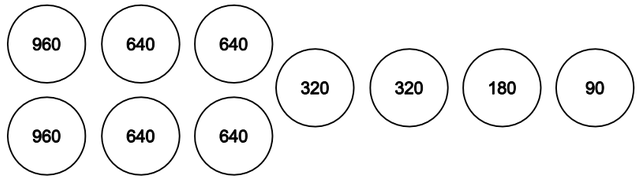
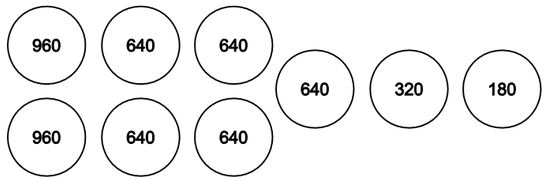
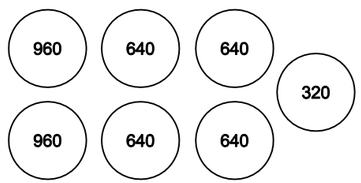


BARREL ARRAY - 80km/h

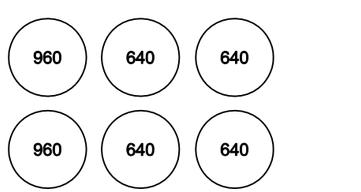


BARREL ARRAY - 70km/h

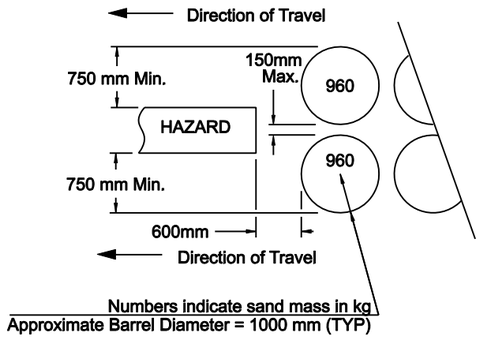
BARREL ARRAY - 60km/h



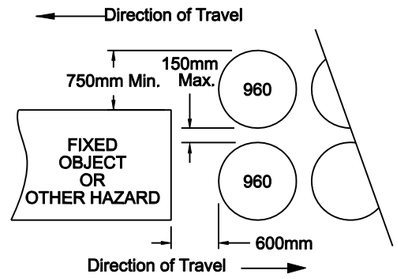
BARREL ARRAY - 50km/h



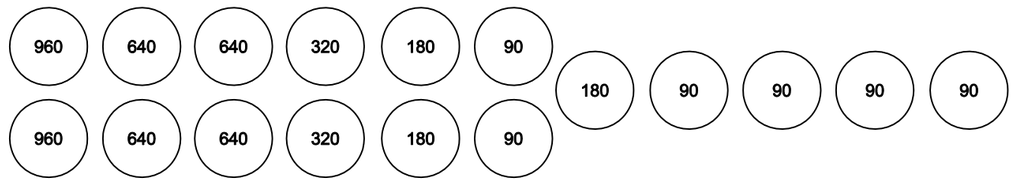
BARREL ARRAY - 40km/h



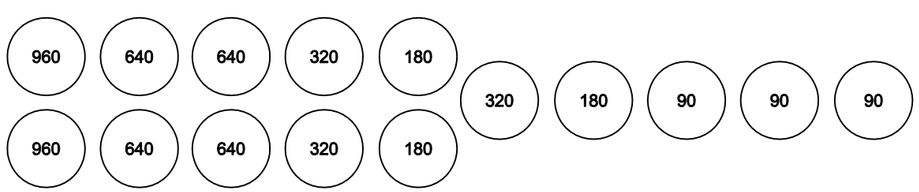
ONE DIRECTION TRAFFIC



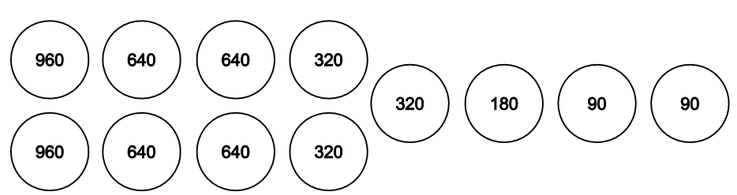
TWO DIRECTION TRAFFIC



BARREL ARRAY - 110km/h



BARREL ARRAY - 100km/h



BARREL ARRAY - 90km/h

General notes:

1. Only crash tested components meeting NCHRP 350 requirements shall be used. The systems currently available are:
   a. Energite Inertia Barrier System by Quixote Transportation Safety Inc.
   b. Fitch Sand Barrel System by Quixote Transportation Safety Inc.
   c. TrafFix Impact Attenuator Sand Barrels by TrafFix Devices Inc.
2. The sand mass shall be clearly marked on each barrel.
3. For permanent installations, the Fitch System shall be used.
4. The systems shall be installed strictly in accordance with manufacturer's recommendations.
5. The sand barrel systems are non-directive and break up during impact. The vehicle speed is slowed by transfer of it's momentum to the sand, allowing for safe, steady deceleration. Sand and plastic parts from the system will scatter in the direction of impact.
6. Fill sand shall conform to ASTM C-33 – washed concrete sand or approved equal. Moisture content of sand shall be three percent or less to minimize caking. The sand shall be mixed with an appropriate percentage of rock salt when use during freezing temperature is expected.
7. Barrels shall be set as far from the traveled way as possible to minimize the number of brush or nuisance hits.
8. Barrel layout shall conform with the configuration for the appropriate posted highway speed.
9. In the case of work zone installations, the design speed shall be at least equal to the speed posted through the work zone.

⚠1 REQUIRES DEPARTMENT APPROVAL ON NEW INSTALLATIONS

No.	REVISIONS	BY	DATE
⚠2	.	.	.
⚠1	APPROVAL NOTE ADDED	P.M.	02 JUL 13

Approved:
Original signed by
Allan Kwan
Executive Director,
Technical Standards Branch

Date: NOVEMBER 23, 2004

Alberta
INFRASTRUCTURE AND TRANSPORTATION

SAND BARREL CUSHION SYSTEM

Prepared By: M.T.	Checked By: R.Y.	Scale: N.T.S.	Dwg No.: TEB 3.19