

CITY OF MARTINEZ
Community Development and Public Services Departments

STREET DESIGN CRITERIA

1. All work shall conform to the latest revisions of the Standard Specifications for Public Works Construction prepared by the Southern California Chapter of the APWA and Associated General Contractors of America and as herein modified.
2. The City of Martinez Standard Drawings will be used for all improvements. Upon approval by the City, applicable Contra Costa County Standard Plans and applicable State of California Department of Transportation Standard Plans may be used.
3. These criteria are applicable to both public and private street design.
4. Horizontal and Vertical Alignment and Grade

	<u>Arterial</u>	<u>Collector</u>	<u>Local</u>
a) Design speed	40-55 MPH	30-40 MPH	25-30 MPH
b) Minimum centerline radius	550'	300'	150'
c) Minimum street grade	0.5%	0.5%	0.5%
d) Maximum street grade	10%	10%	15%
e) Cross slopes – 5% maximum all streets 2% minimum all streets			
f) Minimum tangent distance between reverse horizontal curves shall be 100'			
g) Vertical curves required where grade break is 2% or more. Use Caltrans Highway Design Manual for vertical curve standards. At sags and crests design shall provide absolute minimum flowline grade of 0.25%.			
h) BVC may be established at cross street flowline, however, difference in elevation at 125' from this point is limited to 6' maximum.			

5. The street structural section shall be determined by the traffic index (T.I.) and by soils R-value tests at 500' maximum intervals. Import material may require additional tests as required by the City.

	<u>Local</u>	<u>Collector</u>	<u>Arterial</u>	<u>Heavy Truck/Bus</u>
Required T.I.'s	5.5	7.0	8.5	8.5
Minimum section	0.20' AC 0.50' AB	0.30' AC 0.50' AB	0.40' AC 0.50' AB	0.50' AC 0.50' AB

6. Streets shall intersect at right angles wherever possible and shall not intersect at greater than a 15 degree skew to a right angle. Intersections shall have adequate sight distance in conformance with City Standard No. T-5. The minimum distance between intersections shall be 150' measured from their center lines.
7. Maximum length of any cul-de-sac is 600' unless alternate access is provided. Turnaround at bulb shall conform to City Standard No. S-15.
8. Minimum curb return radius shall be 25'. All returns for collector and arterial streets shall be 35'. All curb return grades shall be on the same plane of each corresponding approach. Property lines at returns shall be concentric with curb return.
9. Valley gutters shall not be used to provide drainage across through street.
10. Sidewalks shall maintain a minimum 4' width clear of all obstructions (fire hydrants, poles, etc.). Sidewalk placed adjacent to curb shall be 5.5' wide minimum from face of curb and all obstructions are then placed behind walk. Sidewalk in commercial areas shall be a minimum 7' wide.
11. cut/fill slopes shall begin a minimum of 2' behind right of way line at a 2:1 maximum slope.
12. Crown of street shall typically be located on the center line with the grade level with the top of curb (TC) grades. For arterial streets crown grade shall be 0.3' above TC.
13. The plans are required to include:
 - a). Title sheet meeting requirements in General Criteria and also:

Typical street sections showing, right of way and street width dimensions, cross slopes, cut/fill slopes, sidewalks, curbs traffic lane dimensions and structural sections. Indicate centerline station limits for each typical sections.

Street structural section table showing T.1., R-Value and required section thicknesses.
 - b) Plan views indicating:

Right of way, easement and street width dimensions

Centerline stationing shown @ 100' intervals and at all curves (BC & EC) and intersecting streets.

Radius of curvature shown for all curves and returns on centerline, curb line and right of way lines, with curve data tables given for curb lines.

Lot/parcel lines and numbers/letters indicated.

Location of underground pipes and utilities. Also fire hydrants utility poles, vaults and pedestals.

Grades shown at key locations or not otherwise shown on Profiles. Key locations may include centerline intersections, grade breaks and flow lines for valley gutters, sidewalk drains, open channels and drainage structures.

Side walks shown with grades at key locations.

Existing and new improvements at and surrounding the project limits.

Stationing and offsets of all drainage facilities and median islands.

Street monuments and special details as required.

c) Profiles indicating:

Finished grade profile for centerline and for top of curb shown (left and right) if special grades required.

Existing ground on centerline shown. Where topography is steep, existing ground at future curbs (left and right) is shown.

Underground pipes and utilities.

Cross sections at 50' intervals shall typically be required. Along street frontage and extending 150' (min.) beyond limits of work. If sufficient grades are shown on plan or profile views to clearly indicate design adequately conforms to existing topography then Engineer may waive this requirement.

Centerline stations and elevations shown @ 100' minimum intervals and @ all BVC, EVC, PIVC and grade breaks.

Match plan to profile on same sheet.

Centerline profiles of intersecting streets are shown to their point of intersection. If BC and EC top of curb grades are indicated, then no curb return profiles will be required since all curb return grades must be on the same plane.

Special details as required.

- d) Existing and new street light installations and undergrounding as required shall be shown. Separate plans may be necessary if street improvement plans get too “crowded”.
- e) Street signing and striping shall be shown accurately. All changes or additions may be separate plans. Separate construction detour plans must be submitted upon request.