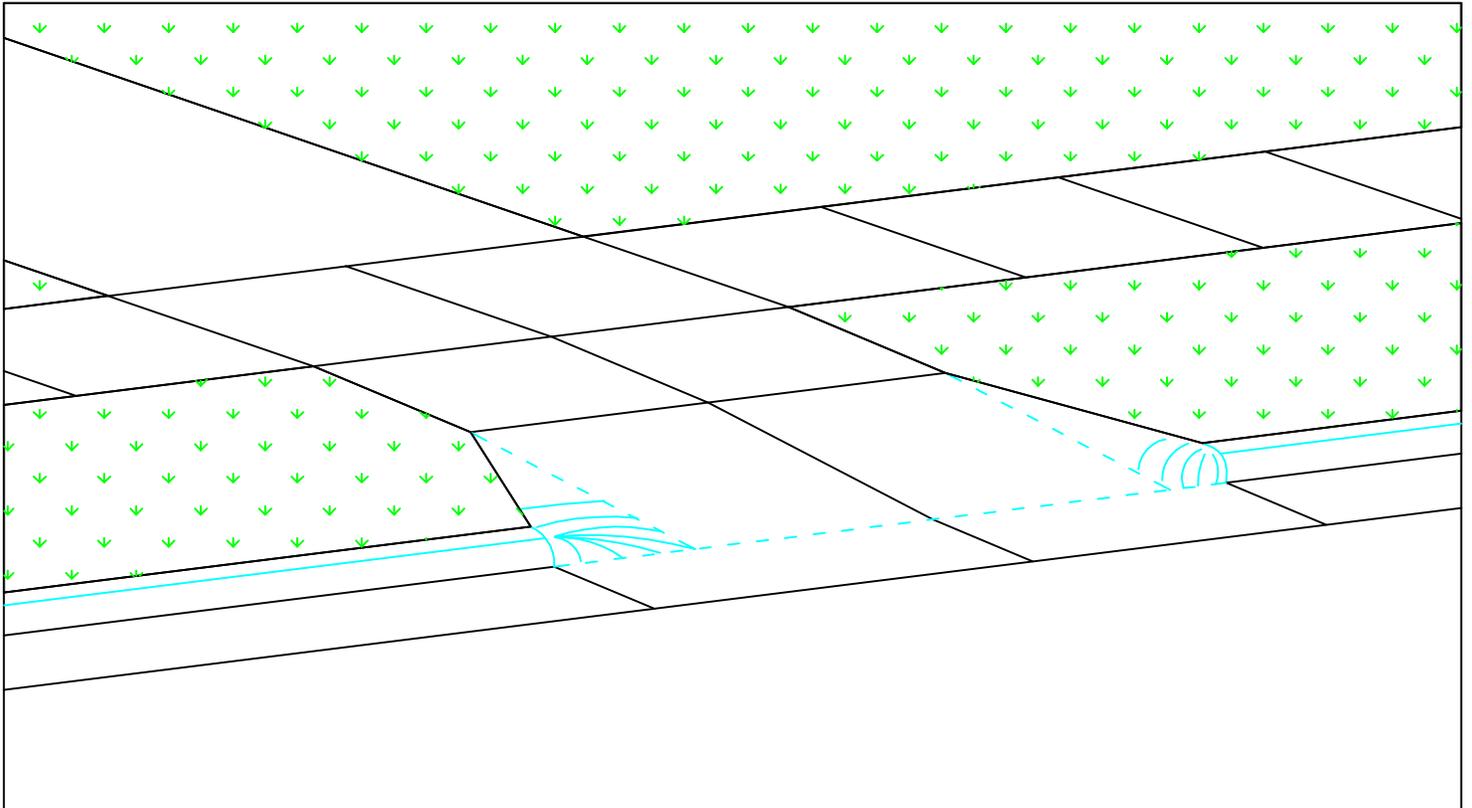




**PUBLIC WORKS & UTILITIES DEPARTMENT
ENGINEERING DIVISION**

**411 W. 1ST ST, RM #211
DULUTH, MN 55802
(218) 730-5200
(218) 730-5907 FAX**

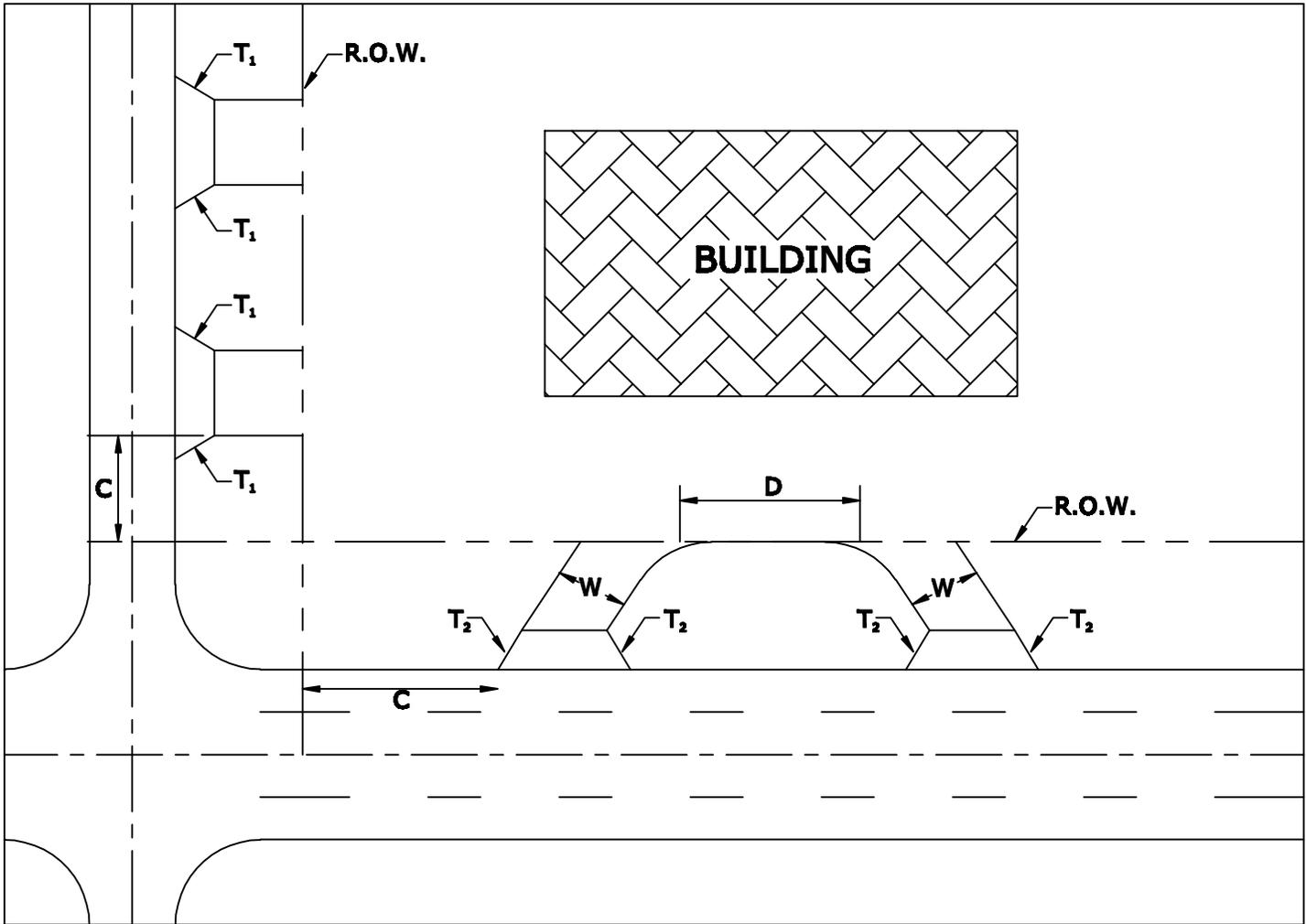
DRIVEWAY ENTRANCE SPECIFICATIONS AND REGULATIONS



Duluth City Code:

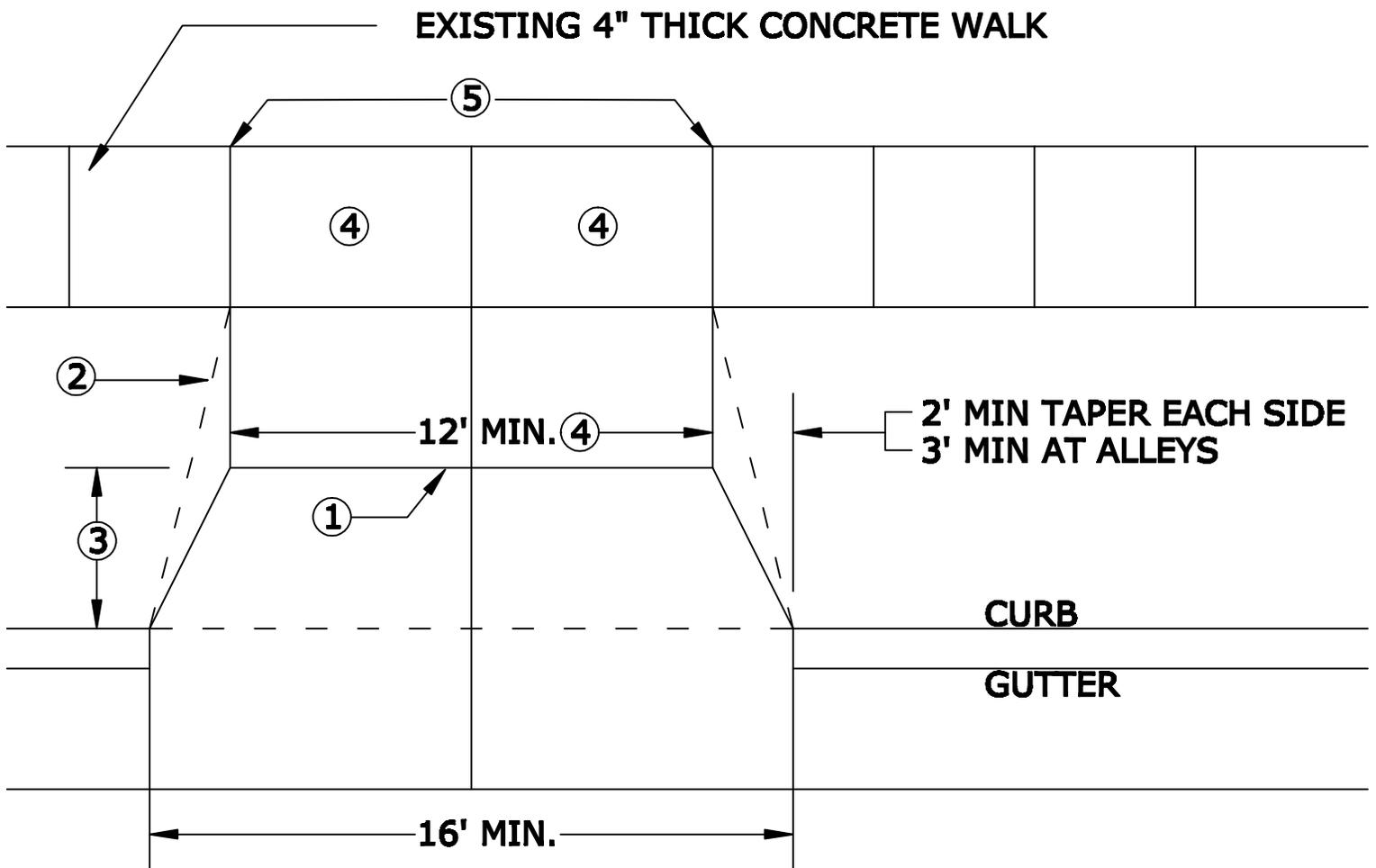
Section 45-14 Driveway Crossings

No person shall construct a driveway or crossing from a publicly maintained street or highway into private property without first applying for and obtaining a permit to do so from the office of the City Engineer. Upon receiving this permit said driveway or crossing and such construction shall be carried out under the direction and inspection of such engineer or his representative.

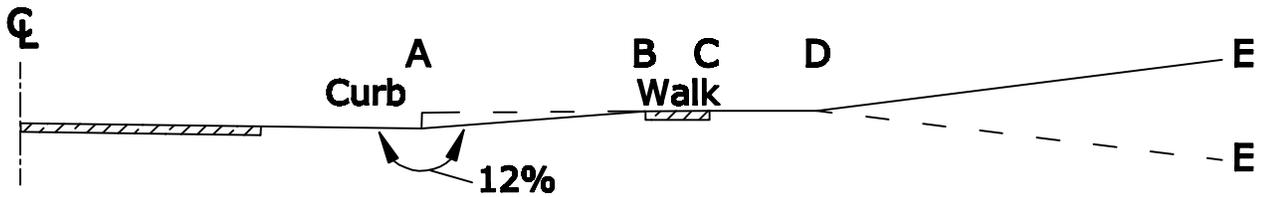


DRIVEWAY DIMENSIONS	RESIDENTIAL		COMMERCIAL - INDUSTRIAL			
	URBAN	RURAL	URBAN	URBAN	RURAL	RURAL
Driveway Angle (Y)	60° - 90°	60° - 90°	60°	90°	60°	90°
Minimum Driveway Width (W)	12'	12'				
Recommended Driveway Width (W)	16'	16'	26'	32'	26'	32'
Maximum Driveway Width (W)	22'	22'	*	*	*	*
Taper (T ₁)	2'	2'	3'	3'	3'	3'
Taper (T ₂)	2'	2'	3'	3'	3'	3'
Minimum Distance Between Double Driveway (D)	20'	30'	20'	20'	30'	30'
Minimum Corner Clearance From Major Street (C)	30'	60'	30'	30'	60'	60'
Minimum Corner Clearance From Minor Street (C)	20'	60'	20'	20'	60'	60'

* Driveway widths up to 40 ft will be permitted only by special permission of the City Engineer. These maximum widths are intended for driveways used nearly exclusively by tractor-trailer combinations. Required width is to be determined with vehicle wheel templates.

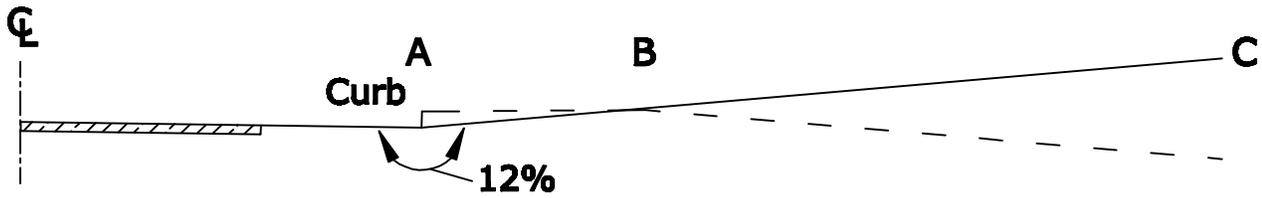


- ① End taper and install joint 1/2 the distance of boulevard width if boulevard is 6.0 ft. or wider.
- ② End taper at sidewalk if boulevard is 5.0 ft. or less.
- ③ Make apron 3.0 ft. minimum width if there is no sidewalk, and a joint every 5 ft.
- ④ 7" concrete (8" at alleys and commercial drives) with 12" gravel base or same as street base.
- ⑤ 1/2" preformed joint filler material.
- 6 Align apron joints with sidewalks and gutter joints.
- 7 Maximum distance between joints should not be more than 1.5 x the smaller panel dimension. Panels 3 ft. wide should have joints no further apart than 5 ft.
- 8 Saw cut all joints 1/3 the thickness of concrete (7" conc. = 2 1/3" sawcut) (8" conc. = 2 2/3" sawcut).
- 9 Saw cuts may be approved to reduce the amount of curb & gutter removal.
- 10 Epoxy will be used to join old and new concrete, where sawcuts are made.
- 11 The driveway grade should rise to curb height with 15.0 ft of the gutter line to prevent water from escaping down the driveway.
- 12 The driveways are to be constructed independently of street.
- 13 All disturbed areas shall be restored.



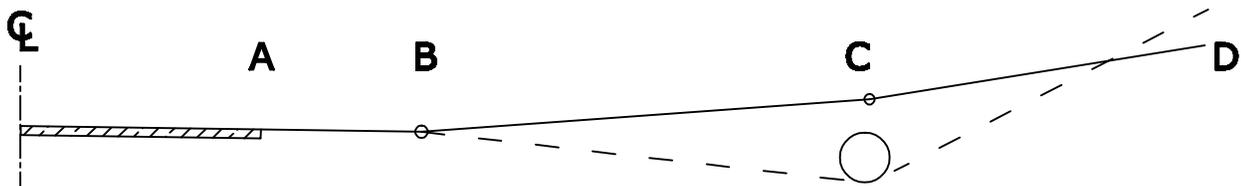
PROFILE WITH CURB AND SIDEWALK

- A to B = Slope from gutter to meet sidewalk (max. grade 10%)
- C to D = Variable distance
- D to E = 8% max. for commercial driveways, 10% for others.



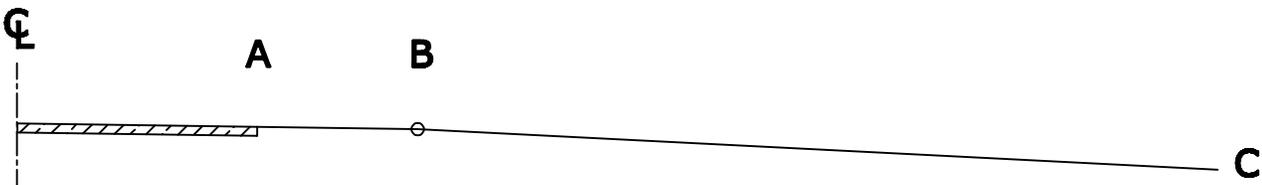
PROFILE WITH CURB

- A to B = Slope upward to min. height equal to curb height.
(max. diff. between downward slope of roadway and the upward slope of the driveway equal 12%)
- B to C = 8% for commercial driveways, 10% for others.



PROFILE IN CUT SECTION

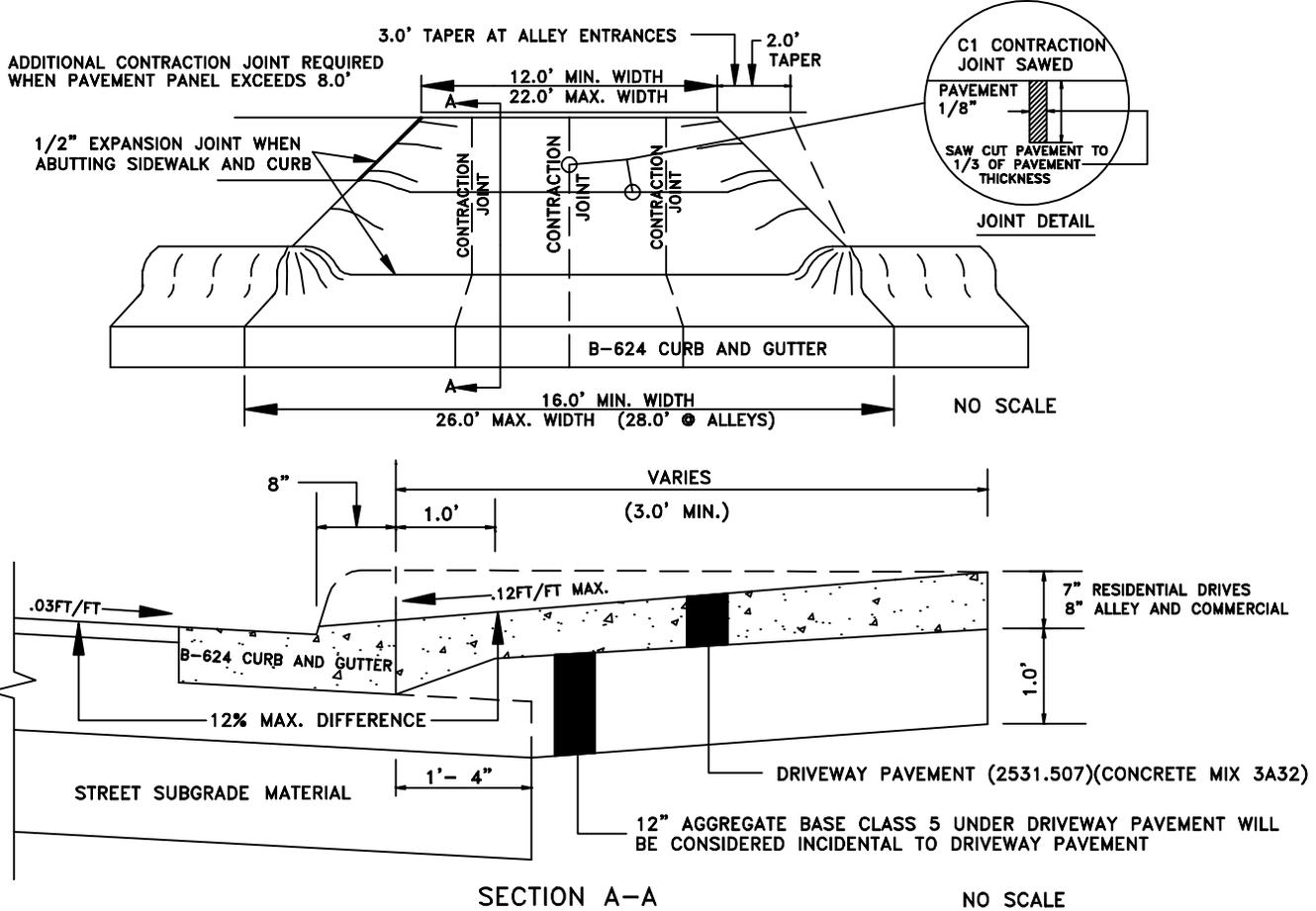
- A to B = Same pitch as shoulder slope.
- B to C = 8% max. (Min. pitch same as shoulder slope.)
- C to D = 8% max. for commercial driveways, 10% for others.



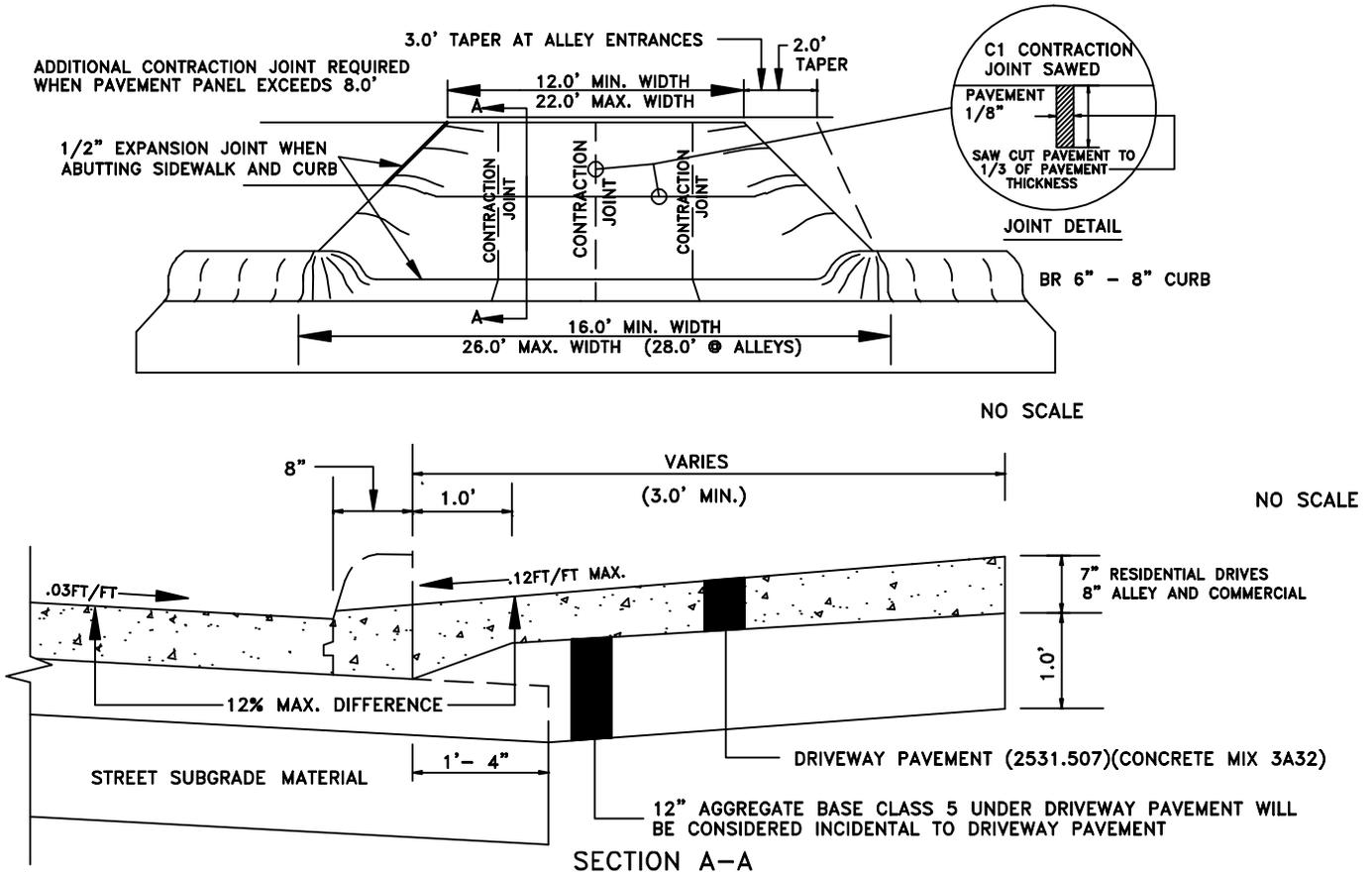
PROFILE IN FILL SECTION

- A to B = Same pitch as shoulder slope.
- B to C = 8% max. for commercial driveways, 10% for others.

DRIVEWAY DETAIL FOR CONCRETE CURB AND GUTTER STREET



DRIVEWAY DETAIL FOR CONCRETE CONCRETE STREET WITH INTEGRANT CURB



SPECIAL REQUIREMENTS for CURB CUTS

- 1) All work under this application must be performed by a contractor or individual who is bonded and insured to work in the right-of-way by the city of Duluth Engineering office.
- 2) No work under this application shall be started until the application is approved and the permit is issued.
- 3) No changes or alterations in existing entrances may be made at any time without permission and a permit from the City Engineering office.
- 4) If the work to be done lies on a county or state roadway, permission must also be obtained from the department having jurisdiction.
- 5) Where work on a traveled roadway is necessary, traffic must be protected and signage placed according to the most recent version of the Minnesota Department of Transportation, Minnesota Manual on Uniform Traffic Control Devices.
- 6) If drains are installed, they must be of a sufficient size in order that overflow and damage to property will not occur.
- 7) No foreign material such as dirt, gravel, or bituminous shall be left or deposited on the road during the construction of the driveway or installation of drainage facilities, and the roadside must be cleaned up after work is completed.
- 8) No work shall be done which will create a nuisance.
- 9) No lugs shall be used on equipment traversing the roadway which will damage the road surface.
- 10) No driving is permitted onto the roadway from the ditch or driving on the shoulders where damage will occur.
- 11) After the driveway apron is formed, the permittee shall notify the City Engineering office for inspection at least four hours before the scheduled concrete pour.
- 12) After driveway construction is completed the permittee shall notify the City Engineer's Office that the work has been completed and is ready for final inspection.
- 13) If pavement is damaged or if settlement occurs, or if the excavation caves in so that replaced materials settle (bituminous mat or concrete base), the same shall be restored to its original condition.