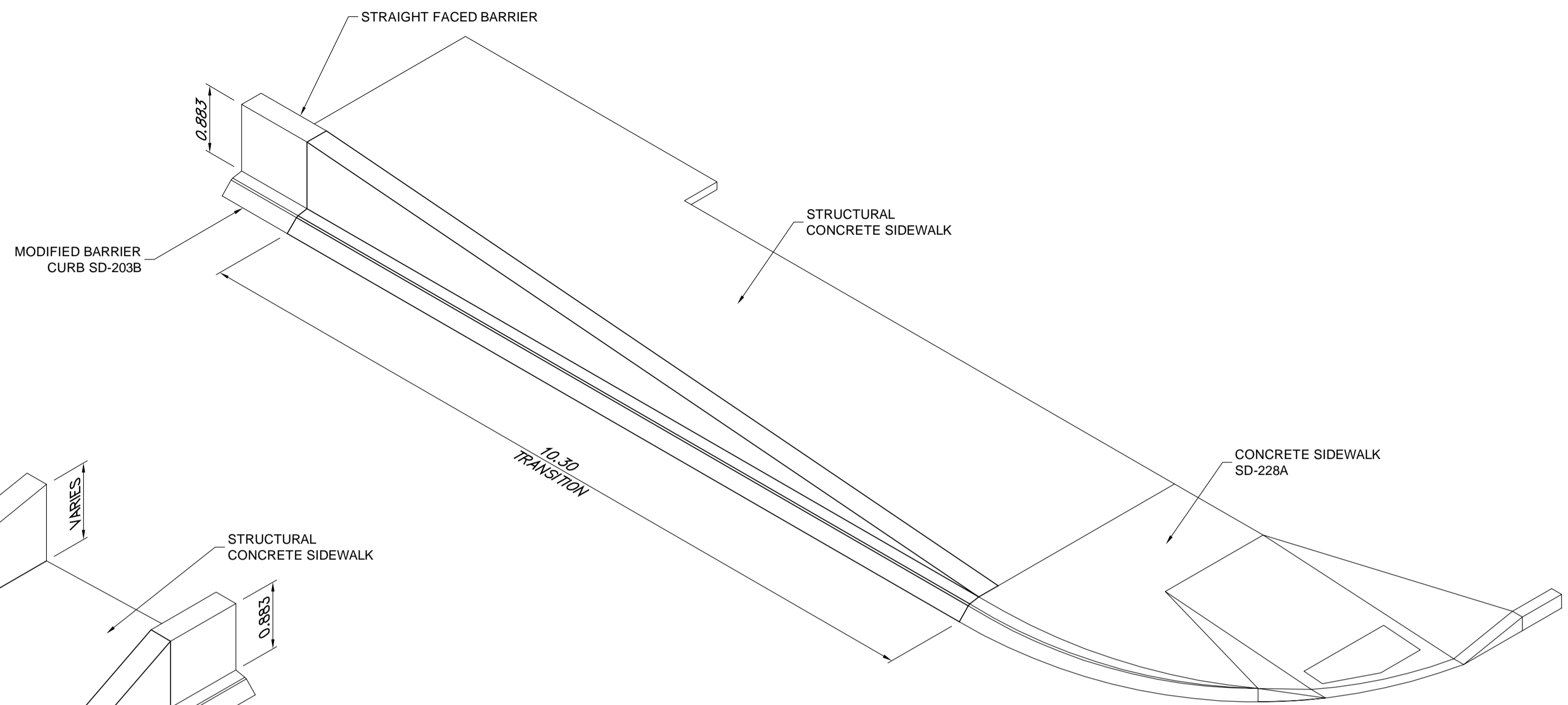
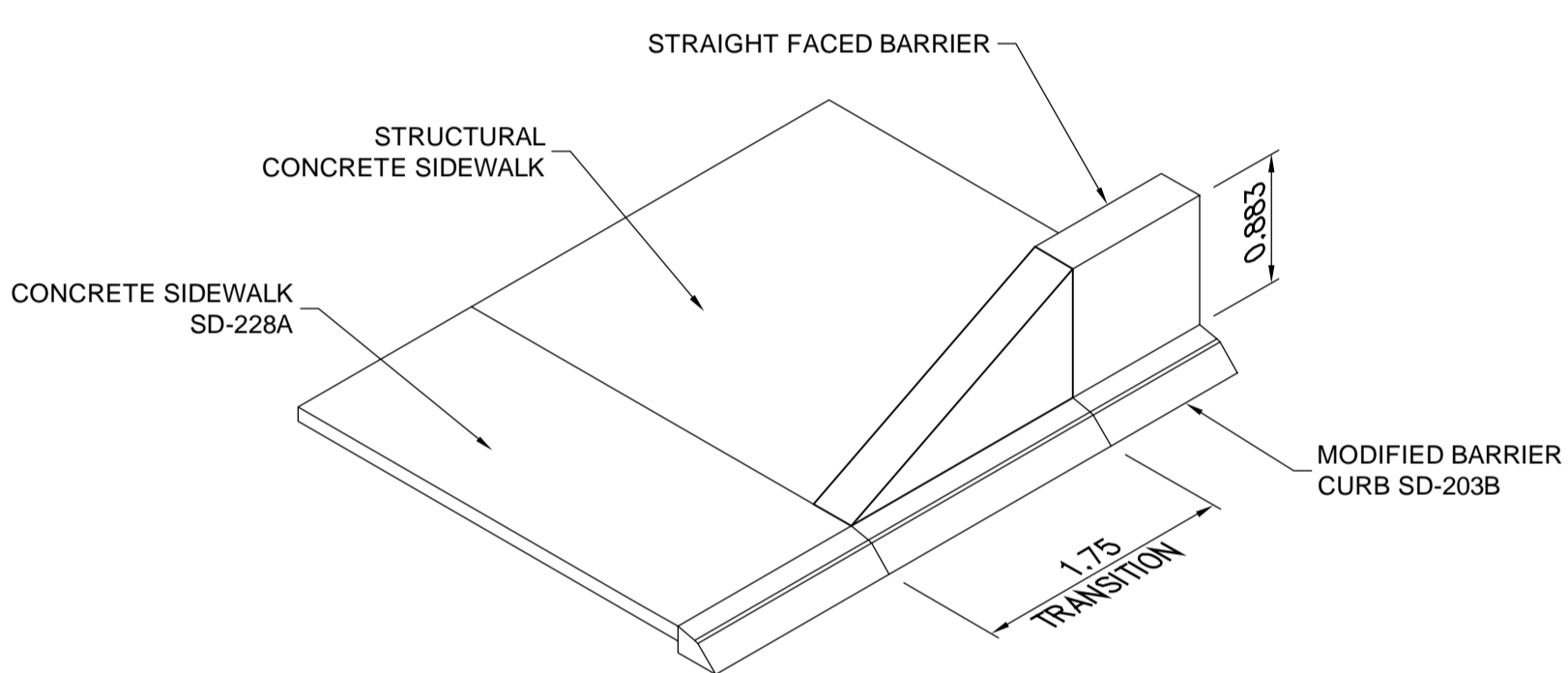


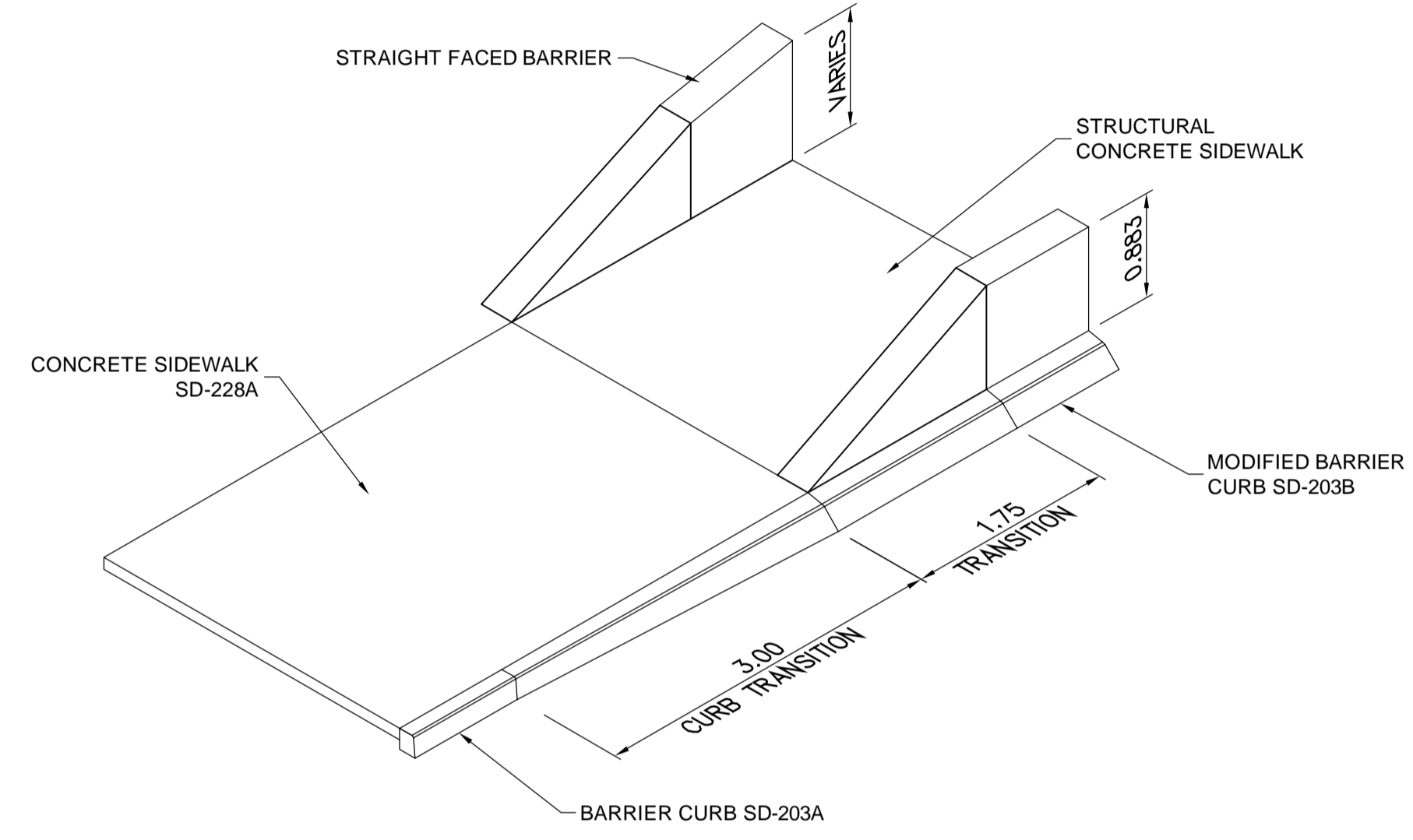
1 SAFETY TO BARRIER MEDIAN TRANSITION
 CT-CT-004/007/021 SCALE: 1:50



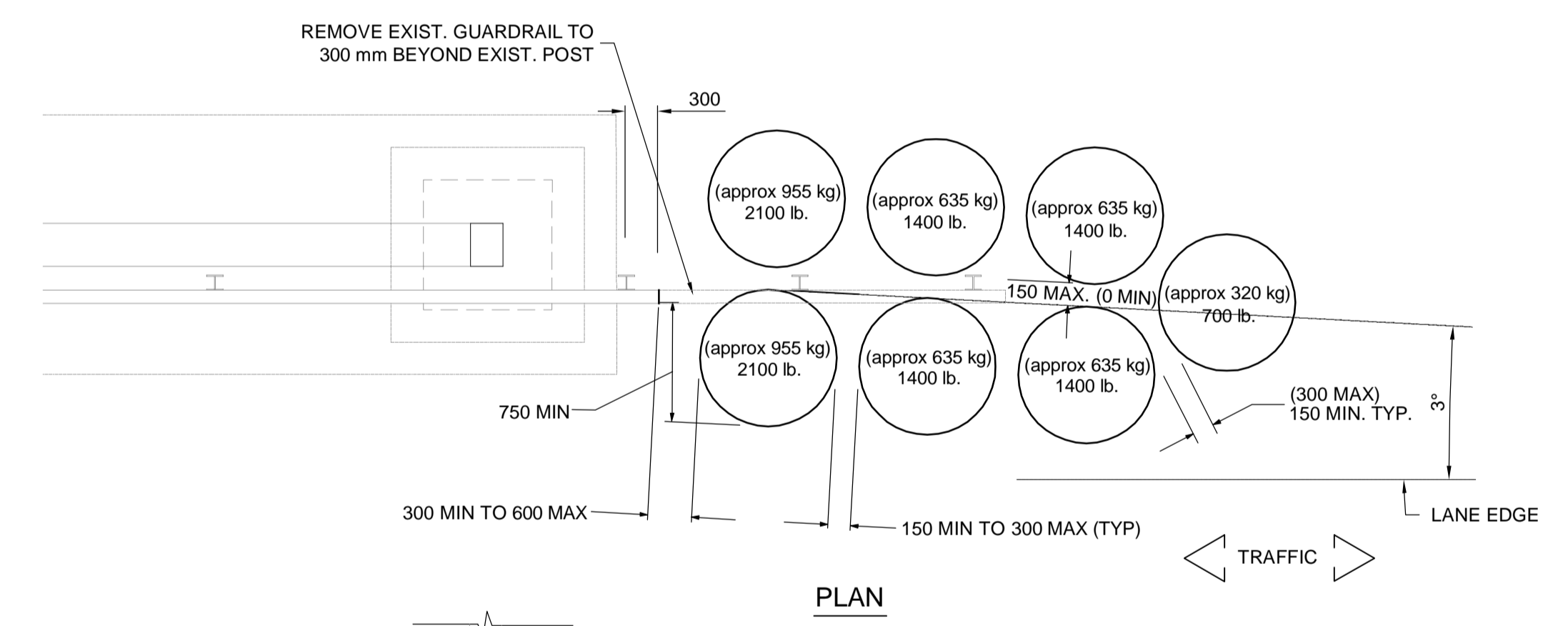
2 STRAIGHT FACED BARRIER TRANSITION - TYPE 1
 CT-CT-004/010/021 SCALE: 1:50



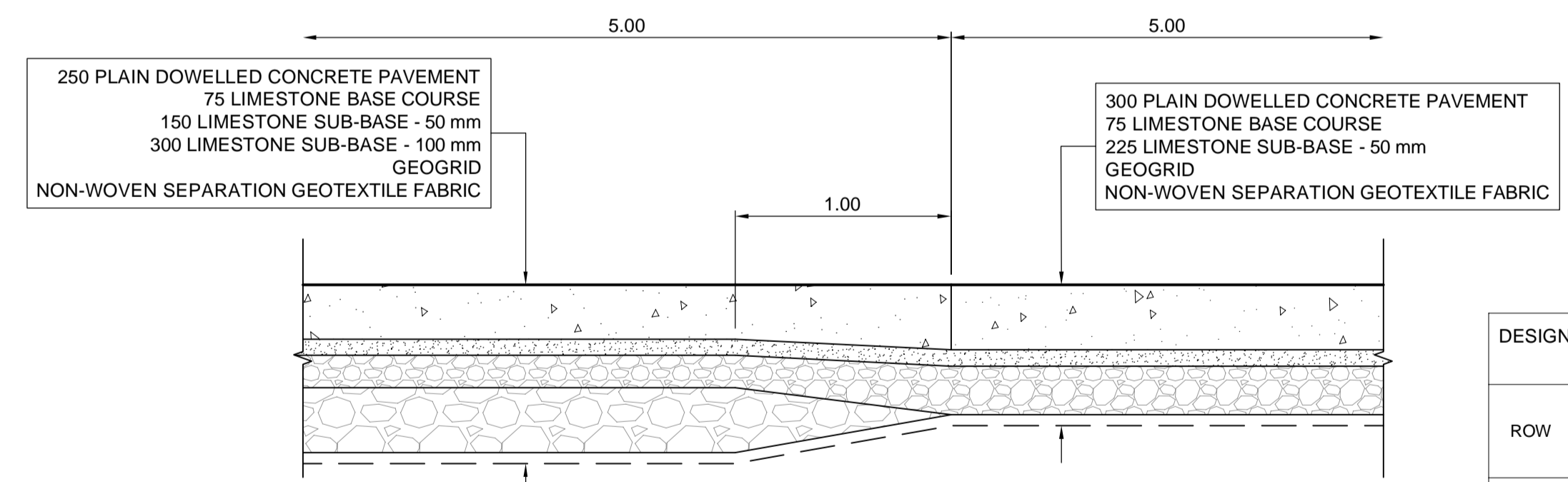
3 STRAIGHT FACED BARRIER TRANSITION - TYPE 2
 CT-CT-010/021 SCALE: 1:50



4 STRAIGHT FACED BARRIER TRANSITION - TYPE 3
 CT-CT-010/021 SCALE: 1:50



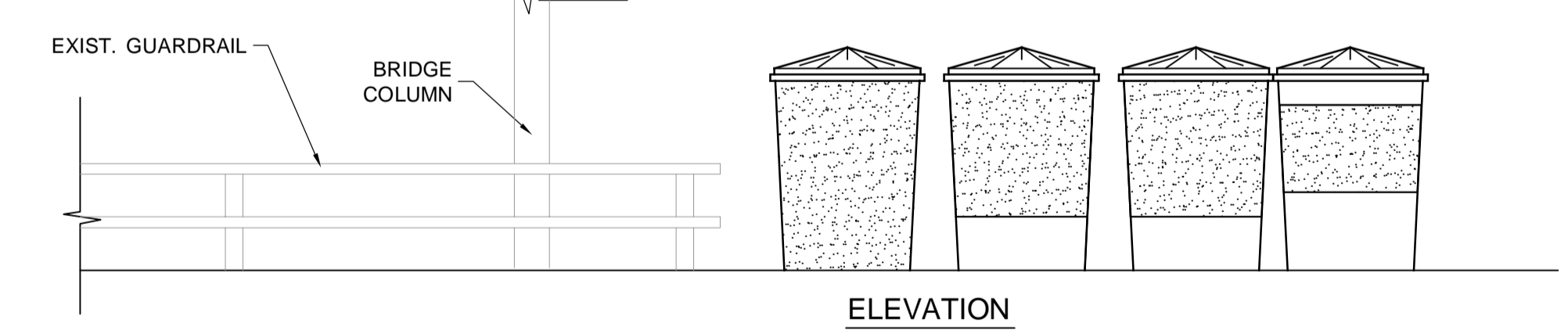
6 SAND FILLED BARRELS
 CT-CT-014/016/021 SCALE: 1:50



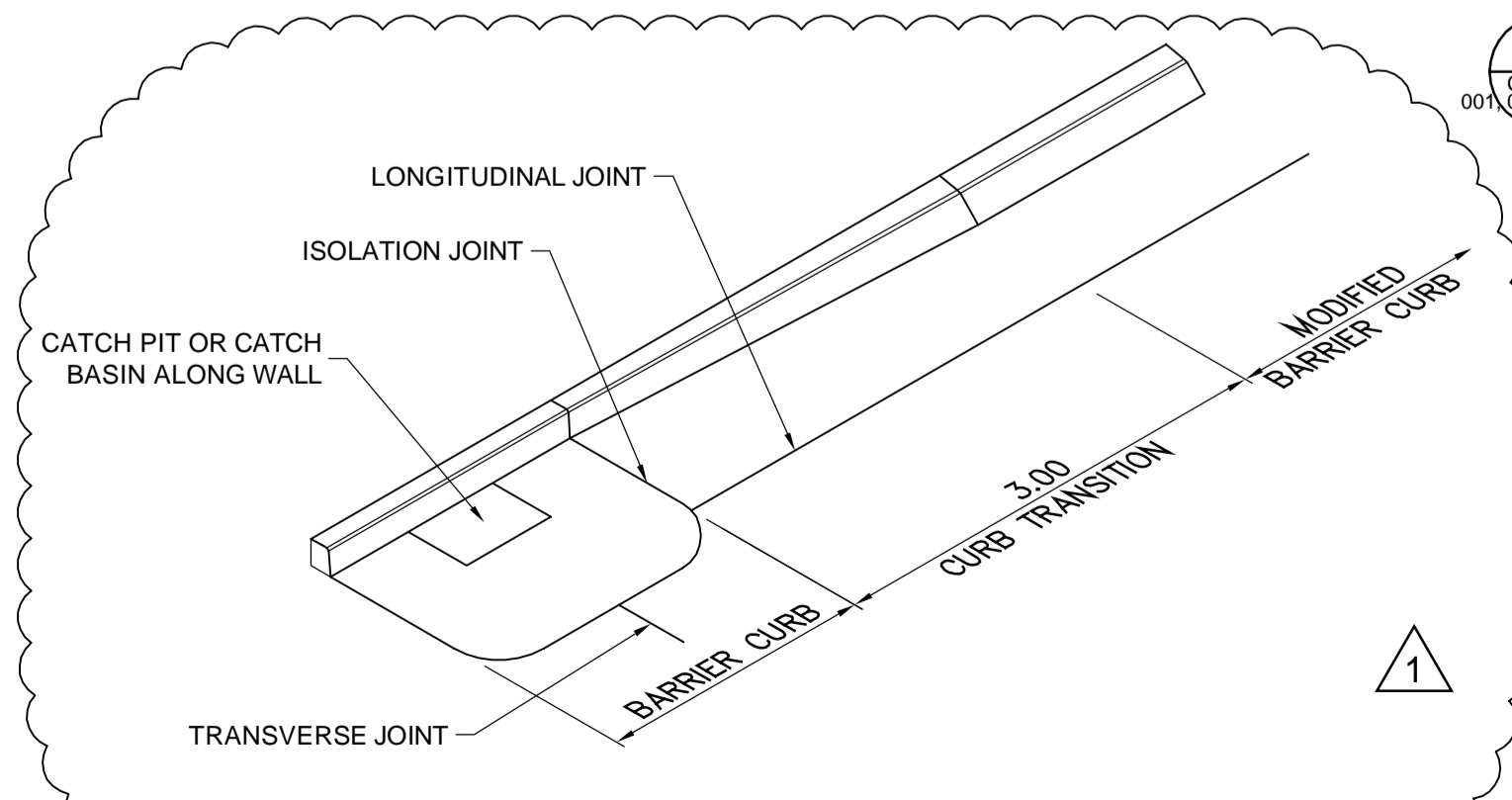
DESIGN CALCULATIONS FOR A POSTED VELOCITY OF 50 km/h (SEE NOTE)

ROW	SAND WEIGHT (lbs.)	816.5 kg CAR		2041.2 kg TRUCK	
		EXIT VEL (km/h)	AVG G'S FOR ROW	EXIT VEL (km/h)	AVG G'S FOR ROW
0	-	50.00	-	50.00	-
1	700	35.98	5.18	43.26	2.70
2	2800	14.06	4.72	26.64	4.99
3	2800	5.50	0.72	16.41	1.89
4	4200	1.65	0.12	8.48	0.85

NOTE: THE DESIGN CALCULATIONS APPLY ONLY FOR A FRONTAL IMPACT IN EITHER A UNIDIRECTIONAL OR BIDIRECTIONAL LAYOUT.



ELEVATION



7 DRAINAGE INLET CURB TRANSITION
 CT-CT-001/002/021 SCALE: 1:50

5 CONCRETE PAVEMENT STRUCTURE TRANSITION
 CT-CT-001/002/021 SCALE: 1:25

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

UNDERGROUND STRUCTURES		B.M. ELEV.	DESIGNED BY	RTP
SUPV. U/G STRUCTURES	DATE		DRAWN BY	TJH
			CHECKED BY	TS
			APPROVED BY	TJP
			HOR. SCALE	AS NOTED
			VERTICAL	AS NOTED
1	ISSUED FOR ADDENDUM 1		DATE	18/03/26
0	ISSUED FOR TENDER		DATE	18/03/16
NO.	REVISIONS		DATE	BY

DILLON CONSULTING

RELEASED FOR CONSTRUCTION

DATE

ENGINEER'S SEAL

PROVINCE OF MANITOBA

T.J. PETERS

18/03/16

Member 22309

REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER

17-6152

THE CITY OF WINNIPEG
 PUBLIC WORKS DEPARTMENT

2018 REGIONAL STREET RENEWAL PROJECT
 McPHILLIPS STREET RECONSTRUCTION AND UNDERPASS
 STRUCTURAL IMPROVEMENTS
 LOGAN AVENUE TO JARVIS AVENUE

CITY DRAWING NUMBER
 P-3492-2018-CT-021

SHEET 021 OF 022

CONSULTANT DRAWING NUMBER
 CT-021

DETAILS (1 OF 2)

APEGM

Certificate of Authorization

Dillon Consulting Limited (MB)

No. 1789 Date: 18/03/16

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