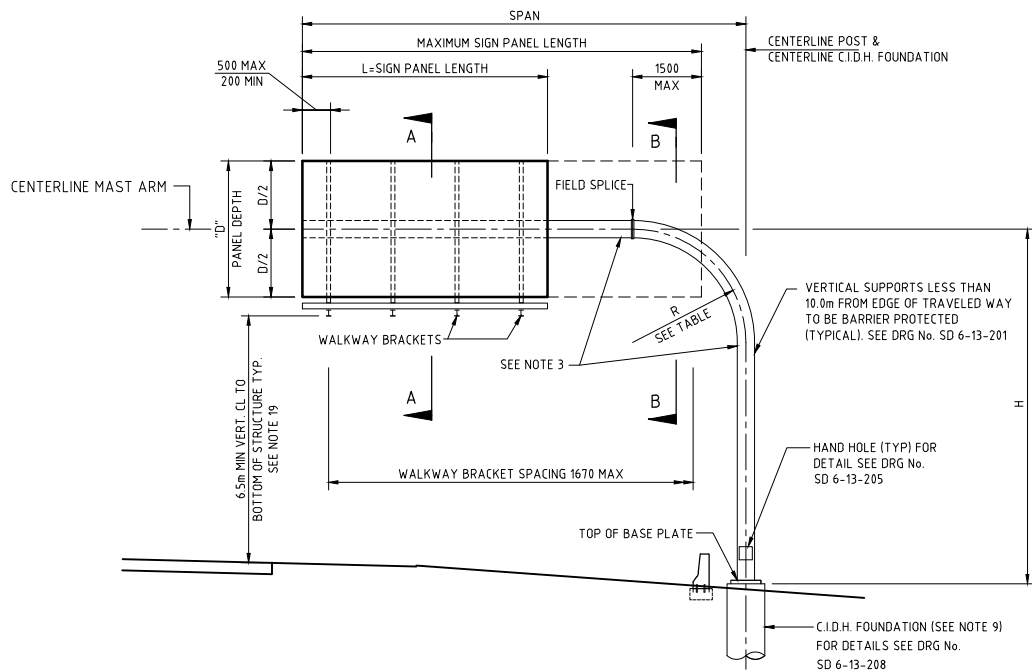
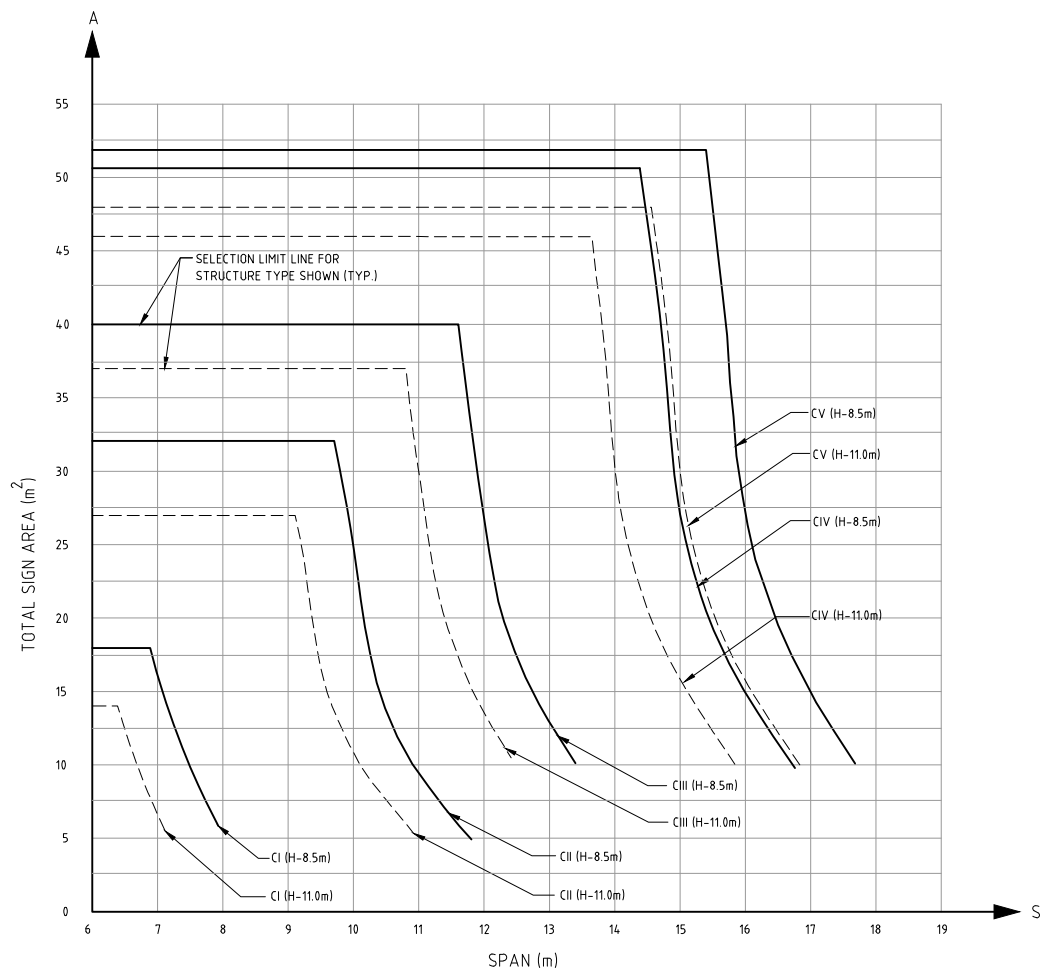
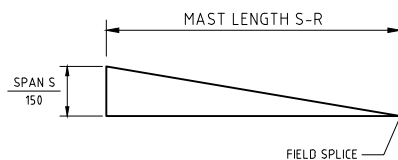




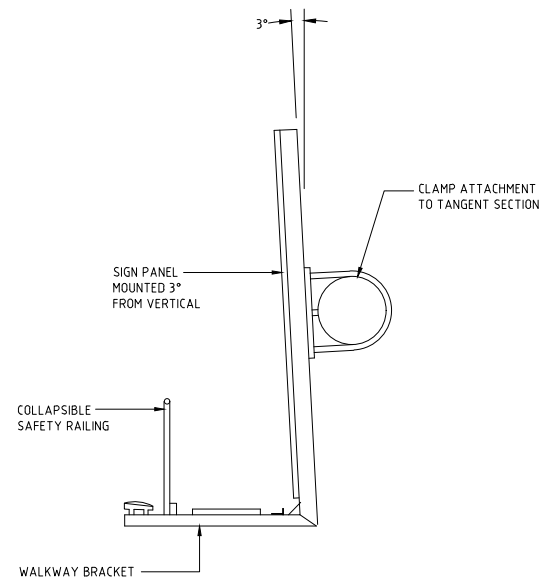
CANTILEVER STRUCTURE TYPE - C



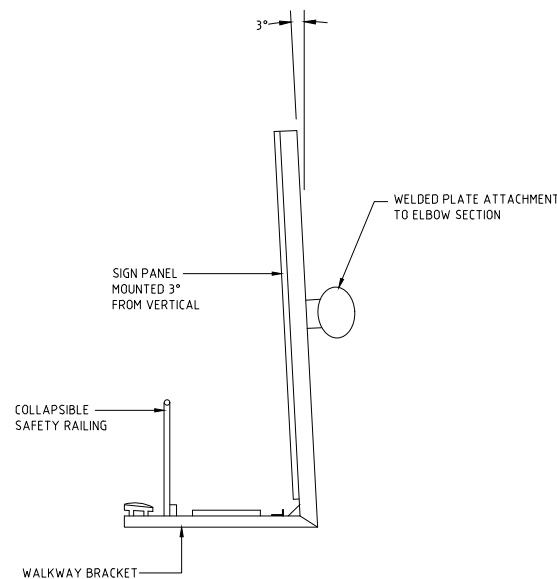
CANTILEVER STRUCTURE SELECTION DIAGRAM



CAMBER DIAGRAM FOR CANTILEVER



SECTION A-A



SECTION B-B

CANTILEVER STRUCTURE DESIGN DATA					
STRUCTURE TYPE	PIPE SIZE φ (mm)	POST WALL THICKNESS (mm)	MAST WALL THICKNESS (mm)	RADIUS (R) (m)	FOUNDATION TYPE
C I	406.4	12.7	10	2.45	(C)
C II	558.8	12.7	10	3.05	(D)
C III	660.4	12.7	10	3.65	(F)
C IV	812.4	12.7	10	4.25	(F)
CV	863.6	14.3	10	4.85	(F)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT Q.C.S. UNLESS OTHERWISE AGREED WITH THE ENGINEER.
3. ALL POSTS BETWEEN BASE PLATE AND FIELD SPLICE ARE EXTRA STRONG PIPE, ALL MAST ARMS ARE STANDARD PIPE PER ASTM A53.
4. SIGN GANTRY SHALL BE DESIGNED TO BE PASSIVELY SAFE IN CONFORMANCE WITH BS EN 12767 OR SHALL BE PROTECTED WITH AN APPROVED VEHICLE RESTRAINT SYSTEM.
5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILING SIGN LOCATIONS, FABRICATIONS, ERECTION DETAILS AND OTHER INFORMATION AS REQUIRED BY THE ENGINEER FOR APPROVAL BY THE ENGINEER.
6. THE CONTRACTOR SHALL OBTAIN AND SUBMIT, SOIL BORINGS FOR EACH OVERHEAD SIGN LOCATION, AS REQUIRED BY THE SPECIFICATIONS.
7. FOR TUBULAR FRAME DETAILS, SEE DRAWING No. SD 6-13-205.
8. PRIOR TO FABRICATION OF TUBULAR FRAMES, ALL DIMENSIONS OF STRUCTURAL FRAMES, AND PLACEMENT OF FOUNDATIONS, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
9. FOR BASE PLATE DETAILS, SEE DRAWING No. SD 6-13-208.
10. WHEN SEVERAL SIGN PANELS ARE TO BE INSTALLED WITH SPACES BETWEEN THE PANELS, THE TOTAL SIGN PANEL LENGTH IS THE SUM OF THE INDIVIDUAL SIGN PANEL LENGTH ONLY.
11. THE MAXIMUM SIGN PANEL OVERLAP ONTO ELBOW SHALL NOT EXCEED 1500mm FROM THE FIELD SPLICE.
12. WALKWAY BRACKET MAXIMUM SPACING SHALL BE 1670mm AND MINIMUM CLEAR DISTANCE FROM FIELD SPLICE SHALL BE 300mm.
13. WALKWAY SHALL EXTEND THE FULL LENGTH OF SIGNS, BE CONTINUOUS BETWEEN SIGNS AND EXTEND TO THE EDGE OF ROADWAY IF REQUIRED. THE SAFETY RAILING SHALL PROTECT THE ENTIRE WALKWAY AND SHALL BE CONTINUOUS FOR NOT MORE THAN 3350mm IN ONE UNIT.
14. ALL WELDING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED.
15. IF THE SIGN FRAMES ARE ERECTED AS ONE UNIT, THEY SHALL BE ADEQUATELY SUSPENDED TO AVOID DISTORTION OR CHANGES IN SPAN LENGTH.
16. BEFORE ANY PORTION OF THE SIGN FRAMES ARE ASSEMBLED IN THEIR FINAL POSITIONS, THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER BY PREASSEMBLY OR OTHER APPROVED METHODS THAT THE SPAN LENGTHS OF THE FRAMES IN THE NO LOAD CONDITION MATCH WITHIN 10mm+ THE FIELD MEASURED SPAN LENGTHS.
17. AT FINAL POSITION OF POST, ALL TOP AND BOTTOM ANCHOR BOLT NUTS SHALL BE WRENCH TIGHTENED AGAINST BASE PLATE.
18. MAXIMUM DEPTH OF SIGN PANEL D=3.0m.
19. 6.5m VERTICAL CLEARANCE MEASURED FROM HIGH POINT OF ROADWAY CROWN TO UNDERSIDE OF SIGN OR FROM LOW POINT OF SIGN TO PAVEMENT.
20. DURING SINGLE POST SIGN ERECTION, THE NUT SUPPORTING TUBULAR BASE PLATE SHALL BE ADJUSTED AS NECESSARY TO BRING THE POST TO A TRUE VERTICAL PLANE AND SIGN PANEL LEVEL.
22. SAFETY BARRIERS TO COMPLY WITH IAN 009, QCS AND QHDM.
23. FOR LATERAL AND VERTICAL POSITIONS OF TRAFFIC AND DIRECTIONAL SIGNS REFER TO QATAR TRAFFIC CONTROL MANUAL, VOLUME 1 PART 1-TABLE 13.

LEGEND:

- CIDH CAST IN DRILLED HOLE
VCB VEHICLE CRASH BARRIER

2	17MAR19	ISSUED FOR USE	
1	20MAR16	ISSUED FOR USE	
0	15SEP13	ISSUED FOR USE	

Rev.	Date	Revision Details	Appd.
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Public Works Authority

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PA
PROJECT AFFAIRS

QCS Section:
Section 6 - Road Works
Part 13 - Traffic Signs, Markings and Studs

Drawing Title:

CANTILEVER SIGN GANTRY

Approved:	Sheet No: 1 OF 1
Date: MARCH 2019	Scale: AS SHOWN
Drawing Number: SD 6-13-202	Revision: 2