

STORM DRAIN DESIGN (PUBLIC OR PRIVATE) CHECK LIST

H.D.M. **San Diego County Hydrology and Design Procedure Manual**
R.S.D. **Regional Standard Drawings (County of San Diego)**
S.E.P. **Standard Engineering Practice**

	SOURCE	OK	NEEDED INFO	COMMENTS
Asphalt concrete spillway	R.S.D.			
Box culvert (single) detail	R.S.D.			
Box culvert (double) detail	R.S.D.			
Box culvert (triple) detail	R.S.D.			
Box culvert wingwall types A, B and C, detail No. 1	R.S.D.			
Box culvert wingwall types A and B	R.S.D.			
Box culvert warped wingwalls, detail No. 1	R.S.D.			
Box culvert warped wingwalls, detail No. 2	R.S.D.			
Box culvert, miscellaneous detail No. 1	R.S.D.			
Box culvert, miscellaneous detail No. 2	R.S.D.			
Catch basin – type 1	R.S.D.			
Catch basin – type F	R.S.D.			
Catch basin – type G	R.S.D.			
Cleanouts notes/details	R.S.D.			
Cleanout-type A	R.S.D.			
Cleanout-type B	R.S.D.			
Cleanouts spacing	S.E.P.			
Concrete apron for curb inlet	R.S.D.			
Concrete energy dissipator (18" to 30" diameter pipe)	R.S.D.			
Concrete energy dissipator (reinforcement) (36" to 72" diameter pipe)	R.S.D.			
Concrete lug	R.S.D.			
Confluence angles	S.E.P.			
Critical depth calculation	S.E.P.			
Curb inlet-type B	R.S.D.			
Curb inlet-type C	R.S.D.			
Curb inlet-type D	R.S.D.			
Curb inlet-type J median	R.S.D.			
Curb inlet opening	R.S.D.			

	SOURCE	OK	NEEDED INFO	COMMENTS
Curb outlet-type A	R.S.D.			
Curtain wall	R.S.D.			
Cutoff wall for drainage channel	R.S.D.			
Debris fence	R.S.D.			
D-load for pipes	S.E.P.			
Depth of water calculation	S.E.P.			
Depth of gutter flow calculation	S.E.P.			
Detention basins	S.E.P.			
Discharge downstream	S.E.P.			
Direction of street drainage shown	S.E.P.			
Diversion of existing drainage	S.E.P.			
Drainage channel (major)	S.E.P.			
Drainage discharge onto other properties (signed agreement)	S.E.P.			
Drainage ditches	R.S.D.			
Drainage easements (on-site)	S.E.P.			
Drainage easements (off-site)	S.E.P.			
Drainage structure grate	R.S.D.			
Easements (recording documentation)	S.E.P.			
Energy grade line	S.E.P.			
Entrance taper and downdrain pipe	R.S.D.			
Existing conditions (upstream, downstream)	S.E.P.			
Grate frame (welded steel)	S.E.P.			
Graded earth channel	R.S.D.			
Headwall type L-circular pipe	R.S.D.			
Headwall type L – CSP arch	R.S.D.			
Hydrology calculations (off-site and on-site)	H.D.M.			
Hydraulic calculations	H.D.M.			
Hydraulic grade line (HGL)	S.E.P.			
Hydraulic loss calculations (entrance, friction, junction, access holes, bends, angles, reduction and enlargement)	S.E.P.			
Inlet calculations	S.E.P.			
Inlet notes/details	R.S.D.			
Inlets (type A and B) corrugated steel pipe inlet	R.S.D.			
Inlets (corrugated steel pipe inlets)	R.S.D.			
Inlet apron for culverts up to 42" diameter	R.S.D.			

	SOURCE	OK	NEEDED INFO	COMMENTS
Map of drainage areas	S.E.P.			
Major drainage channel	S.E.P.			
Minor drainage channel	S.E.P.			
Normal depth calculation	S.E.P.			
Pipe collar	R.S.D.			
Pipe culvert headwalls, endwalls and warped wingwalls	R.S.D.			
Pipe invert elevations	S.E.P.			
Pipe profile and slopes	S.E.P.			
Pipe bedding and trench backfill for storm drains	R.S.D.			
Pipe elevation and grades	S.E.P.			
Pipe length	S.E.P.			
Pipe to channel connection	R.S.D.			
Pipe sizes	S.E.P.			
Protection of downstream or adjacent properties	S.E.P.			
Rational method formula $Q=CIA$	S.E.P. H.D.M.			
Rip Rap energy dissipator	R.S.D.			
Rounded pipe ends in drainage structures	R.S.D.			
Sidewalk underdrain pipe	R.S.D.			
Slotted corrugated steel pipe drains (12" through 24")	R.S.D.			
Straight Headwall-type A (circular pipe)	R.S.D.			
Straight Headwall-type A (CSP-ARCH)	R.S.D.			
Straight Headwall-type B (circular pipe)	R.S.D.			
Straight Headwall-type B (CSP-ARCH)	R.S.D.			
Tapered inlet and downdrain flume	R.S.D.			
Velocity of water in streets	S.E.P.			
Water traveling more than 1000' over land	S.E.P.			
Wing and U type headwalls for 12" to 36" pipe	R.S.D.			
Wing and U type headwalls for 42" to 84" pipe	R.S.D.			

NOTE: For all drainage designs and check lists not covered in these standards, use the [most](#) current San Diego County Hydrology and Design Procedure Manual, and San Diego County Regional Standard Drawings.