

TABLE OF CONTENTS

SECTION No	TITLE	PAGE
1	SCOPE	1.1
2	DEFINITIONS	1.1
	Figure 2.1	
3	TYPES OF DRAWINGS	
3.1	General	3.1
3.2	Definitions	3.1
3.3	Sketches	3.1
3.4	Proposal Sketches	3.2
3.5	Standard Drawings	3.2
3.5.1	RTA Standard Bridge Drawings	3.2
3.5.2	Project Specific Standard Drawings	3.3
3.6	Registered Drawings	3.3
3.7	Registration of Sketches and Drawings in Bridge Engineering	3.4
3.8	CAD File Names for Registered Drawings	3.4
3.9	CAD Numbers and CAD Filenames for Sketches	3.5
3.10	Registration of Drawings with Micrographics	3.6
	Figure 3.4.1	
	Figure 3.4.2	
	Figure 3.8.1	
	Figure 3.9.1	
4	DRAWING SHEETS AND TITLE BLOCKS	
4.1	Sheet Sizes	4.1
4.2	Title Blocks	4.1
4.3	Order of Sheets in a set of Drawings	4.2
4.4	Standard Drawing Sheets	4.2
4.5	Local Government Area Names	4.2
	Figure 4.2.1 (a)	
	Figure 4.2.1 (b)	
	Figure 4.2.1 (c)	
	Figure 4.4.1	
	Figure 4.4.2	
	Figure 4.4.3	
5	SETTING OUT	
5.1	General	5.1
5.2	Chainages	5.2
5.3	Compass Bearing	5.2
5.4	Co-ordinates	5.2
5.5	Piles	5.3
5.6	Footings	5.4
5.7	Piers and Abutments	5.4
5.8	Bearings	5.4

5.9	Girders	5.4
5.10	Deck	5.6
5.11	Barrier Railings	5.8
	Figure 5.1 – Sheet 1	
	Figure 5.1 – Sheet 2	
	Figure 5.3	
	Figure 5.4	
	Figure 5.6	
	Figure 5.9	
	Figure 5.10(a)	
	Figure 5.10(b)	
	Figure 5.11	
6	FOUNDATIONS	
6.1	General	6.1
6.2	Piling	6.1
6.2.1	Precast Reinforced Concrete Driven Piles	6.1
6.2.2	Prestressed Reinforced Concrete Driven Piles	6.2
6.2.3	Cast-in Place Reinforced Concrete Piles	6.2
6.2.4	Tubular Steel Driven Piles	6.4
6.2.5	H Section Steel Driven Piles	6.4
6.3	Pile/Pile Cap Combinations	6.5
6.4	Spread Footings	6.5
6.5	Rock Anchors	6.6
	Figure 6.2.5	
	Figure 6.3.1	
	Figure 6.4.1 (a)	
	Figure 6.4.1 (b)	
	Figure 6.4.1 (c)	
	Figure 6.5	
7	DRAWING PRACTICE	
7.1	Linework	7.1
7.2	Text	7.1
7.3	Dimensions	7.1
7.3.1	General	7.1
7.3.2	Order of accuracy for Dimensions	7.2
7.3.2	Reduced Levels and Chainages	7.2
7.4	Dimension Lines, Projection Lines and Leaders	7.3
7.5	Scales on drawings	7.3
7.6	Plan Views	7.4
7.7	Elevations	7.4
7.8	Sections	7.4
7.9	Views	7.5
7.10	Details	7.5
	Figure 7.1	
	Figure 7.3.1	
	Figure 7.3.2	
8	SLOPING FEATURES	
8.1	Slopes and Batters	8.1
8.2	Grades, Crossfalls and Superelevations	8.1

9	CONTOURS	
	9.1	General 9.1
	9.2	Lines 9.1
	9.3	Levels and Intervals 9.1
10	ABBREVIATIONS	
	10.1	Standard Abbreviations 10.1 Table 10.1.1
	10.2	Acceptable Abbreviations 10.2 Table 10.2.1
11	SYMBOLS	
	11.1	Welding 11.1
	11.2	Surface Texture of Metals 11.1
	11.3	Materials 11.1
	11.4	Use of asterisks and similar Symbols 11.2 Figure 11.3
12	NOTES AND REFERENCES	
	12.1	General 12.1
	12.2	General Notes 12.1
	12.3	Particular Notes 12.1
13	TITLES AND SUB-TITLES	
	13.1	Titles 13.1
	13.2	Subtitles 13.1 Figure 13.2
14	CHECKING OF DRAWINGS	
	14.1	General 14.1
	14.2	Marking of Check Prints 14.2
	14.3	Amendment of Drawings 14.2
15	ISSUE AND AMENDMENT OF DRAWINGS	
	15.1	General 15.1
	15.2	Submission of Drawings for Approval 15.1
	15.3	Issue of Advance Copy Drawings 15.1
	15.4	Amendment of Approved Drawings 15.1
	15.5	Procedure following Amendment of Approved Drawings 15.3
	15.6	Authorisation for release of Amended Drawings 15.4 Figure 15.2 Figure 15.4.1 Figure 15.4.2
16	WORK-AS-EXECUTED DRAWINGS	
	16.1	General 16.1
	16.2	Standard of Work Required 16.1
	16.3	Projects Designed and Constructed Under Contract 16.2 Figure 16.2

17	LOCALITY AND SITE PLANS	
17.1	Locality Plans	17.1
17.2	Site Plans	17.1
18	CONCEPT AND PROPOSAL SKETCHES	
18.1	General	18.1
18.2	Concept Sketches	18.1
18.3	Registration and Numbering	18.1
18.4	Information to be shown on Proposal Sketches	18.1
18.4.1	Plan View	18.2
18.4.2	Elevation	18.2
18.4.3	Typical Cross Section	18.3
18.4.4	Skew Diagram	18.3
18.4.5	Vertical Alignment Diagram	18.4
18.4.6	Site Plan	18.4
18.4.7	Locality Plan	18.4
18.4.8	General Notes	18.4
18.4.9	Title Block	18.4
18.5	Drawing Conventions	18.5
18.6	Orientation	18.6
18.6.1	Locality Plan	18.6
18.6.2	Site Plan	18.6
18.7	Issue of Preliminary Sketches	18.6
18.8	Submission of Proposal Sketches for Approval by Client	18.6
18.9	Amendments to Approved Proposals	18.6
18.10	Preparation of Sketches for Heritage Issue Consideration	18.6
	Figure 18.2.1(a) and (b)	
	Figure 18.4.1(a) and (b)	
	Figure 18.10(a)	
	Figure 18.10(b)	
	Figure 18.10(c)	
	Figure 18.10(d)	
	Figure 18.10(e)	
19	GEOTECHNICAL INFORMATION	
19.1	General	19.1
19.2	Minimum extent of Geotechnical Investigation	19.1
19.3	Bridge Construction Contracts invited by the Authority	19.1
19.4	Bridge Construction as part of Design Construct Maintain Projects	19.1
20	COVER SHEETS	
20.1	General	20.1
	Figure 20.1.1(a)	
	Figure 20.1.1(b)	
	Figure 20.1.1(c)	
	Figure 20.1.1(d)	
21	GENERAL ARRANGEMENT DRAWINGS	
21.1	General	21.1
21.2	Plan View	21.1
21.3	Elevation	21.2
21.4	Typical Cross Section	21.2
21.5	Skew Diagram	21.3

21.6	Vertical Alignment Diagram	21.3
21.7	Site Plan	21.3
21.8	General Notes	21.4
	Figure 21.1.1(a)	
	Figure 21.1.1(b)	
	Figure 21.1.1(c)	
	Figure 21.1.1(d)	
	Figure 21.5	
22	CONCRETE DETAILING	
22.1	General	22.1
22.2	Dimensioning	22.1
22.3	Plan Views	22.2
22.4	Elevations	22.2
22.5	Sections	22.2
22.6	Construction Joints	22.2
	Figure 22.1	
	Figure 22.2	
	Figure 22.3	
	Figure 22.4	
	Figure 22.5	
	Figure 22.6	
23	STEEL REINFORCEMENT DETAILING	
23.1	Layout	23.1
23.2	Bar and Fabric Detailing	23.1
23.3	Development and Lap Lengths	23.2
23.3.1	General	23.2
23.3.2	Development Lengths for Bars in Tension	23.2
	Table 23.3.2.1	23.3
	Table 23.3.2.2	23.4
23.3.3	Development Lengths for Bars in Compression	23.4
	Table 23.3.3	23.5
23.3.4	Slicing of Reinforcement	23.5
23.3.4.2	Lapped Splices for Bars in Tension	23.5
23.3.4.3	Lapped Splices for Bars in Compression	23.5
	Table 23.4.3	23.6
24	PRESTRESSED CONCRETE	
24.1	General	24.1
24.2	Pre-tensioned Prestressed Concrete	24.1
24.2.1	PSC Planks	24.1
24.2.2	Precast Prestressed Concrete Girders	24.1
24.3	Post-tensioned Prestressed Concrete	24.2
24.3.1	General	24.2
24.3.2	Tendon Profiles	24.2
24.3.3	Ducts	24.3
	Figure 24.2.2	
	Figure 24.2.2(b) – Sheet 1	
	Figure 24.2.2(b) – Sheet 2	
	Figure 24.3.1(a)	
	Figure 24.3.1(b)	
	Figure 24.3.1(c)	

	Figure 24.3.1 (d)	
	Figure 24.3.1 (e)	
	Figure 24.3.1 (f)	
25	STRUCTURAL STEELWORK	
	25.1 General	25.1
	25.2 Standard Items	25.2
	25.3 Non-standard Items	25.2
	25.4 Closing Dimensions	25.2
	25.5 Web Diagrams	25.2
	25.6 Stud Welded Shear Connectors	25.2
	25.7 Web Stiffeners	25.3
	25.8 Corner Cuts and Cutouts	25.3
	25.9 Lifting Lugs	25.3
	25.10 Protective Treatment	25.3
	25.11 Plate Nomenclature	25.4
	25.12 Intermittent Welds	25.4
	Figure 25.1 (a)	
	Figure 25.1 (b)	
	Figure 25.1 (c)	
	Figure 25.1 (d)	
	Figure 25.5.1	
26	BARRIER RAILINGS	
	26.1 General	26.1
	26.2 Dimensions	26.1
	26.2.1 Traffic Barrier Railings	26.1
	26.2.2 Pedestrian Railings	26.1
	26.3 Geometry	26.1
	26.3.1 Grades and Vertical Curves	26.1
	26.3.2 Horizontal Curves	26.1
	26.4 Joints	26.2
	26.5 Post Spacing	26.2
	26.5.1 Traffic Barrier Railings	26.2
	26.5.2 Pedestrian Railings	26.3
	26.6 Panel Lengths	26.3
	26.6.1 Traffic Barrier Railings	26.3
	26.6.2 Pedestrian Railings	26.3
	26.7 Termination of Railings at Ends of Structures	26.3
	Figure 26.3.1	
	Figure 26.3.2	
	Figure 26.4	
27	BEARINGS	
	27.1 General	27.1
	27.2 Reduced Levels of Bearings	27.1
	27.3 Bearing Types	27.1
	27.3.1 Elastomeric Bearing Strips and Elastomeric Bearing Pads	27.2
	27.3.2 Laminated Elastomeric Bearings	27.2
	27.3.3 Proprietary Bearing Types	27.3
	Figure 27.3.1	
	Figure 27.3.4(a)	
	Figure 27.3.4(b)	

28	DECK JOINTS	
28.1	General	28.1
28.2	Detailing of Joints	28.1
28.2.1	Small Movement Joints	28.1
28.2.2	Compression Seal Joints	28.2
28.2.3	Steel Fabricated Interlocking Finger Joints	28.2
28.2.4	Elastomeric Strip Seal Joints	28.2
28.2.5	Proprietary Aluminium SawTooth Joints	28.2
28.2.6	Modular Joints	28.2
28.2.7	Other Joint Types	28.2
	Figure 28.2.2	
	Figure 28.2.3(a)	
	Figure 28.2.3(b)	
	Figure 28.2.3(c)	
	Figure 28.2.4	
	Figure 28.2.5	
29	MISCELLANEOUS METALWORK	
29.1	General	29.1
29.2	Protection Angles and Expansion Joint Angles	29.2
29.3	Dowels and Dowel Cap Assemblies	29.2
29.4	Bolt Assemblies	29.3
29.6	Bearing Cover Plates	29.4
29.7	Concrete Safety Barrier Cover Plates for Expansion Joints	29.4
	Figure 29.2.1	
30	BRIDGE WIDENINGS	
30.1	General	30.1
30.2	Drawings	30.1
30.3	Linework and Shading	30.2
	Figure 30.1.1	
	Figure 30.1.2	
31	BRIDGE SAFETY SCREENS	
31.1	General	31.1
31.2	Geometry	31.1
31.2.1	Grades and Vertical Curves	31.1
31.2.2	Height	31.1
31.2.3	Horizontal Curves	31.1
31.2.4	Curvature of Posts and Screens	31.2
31.3	Joints	31.2
31.4	Post Spacing	31.2
31.4.1	Retrofitting application requirements	31.2
31.5	Steel Mesh Panel Sizes	31.3
31.6	Fixing of Steel Mesh Panels	31.3
31.7	Termination of Safety Screens at Ends of Structure	31.4
31.8	End Treatment	31.4
31.9	Application of Decorative Panels	31.4
31.10	Alternative Safety Screens	31.4
	Figure 31.1	
	Figure 31.3	
	Figure 31.4.1	

32	BRIDGE SIZE REINFORCED CONCRETE BOX CULVERTS	
32.1	General	32.1
32.2	Cover Sheets	32.1
32.3	General Arrangement Drawings	32.2
32.4	Cast-in-place Base Slabs	32.2
32.5	Cast-in-place Apron Slabs	32.3
32.6	Precast Reinforced Concrete Crown Units and End Units	32.3
32.7	Cast-in-place Headwalls	32.3
32.8	Cast-in-place Wing Walls	32.4
32.9	Inlet and Outlet Protection	32.4
32.10	Culvert Extensions	32.4
32.11	Bar Shapes Diagram	32.5
	Figure 32.2.1	
	Figure 32.2.2	
	Figure 32.2.3	
	Figure 32.2.4	
	Figure 32.3.1	
	Figure 32.3.2	
	Figure 32.4.1	
	Figure 32.4.2	
	Figure 32.4.3	
	Figure 32.7.1	
	Figure 32.7.2	
	Figure 32.8.1	
	Figure 32.10.1	
	Figure 32.10.2	