utility Easements or equivalent and may be constructed in joint trenches with other dry utilities. Completed telecommunication conduits must be granted to a telecommunication company or the County of Nevada.

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
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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 95%. 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.

### **Sec. L-XVII 3.6 Signing**

Sign type and location shall conform to the following:

#### **A. STREET SIGNS**

Street signs shall be of the type and size as shown in the Nevada County Standard Drawings. A street sign installation with four sign plates on each post is required at each intersection. The location of street sign installations shall be shown on the improvement plans.

#### **B. TRAFFIC SIGNS**

Stop signs, speed limit signs and other traffic control signs shall be of the size and type and shall be installed in locations that are in conformance with the State of California, Department of Transportation Traffic Manual and as required and approved by the Engineer.

### **Sec. L-XVII 3.7 Curb, Gutter and Sidewalk**

- A. Curb, gutter and/or sidewalk shall be installed adjacent to all road improvements where required by Ordinance, Resolution or as a Condition of Approval for the project. Type E rolled curb and gutter and the sidewalk adjacent to the curb and gutter shall be placed upon a layer of Class 2 aggregate base compacted to 95 percent relative compaction. The depth of the aggregate shall be thick enough so that when combined with the concrete above the resulting structural section is equivalent to that of the adjoining roadway. In no case shall the depth of Class 2 aggregate be less than 2 inches.
- B. Type A2-6 curb and gutter shall be placed upon a layer of Class 2 aggregate base as described for Type E rolled curb and gutter except that the sidewalk adjacent to Type A2-6 curb and gutter need not be placed upon aggregate base, provided that the subgrade is compacted to ninety five (95) percent relative compaction. All curb, gutter and sidewalk shall be constructed in accordance with the latest edition of the State of California, Department of Transportation Standard Plans and Section 73, "Concrete Curbs and Sidewalks" of the Standard Specifications.
- C. In areas above the three thousand five hundred (3,500) foot elevation, Type E rolled curb and gutter shall be constructed (see CALTRANS Standard Plans).
- D. The minimum width for all sidewalks shall be four (4) feet except as otherwise specified or required.
- E. Sidewalks shall be six (6) feet wide at bus turnouts and at signalized intersections. Where utility poles or other obstructions are situated within street-side sidewalks, a minimum of four feet of clear uninterrupted sidewalk area shall be provided. Where it is necessary to widen the sidewalk beyond the standard width to obtain the four (4) foot clearance, the widened area shall extend a minimum of five (5) feet beyond each side of the obstruction and a ten foot taper on each side of the widening shall be required.
- F. All construction shall comply with the Americans With Disabilities Act of 1990 (42 U.S.C.S. Secs. 12101, et seq.).

### **Sec. L-XVII 3.8 Bikeways**



All bikeways shall be constructed in locations designated by and designed in conformance with the Nevada County Bicycle Master Plan and the CALTRANS Highway Design Manual, Chapter 1000, "Bikeway Planning and Design."

**Sec. L-XVII 3.9 Snow Stakes**

Snow stakes shall be provided and placed by the Department where applicable. The Developer shall be responsible for payment to the Department for this service on a one-time-only basis.

**Sec. L-XVII 3.10 Snow Storage Easements**

Snow storage easements shall be provided in subdivisions above 3,500 feet elevation and shall be ten feet wide on both sides of the road right-of-way.

**Sec. L-XVII 3.11 Maintenance Agreements**

If the roads constructed within a subdivision are to remain private, then a maintenance entity shall be formed to insure continued maintenance on the road system. Maintenance of the road system shall include maintenance of the fuel modification zones and minimum vertical clearances. The entity shall be formed in accordance with the Standard Maintenance Agreement on file in the Department of Public Works. The subdivider may be required to annex to an adjacent existing maintenance entity. (Ord. 2239)

**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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