<table>
<thead>
<tr>
<th>PLAN NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>101A</td>
<td>COMMERCIAL AND INDUSTRIAL ROADWAYS</td>
</tr>
<tr>
<td>101B</td>
<td>CLASS I SUBDIVISIONS and PARCEL MAP (LESS THAN 2 ACRES IN URBAN AREA) ROADWAY</td>
</tr>
<tr>
<td>101C</td>
<td>RURAL SUBDIVISION AND PARCEL MAP ROADWAYS</td>
</tr>
<tr>
<td>103A-1</td>
<td>DRIVEWAY CONNECTION— SINGLE UNIT, CLASS I SUBDIVISION WITH ROLLED CURB &amp; GUTTER</td>
</tr>
<tr>
<td>103A-2</td>
<td>DRIVEWAY CONNECTION— SINGLE UNIT RESIDENCE, CLASS I SUBDIVISION WITHOUT CURB &amp; GUTTER</td>
</tr>
<tr>
<td>103B-1</td>
<td>DRIVEWAY CONNECTION— SINGLE UNIT TO LOCAL ROAD OR MINOR COLLECTOR</td>
</tr>
<tr>
<td>103B-2</td>
<td>DRIVEWAY CONNECTION— SINGLE UNIT, CLASS I SUBDIVISION ONLY WHERE A.C. DIKE EXISTS</td>
</tr>
<tr>
<td>103C</td>
<td>DRIVEWAY CONNECTION— MINOR COMMERCIAL/INDUSTRIAL, ETC.</td>
</tr>
<tr>
<td>103D</td>
<td>LOCAL ACCESS ROAD TO COLLECTOR &amp; MAJOR COMMERCIAL CONNECTION</td>
</tr>
<tr>
<td>103E</td>
<td>MINOR COLLECTOR TO COLLECTOR/ARTERIAL</td>
</tr>
<tr>
<td>103F</td>
<td>MAJOR COLLECTOR TO COLLECTOR/ARTERIAL</td>
</tr>
<tr>
<td>103G</td>
<td>COMMERCIAL DRIVEWAY FOR VERTICAL CURB LOCATIONS</td>
</tr>
<tr>
<td>104</td>
<td>CONCRETE CURB AND GUTTERS, A.C. DIKE</td>
</tr>
<tr>
<td>105A</td>
<td>STOP SIGN</td>
</tr>
<tr>
<td>105B</td>
<td>STREET SIGN</td>
</tr>
<tr>
<td>105C</td>
<td>BARRICADES/ROAD ENDS SIGN DETAIL</td>
</tr>
<tr>
<td>106</td>
<td>FIRE HYDRANT LOCATION DETAIL</td>
</tr>
<tr>
<td>109</td>
<td>COMMERCIAL DRIVEWAY REGULATIONS</td>
</tr>
<tr>
<td>110</td>
<td>SPECIAL COMMERCIAL FRONTAGE ENTRANCE</td>
</tr>
<tr>
<td>114</td>
<td>CUL-DE-SAC</td>
</tr>
<tr>
<td>115A</td>
<td>GRATED INLET TYPE B</td>
</tr>
<tr>
<td>115B</td>
<td>DROP INLET/CALTRANS TYPE B</td>
</tr>
<tr>
<td>115C</td>
<td>PELICAN GALLERY SANTA ROSA MODEL 6Y/MODEL 4AC CURB INLET</td>
</tr>
<tr>
<td>118</td>
<td>ROCK LINED DITCH</td>
</tr>
<tr>
<td>119</td>
<td>UNDERGROUND TRENCH DETAIL</td>
</tr>
<tr>
<td>120</td>
<td>UTILITY POLE LOCATIONS</td>
</tr>
<tr>
<td>T-501</td>
<td>ROCK LINED CHANNELS</td>
</tr>
<tr>
<td>T-502</td>
<td>GATE DETAIL</td>
</tr>
<tr>
<td>T-503</td>
<td>VEHICLE BARRIER</td>
</tr>
<tr>
<td>T-504</td>
<td>ROCK INLET/OUTLET PROTECTION</td>
</tr>
<tr>
<td>T-505</td>
<td>PAVED SWALE</td>
</tr>
<tr>
<td>T-506</td>
<td>ROCK BREAST WALL</td>
</tr>
<tr>
<td>T-507</td>
<td>ROCK SLOPE PROTECTION</td>
</tr>
<tr>
<td>T-508</td>
<td>3’ AND 4’ TIMBER RETAINING WALL</td>
</tr>
</tbody>
</table>

**STATEMENT OF DISCLOSURE**

These standards are in conformance with generally accepted engineering practices. The intent of these standards is to establish guidelines for public works applications. It is understood that these standards will not be applicable to every situation. The county engineer has the authority to make exceptions to these standards.
SYMBOLS
- CENTERLINE
- PROPERTY LINE
- FENCE LINE
- RIGHT OF WAY
- OVERHEAD ELECTRICAL
- UNDERGROUND ELECTRICAL
- SEWER LINE
- WATER LINE
- GAS LINE
- FLOWLINE
- GUARDRAIL
- AC DIKE
- EXISTING EMBANKMENT SLOPE
- NEW EMBANKMENT SLOPE
- EXISTING PIPE IN SECTION
- NEW PIPE IN SECTION

DEFINITIONS
AB - AGGREGATE BASE
A.C. - ASPHALT CONCRETE
ADT - AVERAGE DAILY TRAFFIC COUNT
ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC - BEGIN CURVE
C & G - CURB AND GUTTER
CIP - CAPPED IRON PIPE
C - CENTERLINE
CMP - CORRUGATED METAL PIPE
C.O.S. - CLEANOUT STRUCTURE
CSP - CORRUGATED STEEL PIPE
EC - END CURVE
EP - EDGE OF PAVEMENT
F - FLOWLINE
FC - FACE OF CURB
F.E.S. - FLARED END SECTION
I.F. - INSIDE DIAMETER
O.C. - ON CENTER
O.D. - OUTSIDE DIAMETER
P.C.C. - PORTLAND CEMENT CONCRETE
P - PROPERTY LINE
PVC - POLY-VINYL-CHLORIDE
RCP - REINFORCED CONCRETE PIPE
R/W - RIGHT OF WAY
SB - SUBBASE
SG - SUBGRADE
TBC - TOP BACK OF CURB
TW - TOP OF WALL

GENERAL NOTES
1. ALL A.C. TO BE 1/2" MAXIMUM, MEDIUM TYPE B WITH AR 4000 FOR A.C. SECTIONS OF 2 1/2" FOR GRADES EXCEEDING 7% OR ELEVATIONS OVER 3000'. 3/4" MIX REQUIRED. FOR A.C. SECTIONS OF 3", 2" WILL BE 3/4" MAXIMUM, MEDIUM TYPE B (LOWER LIFT) AND 1" OF 1/2" ON TOP.

2. INTERSECTION SIGHT DISTANCE WILL BE MEASURED FROM A HEIGHT OF 3'-6" TO A HEIGHT OF 3'-6" (AASHTO).

3. FIVE SACK CEMENT CONCRETE FOR DRIVEWAYS, SIDEWALKS, AND SIX FOR DRAINAGE STRUCTURES.

4. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL, UNLESS A CIVIL ENGINEER DETERMINES THAT A STEEPER SLOPE WILL BE SAFE FOR THE INTENDED USE, WILL NOT BE SUSCEPTIBLE TO EROSION, AND WILL NOT CAUSE ADDITIONAL MAINTENANCE.

5. TWENTY FEET MINIMUM ROADWAY WIDTH REQUIRED FOR CDF AND FIRE PROTECTION VEHICLE ACCESS. (STANDARD RIG SIZE = 96" WIDE, PLUS 10" FOR EACH SIDE MIRROR AND 13'-6" HIGH CLEARANCE.)

6. A STORM DRAIN MANHOLE OR CLEANOUT WILL BE PLACED EVERY 300' OR AT ANY JUNCTION. THESE STORM DRAIN MANHOLES/C.O.S. WILL BE INSTALLED WITH 24" OPENINGS FOR 3' DEEP, 36" FOR UP TO 5', AND 48" OVER 5' DEEP. NUMBER 4 REBAR REQUIRED 12" O.C. ON ALL D.I.'S OVER 5' IN DEPTH, AND ON STORM DRAIN MANHOLES OVER 8' IN DEPTH.

7. GRADES MAY REACH 15% FOR NO MORE THAN 600'. IN ELEVATIONS ABOVE 3000'. GRADES SHALL NOT EXCEED 10% (15% IF SURFACED)
CONSTRUCTION/SLOPE EASEMENT AS REQUIRED (TYP) (SEE NOTE 6)

BASIC RIGHT OF WAY
SEE CHART BELOW

20', 32', 14', 56'

20', 32', 14', 56'

2:1 OR FLATTER

4" MIN. AGG BASE

4" MIN. CLASS II AGGREGATE BASE (SEE NOTE 3)

COMPACTED SUBGRADE (SEE NOTE 2 & 9)

R/W ROADWAY WIDTH ADT DESIGN SPEED MAX. GRADE

68' 48' LESS THAN 5000 40 12% X

80' 64' 5001 TO 35,000 40 10%

110' 88' 35,001 TO 60,000 40 10%

130' 112' 60,001 TO 85,500 40 10%

X WITH COUNTY ENGINEER'S APPROVAL

NOT TO SCALE

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION

NOTES:

1. TYPE 2 CURB AND GUTTER AS SHOWN ON STANDARD PLAN 101. 8' MINIMUM SIDEWALKS ARE REQUIRED ON INDUSTRIAL AND COMMERCIAL STREETS.

2. TOP 6" OF SOIL BELOW SUBGRADE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION (C.T.M. 231F OR ASTM 1557).

3. CLASS 2 AGGREGATE BASE, COMPACTED TO 95% RELATIVE COMPACATION (C.T.M. 231F OR ASTM 1557) INCLUDING SIDEWALKS AND CURB & GUTTERS. ALL AGGREGATE BASE WILL MEET CALTRANS REQUIREMENTS FOR GRADATIONS AND S.E.

4. OVER ALL AGGREGATE BASE, ASPHALT CONCRETE SHALL BE TYPE B PER CALTRANS STANDARD SPECIFICATION 39, 1" OF 1/2" MAX. MED. OVER 2" OF 3/4" A.C. ASPHALT GRADE AR-4000.

5. FOR GRADES EXCEEDING 7%, OR ELEVATIONS OVER 3000 FT., A.C. SECTION WILL BE ONLY 3/4" MAX. MED. TYPE B TACK COAT TO BE USED BETWEEN A.C. LIFTS.

6. WHEN THE GRADING FOR CUT AND FILL SLOPES EXTENDS OUTSIDE OF THE BASIC RIGHT OF WAY WIDTH, A SLOPE EASEMENT WILL BE PROVIDED 2' BEYOND ALL TOE OF FILLS, HINGE OF CUTS, OR DRAINAGE STRUCTURES.

7. ADT's SHALL BE THOSE SHOWN IN THE THE LAND CAPABILITY REPORT UNLESS DETERMINED OTHERWISE BY THE COUNTY ENGINEER.

8. BELOW THE 3000 FT. ELEVATION, ROLLED CURB TYPE 1 ONLY REQUIRED FOR SNOW REMOVAL.

9. IN EXISTING CUT SECTIONS, THE TOP 6" OF SUBGRADE WILL BE SCARIFIED AND RECOMPACTED TO 95% RELATIVE COMPACTION.
NOTES:

1. In existing cut sections, scarify and recompact subgrade to 95% rel. compaction, key in slopes over 10:1.

2. Top 6" of native subgrade shall be compacted to 95% (C.T.M. 231 or A.S.T.M. 1537).

3. Class 2 aggregate base compacted to 95%, per Caltrans standard specifications section 26. (C.T.M. 231 or A.S.T.M. 1537) including the 4" under curb & gutter, and sidewalks.

4. Over all aggregate base, asphalt concrete shall be type B per Caltrans standard specification 39. Aggregate 1 1/2" max. medium type B, asphalt grade AR-1000. For grades exceeding 7%, and elevations over 3000 ft., A.C. to be only 3/4" max. medium. Tack coat to be used between A.C. lifts.

5. Fog seal SB-I, overall A.C. prime coat to be S78.

6. When the grading for cut and fill slopes extends outside of the basic right of way width, slope easement will extend 2' beyond mingles, toes and drainage structures.

7. Adjacent to schools, sidewalks shall be 8 feet wide, and extend between school property lines.

8. ADT's shall be those shown in the land capability report unless determined to be otherwise by the county engineer.

9. Pavement, base, and subgrade compaction thickness may be changed if designed by a registered civil or geotechnical engineer. R-value test results must be submitted.

10. Upon special approval, curb, gutter and sidewalk may be changed to A.C. pipe and oversized drains when connecting onto existing A.C. facilities.

<table>
<thead>
<tr>
<th>R/W</th>
<th>ROADWAY WIDTH (CURB FACE TO CURB FACE)</th>
<th>ADT</th>
<th>DESIGN SPEED</th>
<th>MAX. GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>50'</td>
<td>28' RR</td>
<td>0-350 K</td>
<td>25 K</td>
<td>15% RR</td>
</tr>
<tr>
<td>50'</td>
<td>36' RR</td>
<td>351-2000</td>
<td>25</td>
<td>15% RR</td>
</tr>
<tr>
<td>60'</td>
<td>48' RR</td>
<td>2001-5000</td>
<td>35</td>
<td>12% RR</td>
</tr>
<tr>
<td>80'</td>
<td>64' RR</td>
<td>5001-10000</td>
<td>40</td>
<td>10% RR</td>
</tr>
</tbody>
</table>

*WITH COUNTY ENGINEER'S APPROVAL
*TYPE I ROLLED CURB AND GUTTER
### Greater than 2,000 ADT Use Standard Plan 101A or 101B

**NOT TO SCALE**

<table>
<thead>
<tr>
<th>ADT</th>
<th>RW</th>
<th>Roadway Width</th>
<th>Shoulder Width</th>
<th>Design Speed</th>
<th>Max Grade</th>
<th>Structural Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-150</td>
<td>50'</td>
<td>18'</td>
<td>1' (each side)</td>
<td>20 MPH</td>
<td>15% PAVED</td>
<td>6&quot; CLASS 2 AB</td>
</tr>
<tr>
<td>151-600</td>
<td>50'</td>
<td>18'</td>
<td>2' (each side)</td>
<td>25 MPH</td>
<td>12% UNPAVED</td>
<td>(SEE NOTE 4)</td>
</tr>
<tr>
<td>601-1500</td>
<td>60'</td>
<td>20'</td>
<td>5' (each side)</td>
<td>40 MPH</td>
<td>13% 4&quot;</td>
<td>AC ON 7' AB</td>
</tr>
<tr>
<td>1501-2000</td>
<td>60'</td>
<td>22'</td>
<td>6' (each side)</td>
<td>40 MPH</td>
<td>4&quot; AC ON 8' AB</td>
<td></td>
</tr>
</tbody>
</table>

* 15% with County Engineer's approval (not to exceed 600 LF.)

---

**Notes:**

1. Standard Plan 101A or 101B shall be used for all County maintained roads and all non-county maintained roads within community regions.
2. ADT data shown in the table are the forecasted for 20-year out daily volumes.
3. Roads above 3,000 ft elevation shall be AC paved. The minimum structural section shall be 2.5" AC on 6" AB for roads with ADTs less than 601.
4. Roads with ADT less than 601 may exceed the 12% maximum grade up to a maximum of 15% for more than 600 LF if they are paved with a minimum of 2.5" AC on 6" AB.
5. Widening of existing on-site roads shall comply with minimum structural section required and have as good or better surfacing than existing road.
6. Any modification to structural section shown shall be based on "B" value and "T" design. Design to be submitted to DOT for review and approval.
7. AC shall be type B.
8. The top 6" of subgrade and all class 2 AB shall be compacted to 95% relative compaction.
9. Fabric reinforcement is required on all yielding subgrades unless an alternative design is prepared by the engineer and approved by the County.
10. Double-chip seal may be substituted for 2" of AB for roads with ADT below 601.
11. Cut and fill slopes shall be no steeper than one horizontal to one vertical unless a civil engineer determines that a steeper slope will be safe for the intended use and will not be susceptible to erosion. Slopes over 10% (one horizontal to one vertical) are to be keyed in with embankment fill.
12. Construction/slope easements shall extend 5' beyond hinge points, slope toes, and drainage structures.
NOTES:

E = 200' minimum sight distance for local st., 100' for a cul-de-sac.

A = Angle of driveway centerline in relation to road centerline, the angle will be between 70°-90°

1. The driveway structural section is 4" of Portland cement concrete or 2 1/2" asphalt concrete over 4" of aggregate base.

2. Those driveways exceeding 20% either up or down in grade, will require a grading permit.

3. No portion of a driveway will be within 25' from a radius return, nor 10' from a fire hydrant.

EXISTING PAVEMENT

HEADER BOARD JOINT
(SEE DETAIL)

HEADER BOARD JOINT DETAIL

10% MAX. UPSLOPE

10% MAX. DOWNSLOPE GRADE

STRUCTURAL SECTION
(SEE NOTE 1)

5'

BACK OF CURB

CONCRETE CURB & GUTTER

10' MIN. (TO E IF GREATER)

16' MIN. 35' MAX.

E (SIGHT LINE)

PAVING LIMITS VARY: 10' OR E, WHICHEVER IS GREATER

PROPERTY LINE

DRIVEWAY WIDTH
+ 4 FT. (39' MAX)

COUNTY ROAD

C

COLL

CONCRETE CURB & GUTTER

16' MIN.

35' MAX.

10' MIN.

TO E (IF GREATER)

5'

HEADER BOARD JOINT
(SEE DETAIL)

PROTECTIVE BOARD JOINT DETAIL

10% MAX. UPSLOPE

10% MAX. DOWNSLOPE GRADE

1/2'

P.C.C.

3/4'

4" P.C.C.

EXISTING PAVEMENT

HEADER BOARD JOINT
(SEE DETAIL)

10% MAX. UPSLOPE

10% MAX. DOWNSLOPE GRADE

STRUCTURAL SECTION
(SEE NOTE 1)

5'

CONCRETE CURB & GUTTER

10' MIN. (TO E IF GREATER)
NOTES:

E = 200' MINIMUM SIGHT DISTANCE FOR LOCAL ST., 100' FOR A CUL-DE-SAC.

A = ANGLE OF DRIVEWAY CENTERLINE IN RELATION TO ROAD CENTERLINE, THE ANGLE WILL BE BETWEEN 70°-90°

1. THE DRIVEWAY STRUCTURAL SECTION IS 2 1/2" ASPHALT CONCRETE OVER 4" OF AGGREGATE BASE.

2. THOSE DRIVEWAYS EXCEEDING 20% EITHER UP OR DOWN IN GRADE, WILL REQUIRE A GRADING PERMIT.

3. NO PORTION OF A DRIVEWAY WILL BE WITHIN 25' FROM A RADIUS RETURN, NOR 10' FROM A FIRE HYDRANT.

PLAN

PROFILE
**COUNTY ROAD SPEED**

<table>
<thead>
<tr>
<th>A</th>
<th>70° – 110°</th>
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</thead>
<tbody>
<tr>
<td>E</td>
<td>250 – 300</td>
</tr>
<tr>
<td></td>
<td>350 – 400</td>
</tr>
<tr>
<td></td>
<td>450 – 500</td>
</tr>
<tr>
<td></td>
<td>550</td>
</tr>
</tbody>
</table>

**NOTES:**

1. **E** = 200° Minimum sight distance for local st., 100° for a cul-de-sac.

2. **A** = Angle of driveway centerline in relation to road centerline. The angle will be between 70°-100°.

3. **D**. Driveaway structural section is 2 1/2” asphalt concrete and 4” of aggregate base.

4. **D**. Those driveaways exceeding 20°, either up or down in grade, will require a grading permit.

5. **D**. No portion of a driveway will be within 25° from a radius return, nor 10° from a fire hydrant.

6. **D**. Minor collectors will require maximum width dimension on driveway.

**PLAN**

- Alternate paving sight line minimum sight distance
- Edge of existing pavement
- Minimum paving limits

**PROFILE**

- At least 35° from E if on collector
- Overall structural section (see note 1)
- Clean and tack existing AC
- Min. 12” dia. CSP as req’d cover to be 1/2 dia. of pipe

**NOT TO SCALE**
NOTES:

COUNTY ROAD SPEED

<table>
<thead>
<tr>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>250</td>
<td>300</td>
<td>350</td>
<td>400</td>
<td>450</td>
<td>500</td>
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</tbody>
</table>

E = 200° minimum sight distance for local st, 100° for a cul-de-sac.

A = Angle of driveway centerline in relation to road centerline, the angle will be between 70° - 110°

1. Driveway structural section is 2 1/2" asphalt concrete and 4" of aggregate base.

2. Those driveways exceeding 20%, either up or down in grade, will require a grading permit.

3. No portion of a driveway will be within 25' from a radius return, nor 10' from a fire hydrant.

NOT TO SCALE

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

DRIVEWAY CONNECTION
SINGLE UNIT RESIDENCE
CLASS 1 SUBDIVISION
ONLY WHERE AC DIKE EXISTS

STD. PLAN
103B-2
NOTES:

<table>
<thead>
<tr>
<th>ENCROACHMENT CLASSIFICATION</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
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<tbody>
<tr>
<td>A</td>
<td>70' - 110'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>10 TIMES THE OPERATIONAL SPEED OF TRAFFIC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>24' MAX.</td>
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</table>

1. THE STRUCTURAL SECTION IS 2 1/2" OF ASPHALT CONCRETE PER CALTRANS SPEC. SECTION 39, OVER 6" OF CLASS II AGGREGATE BASE PER CALTRANS SPECS.

2. ADDITIONAL DRAINAGE STRUCTURES NEEDED IF HYDRAULIC STUDIES WARRANT.

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

NOT TO SCALE
NOTES:

A 70' - 110'

E 10 TIMES THE OPERATIONAL SPEED OF TRAFFIC

1. THE STRUCTURAL SECTION IS 2 1/2" OF ASPHALT CONCRETE PER CALTRANS SPEC. SECTION 39. OVER 6" OF CLASS II AGGREGATE BASE PER CALTRANS SPECS.

2. ADDITIONAL DRAINAGE STRUCTURES NEEDED IF HYDRAULIC STUDIES WARRANT.
NOTES:

A  70' - 110'
E  10 TIMES THE OPERATIONAL SPEED OF TRAFFIC

1. THE STRUCTURAL SECTION IS 2 1/2" OF ASPHALT CONCRETE PER CALTRANS SPEC. SECTION 39, OVER 6" OF CLASS II AGGREGATE BASE PER CALTRANS SPECS.

2. ADDITIONAL DRAINAGE STRUCTURES NEEDED IF HYDRAULIC STUDIES WARRANT.

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

MAJOR COLLECTOR
TO
COLLECTOR/ARTERIAL

STD. PLAN
103F
NOTES:

1. WHERE A COMMERCIAL DRIVE IS TO BE PLACED IN EXISTING ROLLED CURB, TWO FEET OF STANDARD (TYPE 2) CURB AND GUTTER WITH 6 FOOT TRANSITIONS SHALL BE PLACED ON BOTH SIDES OF THE DRIVEWAY.

2. NO VERTICAL CURB AND GUTTER ABOVE 3000 FT. ELEVATION.

3. 2500 P.S.I. (POUNDS PER SQUARE INCH) STRENGTH REQUIRED ON CONCRETE AT 28 DAYS.

4. MINIMUM SIGHT DISTANCE ALLOWABLE IS 200' OR 10% OF THE COUNTY ROAD SPEED.

VERTICAL CURB & GUTTER (TYPE 2)

EXPANSION JOINT/WEAKENED PLANE JOINT (SEE DETAIL)

6" THICK CLASS B PORTLAND CEMENT CONCRETE

NO EXPANSION JOINTS WITHIN THIS AREA - USE WEAKENED PLANE JOINTS @ 10' INTERVALS

VERTICAL CURB & GUTTER (TYPE 2)

EXPANSION JOINT/WEAKENED PLANE JOINT DETAIL

CROSS SECTION A-A

6" MIN. CLASS B PORTLAND CEMENT CONCRETE (6 SACKS) PER CALTRANS SPECS

2" MIN. CLASS II AGGREGATE BASE COMPACTED TO 95%

6" MIN. CLASS B PORTLAND CEMENT CONCRETE

2% FOR SIDEWALK

5/8" AT 45° BEVEL

2% FOR SIDEWALK

5/8" AT 45° BEVEL

NOT TO SCALE
NOTES:

1. ALL PORTLAND CEMENT CONCRETE SHALL BE PER CALTRANS SPECIFICATIONS, SECTION 78.

2. 3/8" x 18" LONG DOWEL, MINIMUM 4 FT. CENTER TO CENTER SPACING, OR ADHESIVE.

3. PLACE 3/8" TRANSVERSE EXPANSION JOINTS OF ASPHALT IMPREGNATED CELOTEX IN SIDEWALK, CURB & GUTTER AT 20' INTERVALS. ALL CONCRETE TO BE CLASS "B" AND SCORED EVERY 10'.

4. FOR TYPE 4 & 5 BARRIER CURBS LOCATE WEAKENED PLANE JOINTS AT 10' INTERVALS. USE 5" INTERVALS FOR RADIUS LESS THAN 25'.

5. ASPHALT CONCRETE SHALL BE CLASS B PER CALTRANS SPECIFICATIONS SECTION 35. SEE GENERAL NOTE PAGE.

6. AC DIKE TO BE USED WHERE EXISTING CONDITIONS WARRANT. TO BE USED WITH COUNTY ENGINEER'S APPROVAL.

NOT TO SCALE
NOTES:

1. 4" STRIPE TO BE YELLOW REFLECTORIZED TRAFFIC PAINT. TWO 4" STRIPES WILL BE USED IF ADT'S WARRANT.

2. 12" STOP BAR TO BE WHITE REFLECTORIZED TRAFFIC PAINT AND LOCATED TO PROVIDE MAXIMUM VISIBILITY ALONG THROUGH STREET.

3. ALL SIGNS SHALL BE FABRICATED OF HIGH INTENSITY REFLECTIVE SHEETING ON AN ALUMINUM BLANK PER EL DORADO COUNTY SPECIFICATIONS.

STOP SIGN

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

NOT TO SCALE
NOTES:

1. STREET NAME PANELS FOR COUNTY ROADS SHALL BE FLAT ALUMINUM PLATES, 0.08" THICK. PANELS SHALL BE 6" x 24" OR 6" x 30", DEPENDING ON STREET NAME LENGTH. LETTERING TO BE 1" AND 4" SERIES "8", SILVER REFLECTIVE SHEETING ON GREEN SCOT-LITE BACKING.

2. STREET NAME PANELS FOR PRIVATE ROADS SHALL BE FLAT ALUMINUM PLATES, 0.08" THICK. PANELS SHALL BE 8" x 30" OR 8" x 24", DEPENDING ON STREET NAME LENGTH. LETTERING TO BE 1" AND 4" SERIES "8", SILVER REFLECTIVE SHEETING ON GREEN SCOT-LITE BACKING.
1. Red and white barricades are to warn and alert drivers of the terminus of a road, street, or highway in other than construction or maintenance areas. The barricades are to meet the design criteria of Section 6C-8 for a Type III barricade, except that the colors of the stripes shall be reflectorized white and red.
FIRE HYDRANT BEHIND VERTICAL CURB & GUTTER

BEHIND ROLLED CURB & GUTTER

FIRE HYDRANT WITHOUT CURB & GUTTER

NOTES:

1. THE FIRE HYDRANT IS TO BE PLACED BEHIND THE DRAINAGE DITCH AND NO FURTHER THAN 8 FEET FROM DRIVEABLE SHOULDER SURFACE OR BACK OF CURB.

2. ALL VALVE BOXES SET IN THE A.C. OR CONCRETE TO BE F.G. MINUS 1/4".

3. CONTACT LOCAL WATER AGENCY FOR FIRE HYDRANT AND VALVE ASSEMBLY REQUIREMENTS.
NOTES:

1. FRONTAGE MEASURED ALONG R/W LINE AND FROM THE INTERSECTION OF PROJECTED R/W TANGENTS ON LOT CORNERS.

2. DRIVEWAYS NOT PERMITTED WITHIN 10' OF PROPERTY LINES. SEE CHART A FOR LOCATION OF DRIVEWAYS IN RELATIONSHIP TO INTERSECTING TANGENTS.

3. 22' MINIMUM ALLOWABLE DISTANCE BETWEEN DRIVEWAYS FOR LESS THAN 200' FRONTAGE AND 45' MINIMUM ALLOWABLE DISTANCE FOR FRONTAGE GREATER THAN 200'. 20' MINIMUM AND 35' MAXIMUM DRIVEWAY WIDTH MEASURED AT R/W LINE. SPECIFIC CASES TO BE SUBMITTED FOR APPROVAL.

4. NO PART OF A DRIVEWAY MAY FALL WITHIN A CURB RETURN OR WITHIN THE LIMITS SHOWN IN CHART A.

5. HANDICAPPED RAMPS @ SIDEWALK INTERSECTIONS PER CALTRANS STANDARD PLAN NS-B, CASE E.

6. SEE GENERAL NOTE PAGE REGARDING DRIVEWAY CEMENT.

RADIUS CHART

<table>
<thead>
<tr>
<th>RADIUS</th>
<th>CHART A</th>
</tr>
</thead>
<tbody>
<tr>
<td>40'</td>
<td>ARTERIAL 250'</td>
</tr>
<tr>
<td>35'</td>
<td>MAJOR COLLECTOR 150'</td>
</tr>
<tr>
<td>25'</td>
<td>MINOR COLLECTOR 100'</td>
</tr>
<tr>
<td>25'</td>
<td>ACCESS ROAD 25'</td>
</tr>
</tbody>
</table>

* LESS WITH COUNTY ENGINEER'S APPROVAL

NOT TO SCALE

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

COMMERCIAL
DRIVEWAY
REGULATIONS

109
NOTES:

1. WHEEL CHAIR ACCESS PER CALTRANS STANDARD PLAN N6-B, CASE E.

2. PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS 7B.

3. CURBS SHALL BE IN ACCORDANCE WITH STANDARD PLAN 104.

SECTION A-A

NO. 4 REBAR 1/2" DIAMETER

SECTION B-B

8' MIN. SIDEWALK

SECTION C-C

8' MIN. SIDEWALK
NOTES:

1. CUL-DE-SACS MAY BE ASYMMETRICAL TO THE LEFT OR RIGHT OF CENTERLINE.

2. IF FIRE HAZARDS EXIST, 70' MIN. RADIUS REQUIRED.

3. CALTRANS HS-20 CULDESAC DETAIL MAY BE USED WITH COUNTY ENGINEER’S APPROVAL.

NOT TO SCALE
18" x 4" WINDOW ON INLET SIDE(S) FOR ADDITIONAL FLOW

CALTRANS TYPE 36RX GRATE

2" A.C. APRON (KEYED IN) FOR 3 FEET AROUND INLET

PLAN

18" x 4" WINDOW ON INLET SIDE(S) FOR ADDITIONAL FLOW

CALTRANS TYPE 36RX GRATE

2" A.C. APRON (KEYED IN) FOR 3 FEET AROUND INLET

CONCRETE PIPE

TROWLED FLOOR SLOPE TO INLET

MORTAR

O.D. 4-3"

18"

36"

18"

3"

6"

5"

8" BEYOND VERTICAL PIPE DIAMETER

PROFILE

NOTES:

1. IN RURAL CONDITIONS A CALTRANS OMP OR OCP WITH 1/4" STEEL CHECKERED PLATE COVER AND A SINGLE HORIZONTAL GRATE AT 4" O.C. MAY BE USED WITH COUNTY ENGINEER'S APPROVAL.
NOTES:

1. DEPRESS GRATE 3 7/8" BELOW GUTTER FLOWLINE, ON ROLLED CURB AND GUTTER, AND 1 1/2" ON VERTICAL CURB.

2. FLOOR OF INLET SHALL BE PLACED PRIOR TO OR AT THE SAME TIME AS SIDE WALLS, OR TIED WITH REBAR.

3. FRAME AND GRATE SHALL CONFORM TO STANDARD PLAN 115B PINKERTON FOUNDRY #A–601 OR EQUAL.

4. OPEN–BACK HOOD SHALL BE CAST IRON.

5. THE OUTLET PIPE INVERT SHALL BE AT LEAST ONE INCH BELOW THE LOWEST INLET PIPE INVERT.

6. FOR ROLLED CURB AND GUTTER, 6" TRANSITIONS TO VERTICAL CURB ARE REQUIRED ON BOTH SIDES OF INLET.

7. CONCRETE TO BE SIX SACK MIX FOR ALL DRAINAGE STRUCTURES.

8. 5' MAX. DEPTH FROM FLOWLINE, WITHOUT REINFORCEMENT ADDED.
NOTES:

1. PORTLAND CEMENT CONCRETE SHALL BE 3000 P.S.I. AT 28 DAYS.

2. PELICAN GALLERY TO BE SANTA ROSA'S 6Y GALLERY ASSEMBLY WITH THE MODEL 4AC PRE-CAST CURB INLET OR EQUIVALENT.

3. INLET SHOULD BE BROUGHT TO LINE AND GRADE BY ALIGNING NOSING WITH CURB FACE BOARD.

4. FOR ROLLED CURB AND GUTTER, 6" TRANSITIONS TO VERTICAL CURBS ARE REQUIRED ON BOTH SIDES OF INLET.

5. STRINGLINE TOP OF ROLLED CURB AND GUTTER 6" BEYOND ALL OPENINGS AND HOLD AT ELEVATION FOR TOP FRONT OF CURB, DEPRESSING FLOWLINE CORRESPONDINGLY.

PELICAN PICTORIAL VIEW AND CURB TRANSITIONS

4A CURB INLET DRAINAGE CAPACITY WITH 6Y PELICAN GALLERY

NOT TO SCALE
ROCK LINED DITCH DETAIL

PLACE NO. 2 BACKING CLASS ROCK SLOPE PROTECTION 6" MIN. THICKNESS

GEOTEXTILE OR MINERAL AGGREGATE FILTER

FLOWLINE FOR HYDRAULIC CALCULATIONS AND DESIGN

ROADWAY ROCK LINED DITCH DETAIL

PLACE NO. 1 BACKING CLASS ROCK SLOPE PROTECTION 12" MIN. THICKNESS

FLOWLINE FOR HYDRAULIC CALCULATIONS AND DESIGN

NOTES:

1. ROCK LINED DITCHES ARE USED AS SPECIFIED IN EL DORADO COUNTY GRADING ORDINANCES.

2. ROCK LINING SHALL NOT BE HIGHER THAN ROADWAY OR ELEVATION OF SHOULDER.

3. WHERE A 6:1 SLOPE EXISTS, USE A MINIMUM OF 6" OR A MAXIMUM OF 18" SIZED ROCKS.

4. GROUT WILL BE USED WHEN ROCK RIP-RAP IS PLACED ON FILL SLOPES, IF SLOPES ARE EXCEEDING 2:1, WITHIN 10 FEET OF A CULVERT WITHOUT A FLARED END SECTION, OR WHEN VELOCITIES EXCEED 15 FT. PER SECOND.

5. THE ENDS OF BOTH THE ROCK LINED AND GROUTED ROCK LINED DITCHES TO BE KEYED IN A MINIMUM OF ONE FOOT.

NOT TO SCALE
1. Structural section shall be 3" A.C. and 8" AB minimum, or match existing thickness.

2. Ponding or jetting not permitted under or within 2' of existing roadway.

3. The trench will be paved with asphalt when entering roadside ditches and gutters with a grade of 5% or better. At Tahoe, pave all trenches entering ditches.

4. In roadway fill steeper than 4:1, the outer edge of trench shall be at least 18" from hinge point. For cable plowing operations, it shall be 36".

5. Longitudinal pavement replacement will be from the inner cut line to the edge of the existing pavement, when the remaining pavement width would be less than 3 feet. On collector roads, pavement shall be replaced from centerline.

6. Replace all obliterated pavement markings.

7. On collector roads, intermediate backfill will be 3/4" AB compacted to 95% A concrete/sand slurry (2 sack) may be used in place of 3/4" AB.

8. Final pavement replacement will have a uniform width and will be approved by an inspector before saw cutting.

9. See further conditions attached to permit.
NOTES:

1. POLES MAY BE LOCATED AT THE TDE OF FILLS WHICH ARE MORE THAN 4 FEET IN HEIGHT. POLES SHOULD EXTEND TO NATIVE GROUND WHERE PRACTICAL.

2. POLES MAY BE LOCATED ON CUT OR FILL SLOPES WHEN THE ELEVATION OF THEIR BASE IS 4 FEET ABOVE OR BELOW THE EDGE OF ROADWAY.

3. POLES SHOULD BE LOCATED AS FAR AS PRACTICAL FROM THE ROADWAY AND BEYOND THE SHOULDER & DITCH AREA, BUT MUST BE AT LEAST 6 FEET FROM THE EDGE OF ROADWAY AND 10 FEET PREFERRED.

4. POLES MAY BE LOCATED CLOSER TO THE ROADWAY IF MOTORISTS ARE PROTECTED FROM POLES BY METAL BEAM GUARD RAILING.

5. POLES AND GUYS MAY NOT BE LOCATED ON THE ROADWAY OR IN THE ROADSIDE DITCH OR DRIVEABLE SHOULDER.

6. NO POLES WILL BE LOCATED WITHIN ANY RADIUS PORTION OF A DRIVEWAY CONNECTION OR ROADWAY.
NOTES:
1. ROCK LINED CHANNELS SHALL NOT BE USED UNLESS WARRANTED BY HYDRAULIC CALCULATIONS.
2. ALL ROCK SHALL BE ANGULAR WITH A MINIMUM OF 2 FACES.
3. GROUT WILL BE USED WHEN ROCK RIP RAP IS PLACED ON FILL SLOPES, IF SLOPES EXCEED 2:1, IF WITHIN 10 FEET OF A CULVERT WITHOUT A FLARED END SECTION, OR WHEN ROCK IS PLACED ON ANY FILL.
4. A 24" KEY WILL BE PLACED AT THE END OF THE SWALE AREA.

<table>
<thead>
<tr>
<th>CHANNEL TYPE</th>
<th>WIDTH, X</th>
<th>DEPTH, Y</th>
<th>ROCK CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1'</td>
<td>1'</td>
<td>NO. 1 BACKING</td>
</tr>
<tr>
<td>B</td>
<td>2'</td>
<td>1 1/2'</td>
<td>NO. 1 BACKING</td>
</tr>
<tr>
<td>C</td>
<td>2'</td>
<td>2'</td>
<td>NO. 1 BACKING</td>
</tr>
</tbody>
</table>
NOTES:

1. CONCRETE ENCASEMENTS SHALL HAVE A 1" CROWN ABOVE GROUND LEVEL.

2. 12' WIDE GATE OF 16 GAUGE, 2" DIAMETER TUBE CONSTRUCTION WITH MOUNTING HARDWARE AND SINGLE, LOCKABLE PISTON LEVER LATCH BY WESTGUARD INDUSTRIES OR EQUIVALENT.

3. GATE POSTS 4" DIAMETER SCHEDULE 40 GALVANIZED STEEL.
1. WHERE USED ON DEAD END ROADS, A RED WARNING SIGN SHALL BE INSTALLED PER STANDARD PLAN 105C.
NOTES:

1. Hand place rock.

2. All rock shall be angular and have two faces.

3. Where slopes of outlet exceed 5%, a sediment bowl or energy dissipater shall be required.

4. Flared end section and rock slope protection will slope at a minimum of 1% into or out of the culvert.

5. 12" x 24" key to be placed for both inlet and outlet applications.

6. On outlet applications, 50% of the rock shall be larger than half the diameter of the pipe.

<table>
<thead>
<tr>
<th>ROCK CLASS</th>
<th>PIPE Ø IN.</th>
<th>(3 x PIPE Ø) (ft)</th>
<th>(4x) Y (ft)</th>
<th>(5x) Z (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO. 1 BACKING</td>
<td>12</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>NO. 1 BACKING</td>
<td>18</td>
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<td>12.5</td>
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<tr>
<td>NO. 1 BACKING</td>
<td>36</td>
<td>9</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

NOT TO SCALE
NOTES:

1. ABOVE 4000 FT. ELEVATION AC SHALL BE REPLACED WITH CLASS B CONCRETE PER CALTRANS SPECIFICATIONS.

2. KEY IN END 1 FT. MIN. OR EQUAL TO DEPTH OF DITCH.

3. PLACE FULL WIDTH KEY EVERY 50' FOR LONG RUNS WITH STEEPER DITCH SLOPES.
NOTES:
1. TAHOE BASIN ONLY, AND ONLY WHERE REPAIRING EXISTING.
NOTES:

1. Tahoe basin only, when repairing existing conditions.
Slope revegetation

Round top of slope to match exist grade

Clean fill material

Finished slope varies to match exist tip of slope or 3:1 max slope to hinge

Exist slope location varies

Drain 1 1/2" rock only to first plank

SECTION A-A

1/2" exterior plywood spacers at each post

18" diameter class A concrete footing

NOTES:
1. Depth of footing may be reduced to 2 feet as directed by engineer.
2. Use 12' lengths for stringers. 6' stringers allowable for radii and transitions where necessary.
3. Place 20 sq. ft. of No. 2 backing as slope protection at the end of each wall.
4. Dimensions in parenthesis for 4' retaining wall applications.