



Consultant/Developer Specifications for the
Delivery of Digital Data to Local Government

Version 1.7
May 7th, 2009



Victorian Members



City of Ballarat



Bass Coast Shire Council



Baw Baw Shire Council



Brimbank City Council



Cardinia Shire Council



City of Casey



Colac Otway Shire



City of Greater Dandenong



City of Greater Geelong



Hume City Council



Latrobe City Council



Melbourne City Council



Shire of Melton



Mitchell Shire Council



Mornington Peninsula Shire Council



Glenelg Shire Council



Greater Shepparton City Council



Surf Coast Shire Council



Rural City of Wangaratta

Warrnambool City Council

Wellington Shire Council

Whittlesea City Council

Wyndham City Council

W.A. Members



City of Albany



City of Armadale



Shire of Busselton



City of Cockburn



City of Fremantle



City of Gosnells



City of Mandurah



City of Rockingham



Serpentine & Jarrahdale Shire



City of Swan



City of Wanneroo

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EXECUTIVE SUMMARY

Introduction

A-Spec Program

A-SPEC is the acronym for the program involved in developing specifications for the delivery of newly constructed assets as Digital Data in a GIS ready format to Local Government.

The A-Spec management model enables Local Government authorities around Australia to participate in the development and use of the standards developed under this program.

The key objectives of the **A-SPEC** initiative is to streamline stake holders' (local government/utilities) processes for receiving, handling and storing of underground infrastructure related to newly constructed assets either from subdivision developments or internal programs (e.g. capital works) in their GIS and AMIS.

This process will increase the efficiency of information access and result in greater customer satisfaction when dealing with inquiries from engineering consultants, surveyors, developers and prospective residents.

- **Eliminate duplication of effort.** Significant duplication of effort exists in the digitising of as constructed information. This duplication exists between the private sector (who capture as constructed information), and council staff (who may digitise that information from paper plans);
- **Improve process efficiency,** in the process of accepting and processing lodgements, and in checking existing data against design criteria and/or design plans;
- **Improve customer service** to both internal and external customers of asset information;
- **Improve the quality** of drainage information held in council systems for audit and financial requirements, as well as operational and business requirements;
- **Provide a structure** for the consistent recording of all council owned assets, including those created through internal programs such as; capital works and renewals.
- and ultimately **manage assets better** to reduce the need for capital works and/or to reduce ongoing maintenance costs.

The organisations using the **A-SPEC** standards include:

Victoria

City of Ballarat	Bass Coast Shire Council	Baw Baw Shire Council	Brimbank City Council
Cardinia Shire Council	City of Casey	Colac-Otway Shire Council	City of Greater Dandenong
City of Greater Geelong	Glenelg Shire Council	Hume City Council	Latrobe City Council
Melbourne City Council	Shire of Melton	Mitchell Shire Council	Mornington Peninsula Shire Council
Greater Shepparton City Council	Rural City of Wangaratta	Surf Coast Shire Council	Warrnambool City Council
Wellington Shire Council	Whittlesea City Council	Wyndham City Council	

Western Australia

City of Albany	City of Armadale	Shire of Busselton	City of Cockburn
City of Fremantle	City of Gosnells	City of Mandurah	City of Rockingham
Serpentine & Jarrahdale Shire	City of Swan	City of Wanneroo	

R-Spec Standard

The **R-SPEC** standard was created to enable Local Government authorities around Australia to participate in the use of a single specification when dealing with the Land Development Industry within its local jurisdiction.

Taking into account the Road Management Act in Victoria the intent of R-Spec is to provide Local Government with the ability to identify the assets within a road reserve that they will become responsible for. For reference extracts of the Act are outlined on the following page.

Overall a common specification for the supply of asset information within the road reserve was identified as a major opportunity for the members to achieve efficiency and cost savings in the process of maintaining public assets in accordance with their responsibilities under the Road Management Act

The R-Spec standard will enable consultants to provide As – Constructed data with supplementary tables specifying the characteristics required or as GIS ready tables as per D-Spec.

Use of the Specification

This specification is for use by Private Developers, the representatives of Private Developers, engineering consultants and surveyors (hereafter referred to as “Consultants”) who undertake Land Development activities for one or more members of the **A-SPEC** consortium.

Where applicable please refer to the section of the document that stipulates the specific requirements of the **State of Australia** that you are conducting your business in. It is the responsibility of the consultants to understand the specific requirements of their local government clients. Assistance will be provided wherever possible to clarify any issues or concerns.

The key objective of this specification is to provide information to the Consultants that will be dealing with **A-SPEC** consortium members. The standard outlines the specific requirements for the submission of “**As-Constructed Measurements**” as digital data of newly constructed assets within the road reserve.

Whilst all care has been taken with the preparation of this document it is the responsibility of the consultant to confirm that all details are current and relevant. EG: there are specific references in this document that **only** relate to Local Government requirements in Western Australia.

The project to determine the suitability of the **R-SPEC** standard was developed and is being managed by Workforce Solutions Pty Ltd. Level 1, 8 Lawrence Street, Blackburn South, Victoria, 3130

Road Management Act - Victoria

The Victorian Parliament passed the Road Management Act 2004 during its Autumn 2004 sittings of Parliament. The purpose of the Act is to establish a coordinated management system for public roads that will promote safe and efficient State and local public road networks and the responsible use of road reserves for other legitimate purposes, such as the provision of utility services. The majority of the provisions of the Act came into operation on 1 July 2004. Provisions affecting utilities and works on roads came into effect on 1 January 2005.

The following are extracts from the Road Management Act under **Division 2—General functions and powers of road authorities**

33. Role of a road authority

A road authority must in performing road management functions have regard to the principal object of road management and the works and infrastructure management principles

34. General functions

(1) A road authority has the following general functions—

- (a) to provide and maintain, as part of a network of roads, roads for use by the community served by the road authority;
- (b) to manage the use of roads having regard to the principle that the primary purpose of a road is to be used by members of the public and that other uses are to be managed in a manner which minimises any adverse effect on the safe and efficient operation of the road and on the environment;
- (c) to manage traffic on roads in a manner that enhances the safe and efficient operation of roads

35 Powers of a road authority

(1) Subject to this Act, a road authority has power to do all things necessary or convenient to be done for or in connection with the performance of its functions under this Act.

36 Which road authority is the coordinating road authority?

Subject to sections 15 and 16, the coordinating road authority is—

- (a) if the road is a freeway or arterial road, VicRoads;
- (b) if the road is a non-arterial State road, the relevant responsible road authority under section 37(1)(c) or 37(1)(d);
- (c) if the road is a municipal road, the municipal council of the municipal district in which the road or part of the road is situated.

The following are extracts from the Road Management Act under **Division 3—Specific powers and duties of road authorities**

40 Statutory duty to inspect, maintain and repair public roads

(1) Subject to Part 6, a road authority has a statutory duty to inspect, maintain and repair a public road—

(3) The statutory duty to inspect applies to any part of a public road which is—

- (a) a roadway;
- (b) a pathway;
- (c) a shoulder;
- (d) road infrastructure.

For further details visit the Victorian Legislative and Parliamentary Documents website to view the [Road Management Act 2004](http://www.dms.dpc.vic.gov.au/) at <http://www.dms.dpc.vic.gov.au/> or the VicRoads website at www.vicroads.vic.gov.au/rmb

The following information represents extracts from fact sheets prepared by VicRoads to provide a brief snapshot of the key requirements of the Act.

Requirements of Local Government Authorities ¹

The Road Management Act sets down specific requirements for Local Government Authorities, including the following:

Road authorities will be required to make an assessment of the need to put into place a formal road management plan.

Road authorities will be required to establish a Register of Public Roads listing each public road for which it is responsible.

Road authorities will be required to establish effective policies, administrative processes and systems to manage roads in order to receive a level of statutory protection against civil liability claims under the Act.

Prepare reports on road conditions following receipt of notification of an intention to claim for property damage as a result of an incident (such notification is to be provided within 30 days of an incident).

Requirements of Individuals Working in Road Reserves ²

The Road Management Act sets down specific requirements for individuals working in the road reserve, including the following:

Obtaining consent from the coordinating road authority for works impacting on roads and provide notification of the installation of infrastructure, subject to exemptions in regulations. [NOTE: The consent provision comes into operation on 1 January 2005 and is in addition to any requirements under planning and environmental legislation].

Individuals will be required to adequately reinstate roads after completion of repairs or new works.

Individuals will be required to notify coordinating road authorities following completion of works, subject to exemptions in regulations.

¹ Extract from a fact sheet prepared for Local Government Authorities – VicRoads Dec04 (Sheet5LocalGovtDEC04.PDF)

² Extract from a fact sheet prepared for Individuals – VicRoads Dec04 (RMBFactSheetNo5WorkinginRoadReservesDEC04.PDF)

Submission of “As Constructed Measurements” as Digital Data

The key objective of the specification is to provide “As Constructed Measurements” as digital data of information of assets within the Road Reserve in a GIS ready format to the consortium of councils using the R-Spec standard.

- Please refer to the **A-SPEC** website; www.dspeg.com.au for details of **A-SPEC** consortium members preferred formats.³

This document outlines the specifications for digital files containing: - information of assets within the Road Reserve to be provided to the **A-SPEC** consortium members.

Supplier Register

The **A-SPEC** Consortium will maintain a register of Suppliers on the **A-SPEC** consortium website that this specification is issued to, and provide updates or revisions as necessary. You are advised to read this specification carefully and any comments or suggestions you have regarding this specification are welcomed.

- The register of suppliers will be made available on the **A-SPEC** website; www.dspeg.com.au

A-SPEC Member Contact

All inquiries relating to the format of the digital information should be directed to the **A-SPEC** representative of the relevant organisation:

- Please refer to the **A-SPEC** website; www.dspeg.com.au for up-to-date contact details.

³ The preferred format relates to the format the data is presented as e.g. MapInfo, MIF/MID, Arc shape files, etc

Victoria

Responsibility of the Developer

The developer or his representative shall be responsible for:

- ensuring that any information provided by the consortia members is verified prior to any works being undertaken.
- ensuring that the **"As-Constructed Measurements"** of the Works are recorded and certified in accordance with this document and forwarded to the **A-SPEC** consortium member prior to works being accepted and cleared, to receive a Statement of Compliance.
- ensuring that the data supplied to the **A-SPEC** member is **correct, accurate, and complete**.
- ensuring the data is supplied within 3 weeks of work being completed unless otherwise agreed with the relevant consortium member.
- ensuring that the information provided is relative to the cadastral information being recorded in Spatial Information Infrastructure's digital cadastral map base.

In the event that the **Developer engages a surveyor** separately to record the **"As-Constructed Measurements"** of the works, then the surveyor will be responsible for:

- ensuring that any information provided by the consortia members is verified by prior to any works being undertaken.
- ensuring that the **"As-Constructed Measurements"** of the Works are recorded and certified in accordance with this document and forwarded to the **A-SPEC** consortium member prior to works being accepted and cleared, to receive a Statement of Compliance.
- ensuring that the data supplied to the **A-SPEC** member is **correct, accurate, and complete**.
- ensuring the data is supplied within 3 weeks of work being completed unless otherwise agreed with the relevant consortium member.
- ensuring that the information provided is relative to the cadastral information being recorded in Spatial Information Infrastructure's digital cadastral map base.

In the event that the **Developer engages a consulting engineer** to supervise all works including those of a surveyor to record the **"As-Constructed Measurements"** of the works, then the consulting engineer will be responsible for:

- ensuring that any information provided by the consortia members is verified by prior to any works being undertaken.
- ensuring that the **"As-Constructed Measurements"** of the Works are recorded and certified in accordance with this document and forwarded to the **A-SPEC** consortium member prior to works being accepted and cleared, to receive a Statement of Compliance.
- ensuring that the data supplied to the **A-SPEC** member is **correct, accurate, and complete**.
- ensuring the data is supplied within 3 weeks of work being completed unless otherwise agreed with the relevant consortium member.
- ensuring that the information provided is relative to the cadastral information being recorded in Spatial Information Infrastructure's digital cadastral map base.

Western Australia

Responsibility of the Developer

The developer or his representative shall be responsible for:

- ensuring that any information provided by the consortia members is verified by the consultant prior to any works being undertaken.
- ensuring that the **Survey Enhanced "As-Constructed Measurements"** and details of the Works are recorded and certified by the Surveyor in accordance with this document and forwarded to the **A-SPEC** consortium member prior to works being accepted and receiving a Clearance.
- ensuring that the data supplied to the **A-SPEC** member is correct, accurate and complete.
- ensuring the data is supplied within 3 weeks of work being completed unless otherwise agreed with the relevant consortium member.
- ensuring that the information provided is relative to the cadastral information being recorded in LANDGATE's digital cadastral map base.

In the event that the **Developer engages a surveyor** separately to record the extent of the "As Constructed" works, then the surveyor will be responsible for:

- ensuring that any information provided by the consortia members is verified by the consultant prior to any works being undertaken.
- ensuring that the **Survey Enhanced "As-Constructed Measurements"** and details of the Works are recorded and certified by the Surveyor in accordance with this document and forwarded to the **A-SPEC** consortium member prior to works being accepted and receiving a Clearance.
- ensuring that the data supplied to the **A-SPEC** member is correct, accurate, complete and on the projection requested by the **A-SPEC** member
- ensuring the data is supplied within 3 weeks of work being completed unless otherwise agreed with the relevant consortium member.
- ensuring that the information provided is relative to the cadastral information being recorded in LANDGATE's digital cadastral map base.

In the event that the **Developer engages a consulting engineer** to supervise all works including those of a surveyor to record the extent of the "As Constructed" Measurements" of the works, then the engineer will be responsible for:

- ensuring that any information provided by the consortia members is verified by the consultant prior to any works being undertaken.
- ensuring that the **Survey Enhanced "As-Constructed Measurements"** and details of the Works are recorded and certified by the Surveyor in accordance with this document and forwarded to the **A-SPEC** consortium member prior to works being accepted and receiving a Clearance.
- ensuring that the data supplied to the **A-SPEC** member is correct, accurate, complete and on the projection requested by the **A-SPEC** member.
- ensuring the data is supplied within 3 weeks of work being completed unless otherwise agreed with the relevant consortium member.
- ensuring that the information provided is relative to the cadastral information being recorded in LANDGATE's digital cadastral map base.

Responsibility of A-Spec Consortium Members

Each participating member shall be responsible for:

- Correctly inserting the data provided by the certifying company into their respective GIS environments (A-Spec members are **NOT** responsible for scaling, rotating or manipulating the data supplied by the consultants).
- Providing extracts of existing data from their GIS in a timely manner.
- In Victoria - providing acknowledgment of the receipt of Certified **"As-Constructed Measurements"** of the Works from the Developer or their representative.
- In Western Australia - providing acknowledgment of the receipt of Certified **Survey Enhanced "As-Constructed Measurements"** information from the Developer or their representative.
- Processing the data in a timely manner in accordance with the **A-SPEC** specified timeframes or as otherwise arranged with the consultant.
- Informing Consultants of non-conformance in accordance with the **A-SPEC** specified timeframes.
- Application of quality control programs relevant to the respective **A-SPEC** consortium member.
- Undertaking random in-house testing of the data.

Acceptance

Each of the **A-SPEC** consortium members has independent processes that will take the digital files and place them in their respective GIS and Asset Management Systems. At the same time quality control programs will check the validity of the data, and maps may be printed.

Where applicable, this document includes suggested data validation checks for attribute fields. It is strongly recommended that each consultant implement and run these prior to the submission of data to the **A-SPEC** consortium member. The **A-SPEC** consortium members will undertake random in-house testing to ensure compliance. The **A-SPEC** consortium members will carry out acceptance testing within the following guidelines unless alternative timelines are agreed to by the developer and the respective **A-SPEC** member.

- | | |
|-----------------------------|-----------------|
| 1. Developments < 10 lots | 5 working days |
| 2. Developments 10 -50 lots | 10 working days |
| 3. Developments 50 + lots | 15 working days |

Following the acceptance of the data and the provision of a Statement of Compliance the ownership of the data will revert to the relevant **A-SPEC** consortium member.

Guidelines for the carrying out of validity checks have been outlined in [Section 3](#) of this document.

Errors and Omissions

It is an expectation of the **A-SPEC** consortium that all data be verified by the developer or their representatives (consultants) with relation to its completeness and graphical accuracy prior to submission.

Errors and omissions will result in the data being returned to the consultant for correction and may result in a non-conformance being placed on the data submission.

This may result in a delay in the provision of a:

- o **Statement of Compliance** (Victoria) or
- o **Clearance** (Western Australia)

Intellectual Property

The **A-SPEC** consortium members own the intellectual property of the developed specifications and Intellectual Property rights are not to be sold, transferred or assigned to any party (other than a new participating **A-SPEC** consortium member) without the prior written approval of the **A-SPEC** consortium.

The **A-SPEC** Specifications will be available free of charge to the development industry.

Disclaimer

On occasion **A-SPEC** consortium members may supply consultants with digital data to assist them with their planning and design phases. The **A-SPEC** consortium accepts no liability for the accuracy or completeness of the information and it is the responsibility of the consultants to ensure that the data supplied is appropriate and applicable to the end use intended.

Deliverables

The following are acceptable media for providing the digital data files.

- Email files to **A-SPEC** member representative. (File size limitation is 5 megabytes)
- CD-ROM.
- DVD

The CD or DVD is to be labeled in the following way.

Estate Name and Stage _____
Property Description (prior to subdivision) _____
Individual Council Approval Number _____
Signed by _____ *Date* _____
Name _____
Consultant name _____

Readme / Metadata File

The readme.txt is a simple text file that contains information about the project the digital data is being provided for and must accompany **EVERY** digital data submission.

Label	Description	Example
PROJECT	Project name	<i>Wyndham Estate</i>
STAGE	Subdivision Stage Name	<i>Stage 3B</i>
A-SPEC MEMBER	Participating LGA	<i>Wyndham City Council</i>
DATE SUBMITTED	Date the digital data submitted to A-SPEC member	<i>31/1/2008</i>
COMPANY	Company name	<i>Workforce Solutions</i>
CONTACT	Contact name for this project	<i>George Havakis</i>
TELEPHONE	Telephone number	<i>(03) 9877 6972</i>
FACSIMILE	Facsimile number	<i>(03) 9878 2819</i>
EMAIL	Email address (as applicable)	george@viccadd.com.au
MAILING ADDRESS	Mailing address	<i>Level 1-8 Lawrence St, Blackburn Sth, Vic, 3130</i>
PHYSICAL ADDRESS	Physical business address	<i>'As Above'</i>
COORDINATES/DATUM	The coordinate system the data is in	<i>GDA94 Zone 49</i>
TRANSFORMATION	The coordinate system the data was transformed from	<i>E.g. Perth Coastal Grid to GDA94 Zone49</i>
SOFTWARE FORMAT & VERSION	The software used to create the digital data	<i>E.g. MapInfo v7.5 / AutoCad Map 2008</i>
NOTES	Important notes or information to be included here.	<i>Any other relevant information that the data custodian needs to be aware of.</i>

Note:

- Please refer to the **A-SPEC** website; www.dspect.com.au for details of **A-SPEC** consortium members preferred formats.

1. Graphical Specifications

The key principle of this specification is to provide a standardised structure to record the characteristics/attributes of each graphical element. Where data is being supplied in a GIS format, it can be assumed that this is already the case.

It is an expectation of the **A-SPEC** consortium that all consultants providing data will be required to conform to the current **A-Spec** standard. Therefore it is of vital importance that the release date of the specification is known in the event that an update is issued specifying any variations.

The digital plans provided to the A-SPEC consortium must conform to the following specifications:

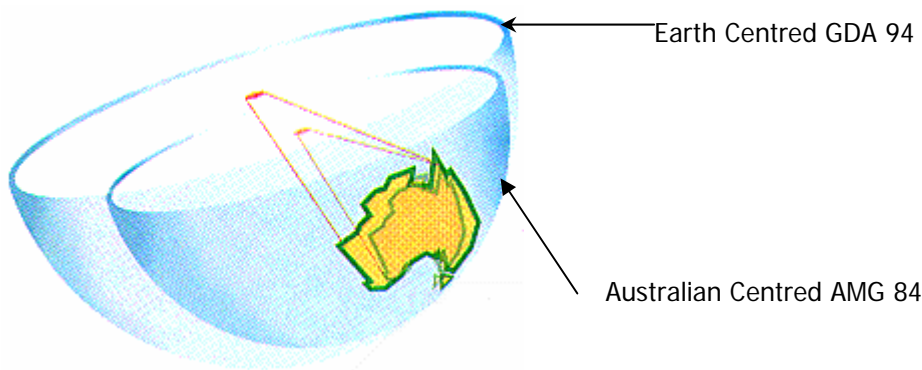
1.1 Datum

All graphical information is to be projected in accordance with the preference of each individual **A-SPEC** member.

- Please refer to the **A-SPEC** website; www.dspec.com.au for details of **A-SPEC** consortium members preferred formats.

The Geocentric Datum of Australia (GDA94) is the new Australian coordinate system, replacing the Australian Geodetic Datum (AGD). GDA is part of a global coordinate reference frame and is directly compatible with the Global Positioning System (GPS). The map projection associated with GDA94 is the Map Grid of Australia, 1994 (MGA94), a Transverse Mercator projection, which conforms to the internationally accepted Universal Transverse Mercator Grid system.

The Australian Height Datum (AHD) will not be affected by the adoption of GDA.



Victoria

Please note that in accordance with the guidelines outlined by the Spatial Information Infrastructure ("SII") group within the Department of Sustainability and Environment ("DSE"), GDA 94 become the official datum in Victoria in June 2005.

The applicable zones will be 54 and 55.

Western Australia

The Western Australian Cabinet approved the adoption of the Geocentric Datum of Australia during 2000. The Western Australian Land Information System (WALIS) Council has been made responsible for the oversight and introduction into Western Australia of the Geocentric Datum of Australia 1994.

The applicable zones will be 49, 50, 51 and 52.

The following parameters apply for the Universal Transverse Mercator (UTM) projections

- 6° wide zones
- Central Scale Factor 0.9996
- False Easting 500,000 m
- False Northing 10,000,000 m

There are a number of local grids that are used within Western Australia e.g. Perth Coastal Grid. In all instances where data has been transformed by the consultant it is mandatory to state the local grid the data was originally based in.

1.2 Format

All data is to be supplied in the format specified by each individual **A-SPEC** member or as otherwise arranged with the individual consortium member

- Please refer to the **A-SPEC** website; www.dspect.com.au for details of **A-SPEC** consortium members preferred formats.

E.G

Member	Preferred format	Secondary Format
Brimbank City Council	MapInfo native	MIF/MID
City of Gosnells	MapInfo native	MIF/MID
City Of Greater Geelong	ESRI shape files	MIF/MID

1.3 Theme/Layer Structure

The following level/layer structure is intended as a guide to assist Consultants when putting together graphical information for members of the **A-Spec Group**. The key principal is that each asset type must be delivered on a separate level/layer and they must be clearly labelled.

Depending on the asset to be captured, not all the levels/layers indicated here may appear in the submitted data.

It is important to note that each level/layer should only contain the listed features; any other features present will impede the automatic acceptance testing.

Asset Type	Page No	Feature (Object Type)	Description	Attribute Table
Road Reserve	19	Polygon (Closed Polyline)	Property Boundary to Property Boundary	No Graphics Only
Trafficable Width	20	Line (Closed Polyline)	Lip of Kerb to Lip of Kerb	No Graphics Only
Pavement Centreline	21	Line (Polyline)	Centreline of Road At each Change of Seal	Yes
Pathways	22	Polygon (Closed Polyline)	Perimeter of Pathway	Yes
On-Road Parking	22	Polygon (Closed Polyline)	Perimeter of Parking Area	No Graphics Only
Kerb/Kerb & Channel & Shoulder	23	Line (Polyline)	To be represented by the back of the Kerb If there is NO Kerb & Channel the edge of the shoulder must be provided.	Yes
Traffic Mgt - Devices	24	Polygon (Closed Polyline)	Perimeter of Device	Yes
Traffic Mgt - Lines	24	Line (Polyline) Perimeter of painted marking	Line Markings, Pedestrian crossings/ medians/ chevrons	No Graphics Only
Traffic Mgt - Devices	25	Point	Perimeter of Device	Yes
Bridge / Major Culvert & Abutments	26	Polygon (Closed Polyline)	Perimeter of Bridge / Major Culvert & Abutment	Yes
Signs	27	Point	Centre of Sign	Yes
Trees	27	Point	Centre of Tree	Yes
Water Hydrants	28	Point	Centre of Water Hydrant	Yes
Lighting	No diagram Provided	Point	Non-standard Public Lighting	Yes
Vehicle Crossing	28	Line (Polyline)	Driveway access	No Graphics Only
Road Safety Barriers	No diagram Provided	Line (Polyline)	Centreline depicting extents of barrier	No Graphics Only

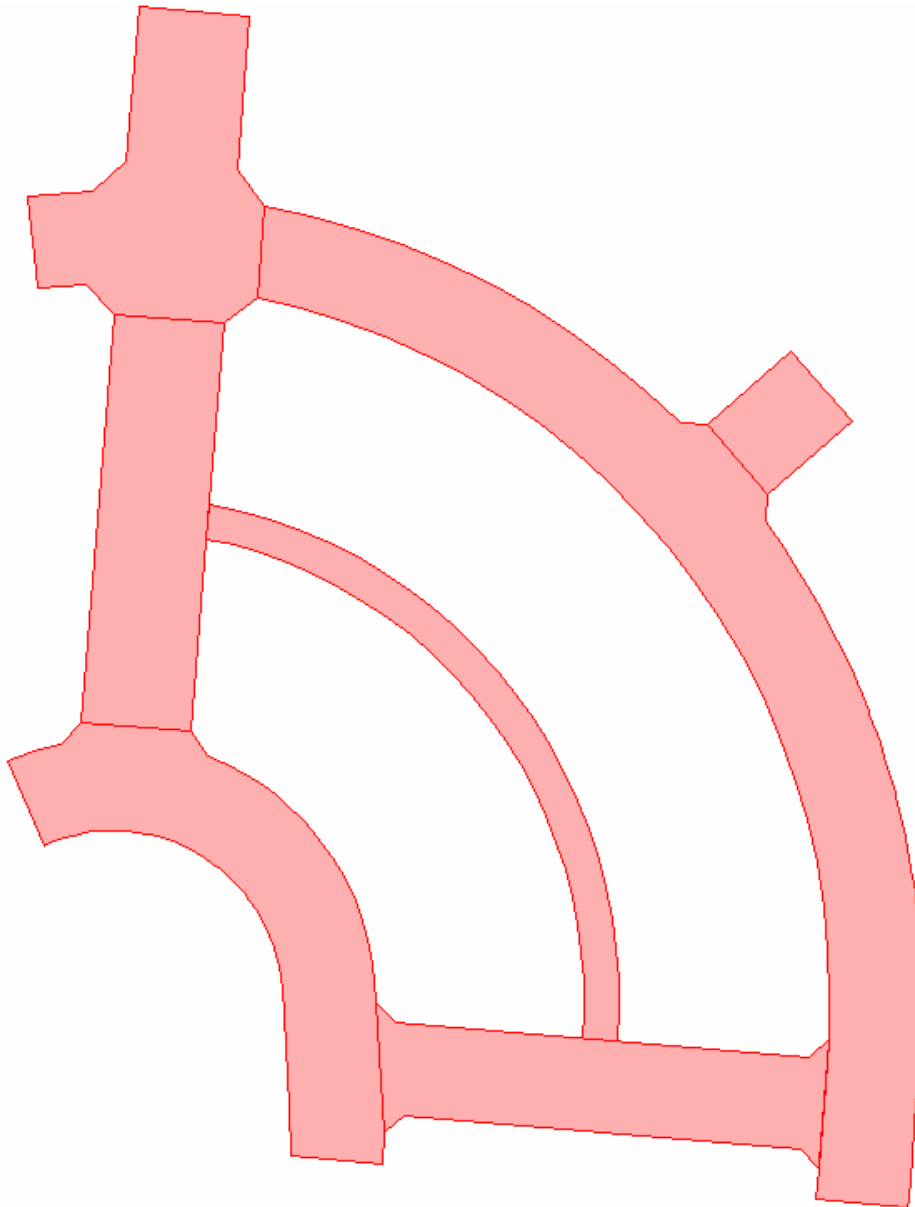
1.4 Graphical Data Construction Principles

This section details the graphical data construction principles that consultant must adhere to for all linework, polygons and points provided. Where practicable, the alignment of all Survey Enhanced "As Constructed" data must be related to the title/property boundaries abutting the road reserve.

- Please use sound CAD practices when recording data, such as snapping to lines and closing polygons.

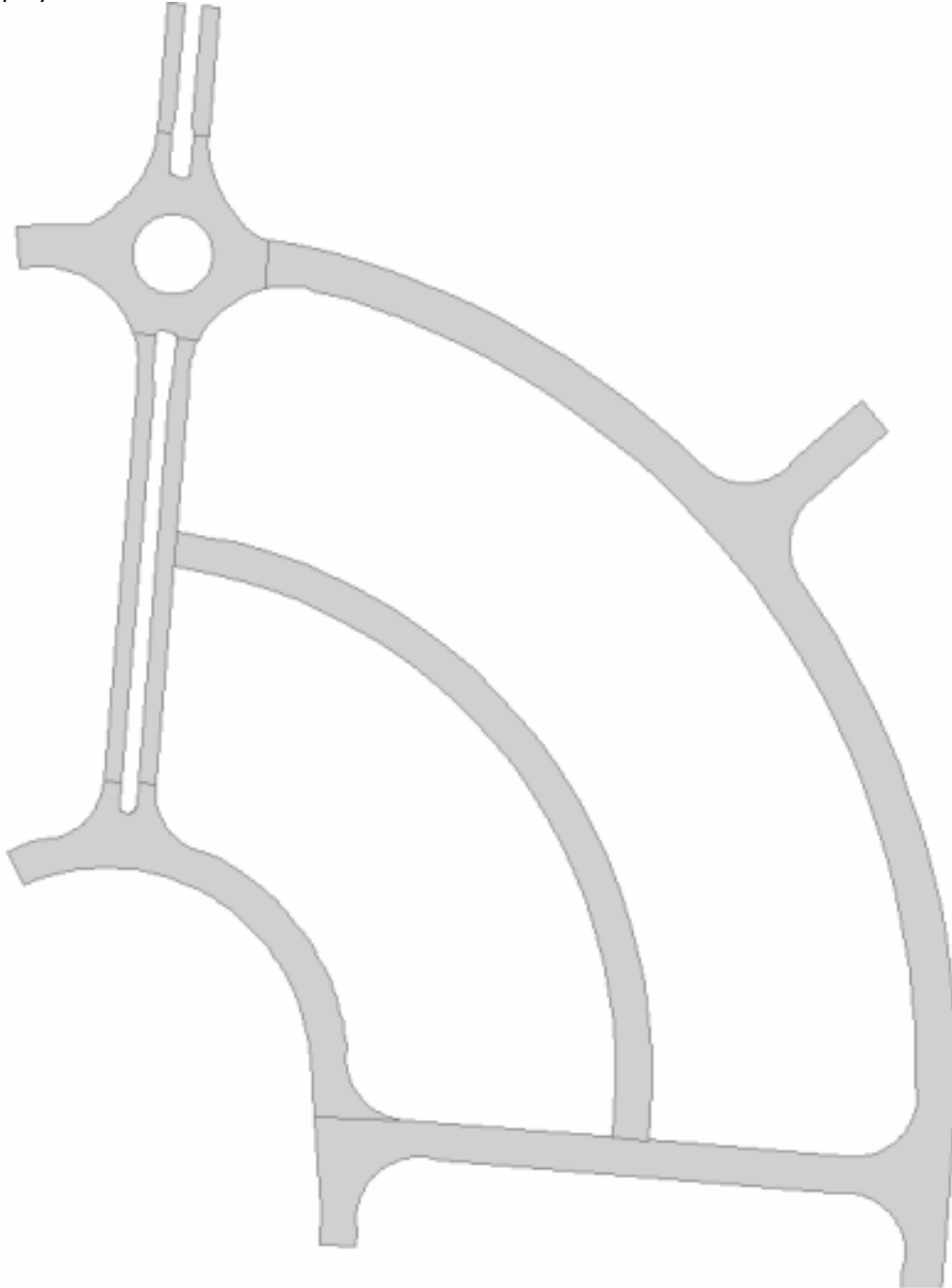
1.4.1 Road Reserve (Polygon / Closed Polyline)

The Road Reserve (Property Boundary to Property Boundary) is to be represented as a series of polygons or closed polylines as depicted below...



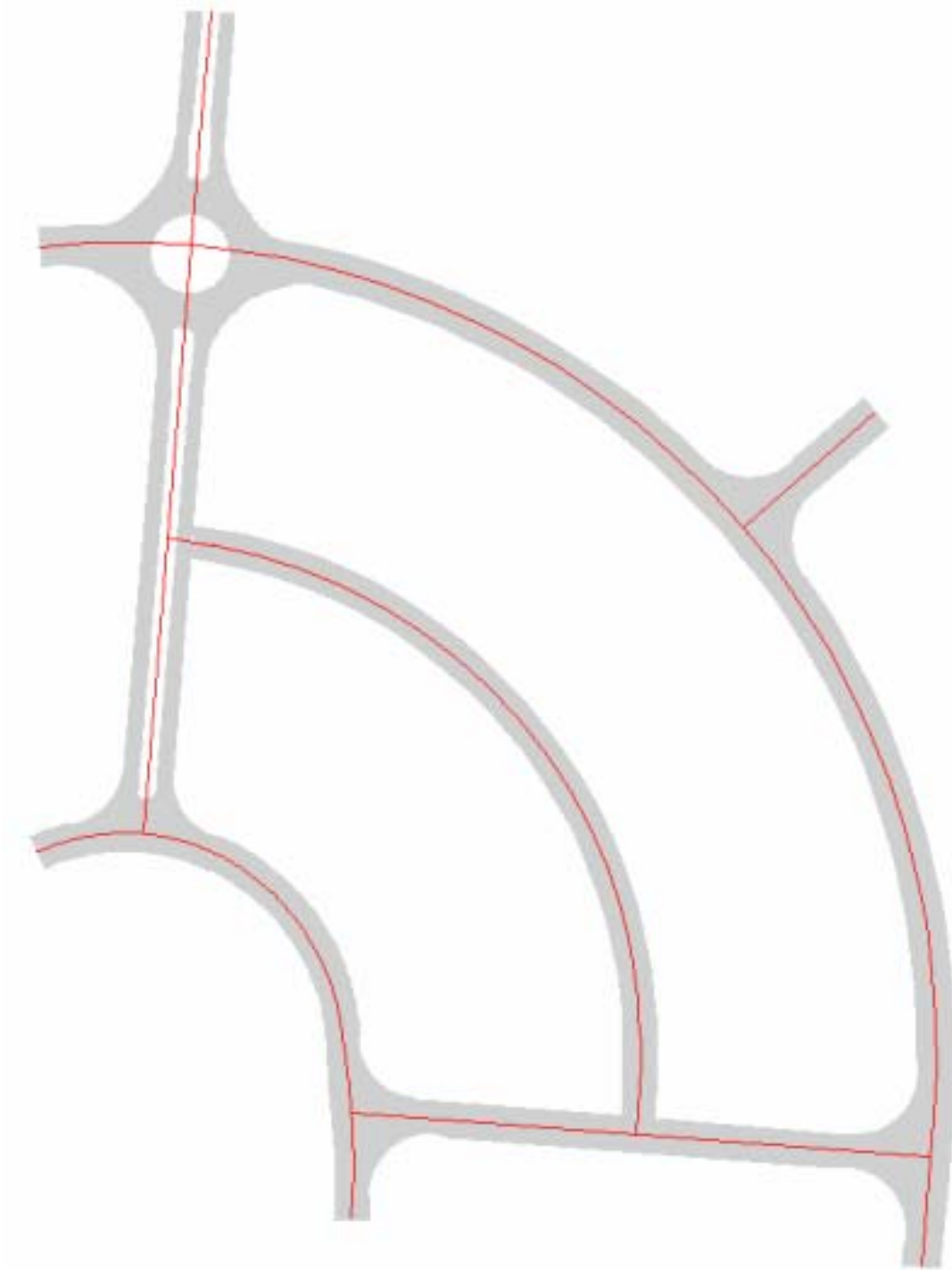
1.4.2 Trafficable Width (Polygon / Closed Polyline)

The perimeter of the Road Section (Lip of Kerb to Lip of Kerb) is to be represented as a series of polygons or closed polylines.



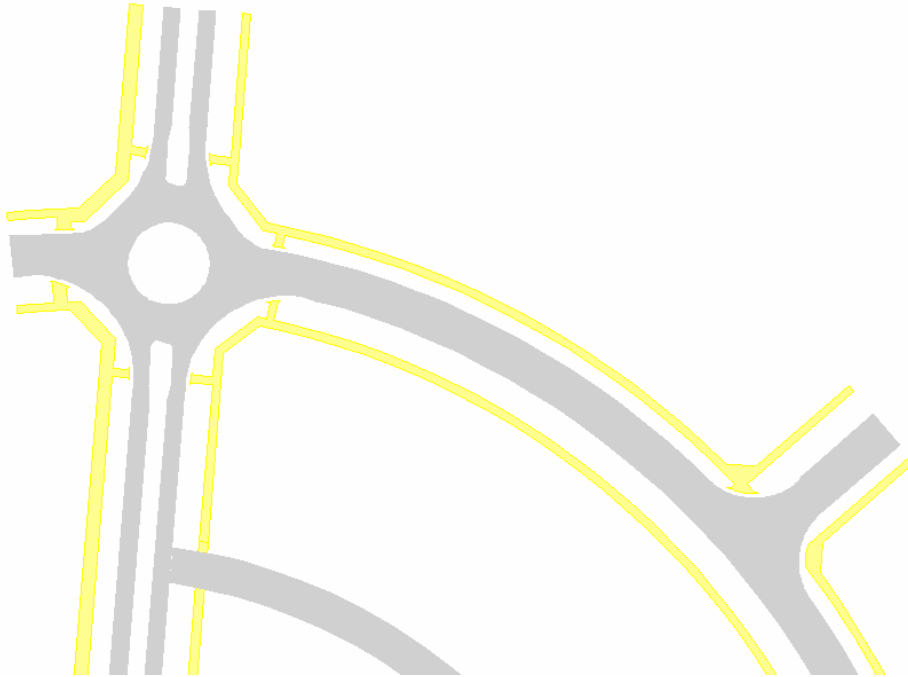
1.4.3 Pavement Centreline (Line / Polyline)

The Length of the road is based on the length of continuous pavement and surfacing material. Where there is a change in either type or pavement material a new line segment is to begin. These will correspond with the attribute table.



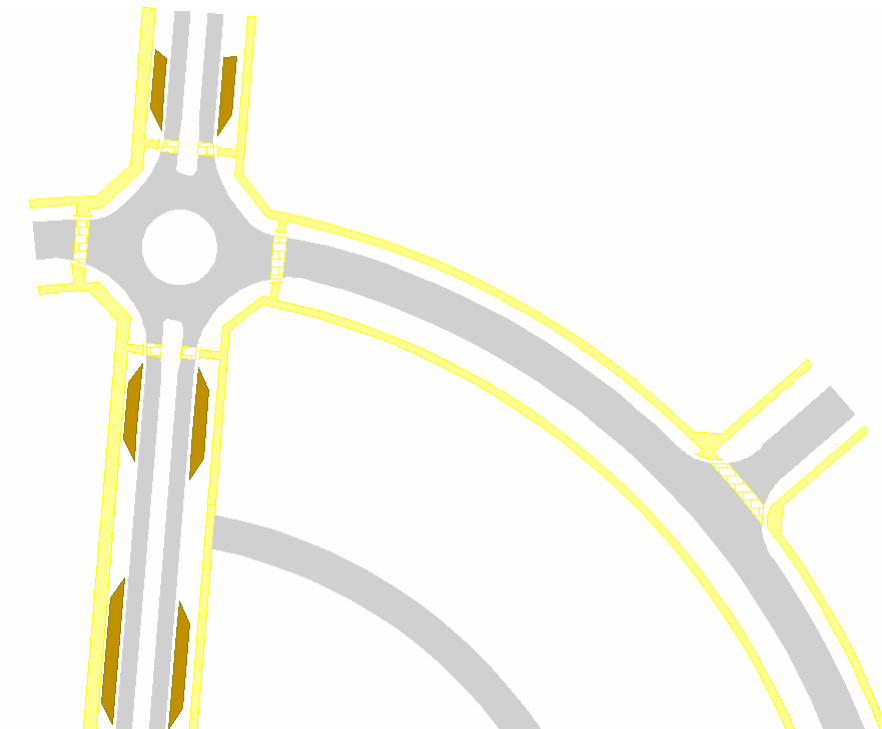
1.4.4 Pathways (Polygon/ Closed Polyline)

The perimeters of any pathways are to be represented as a polygon or a closed polyline (Shown as yellow polygons in the diagram below).



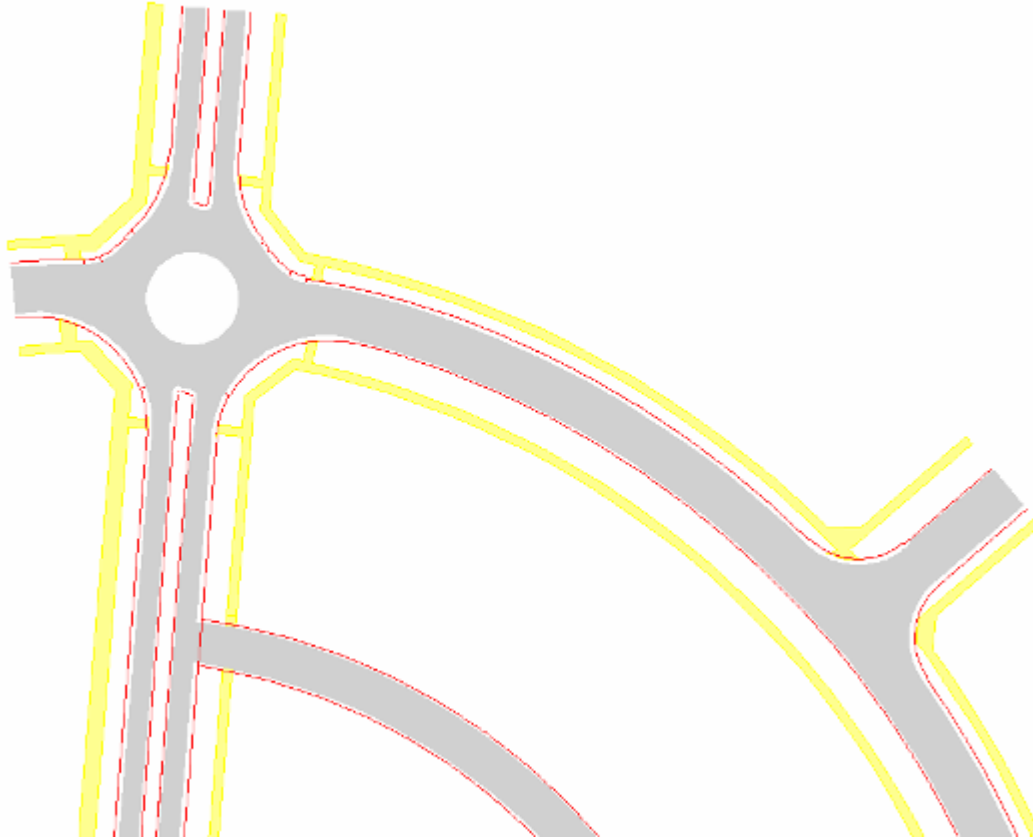
1.4.5 On-Road Parking (Polygon/ Closed Polyline)

The perimeter of any road parking is to be represented as a polygon or a closed polyline. Shown as brown polygons in the diagram below. On-Road Parking that is **not** divided from the road pavement by a structure (eg: channel) is considered part of the existing pavement.



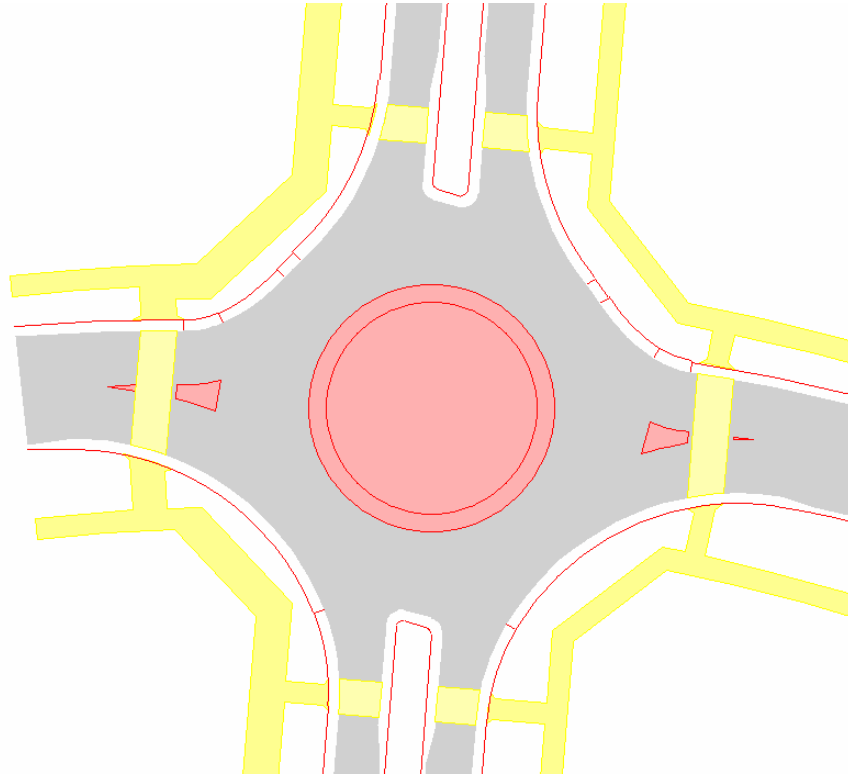
1.4.6 Kerb & Channel & Shoulder (Line / Polyline)

Shown as a red line in the diagram below



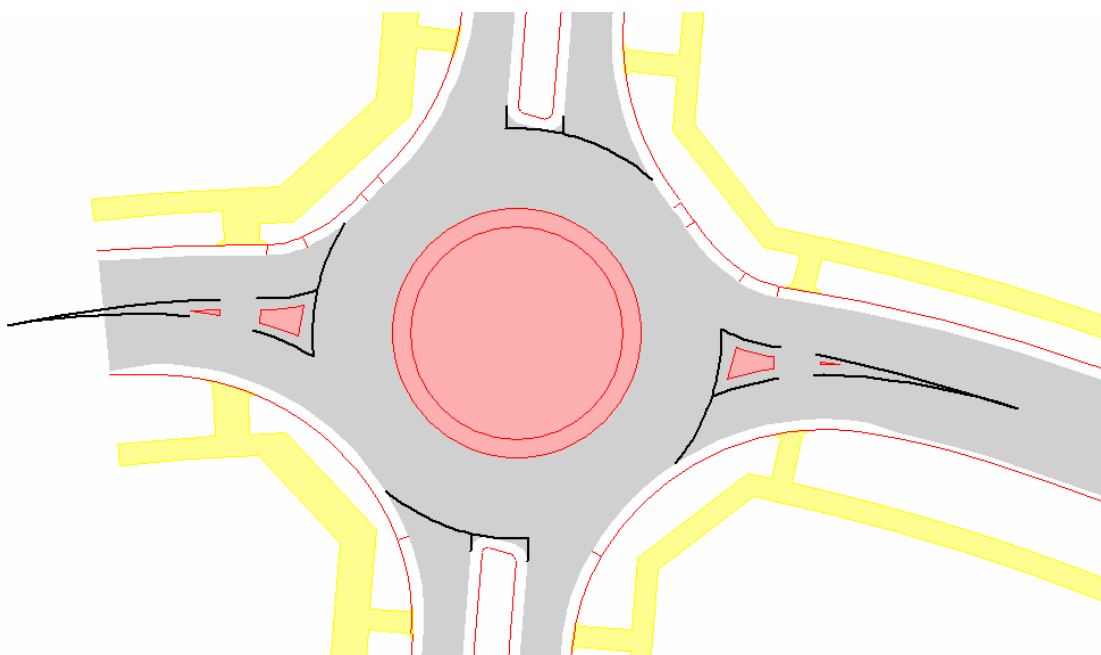
1.4.7 Traffic Management Devices (Polygon/ Closed Polyline)

The perimeter of the Traffic Management Device to be represented as a polygon or a closed polyline. (Shown as Red Polygons in the diagram below)



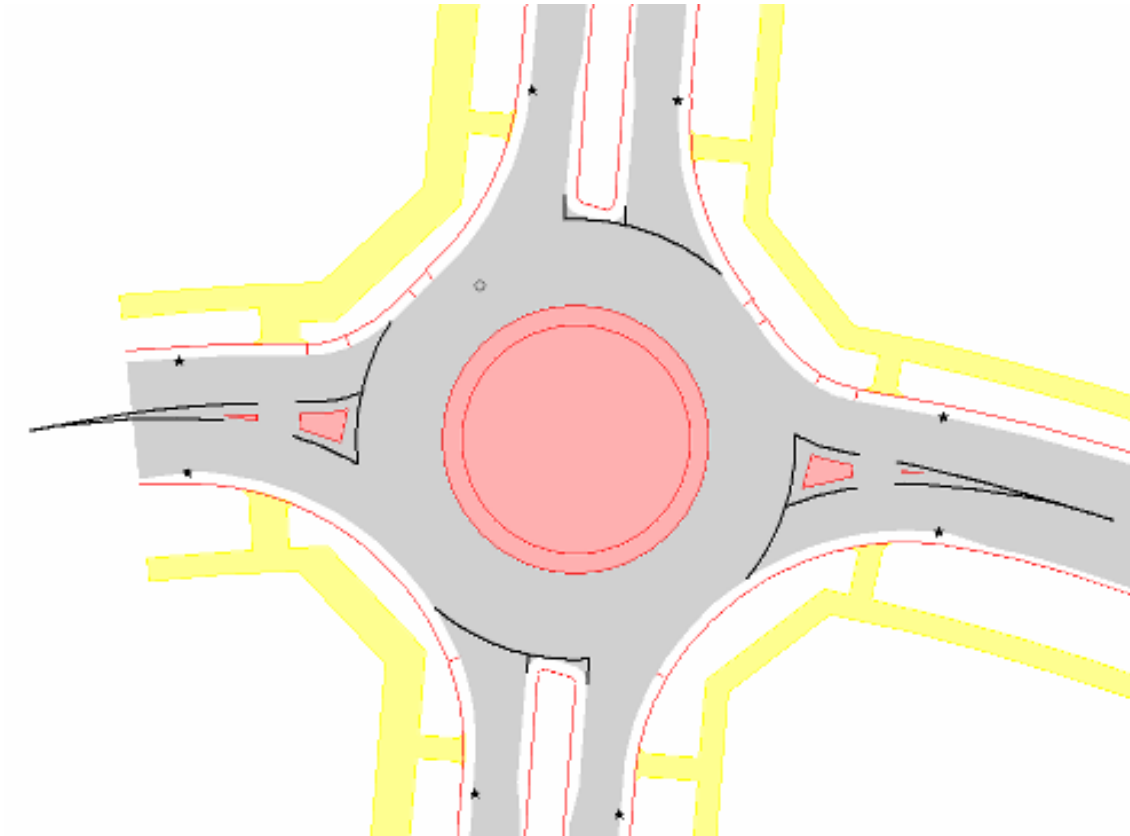
1.4.8 Traffic Management Device (Polyline)

Line Markings, Pedestrian Crossings, Medians and Chevrons: a polyline showing the perimeter of the painted marking (shown as black lines in the diagram below).



1.4.9 Traffic Management Device (Point)

Traffic Lights and Pedestrian Signals are to be represented as a point. (shown as black stars in the diagram below).



1.4.10 Bridges / Major Culverts (Closed Polyline)

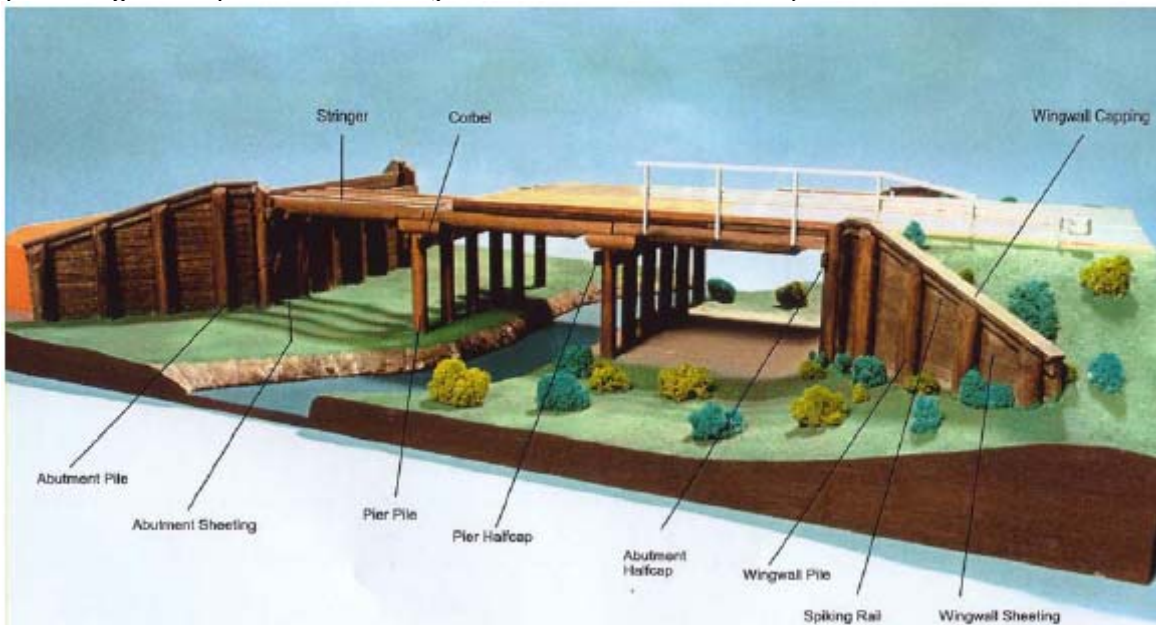
2 polygon elements are required to represent a Bridge;

1. Perimeter of the Bridge or Major Culvert. From the bridge edge (generally described as the abutment) on one side to bridge edge on the other side (as indicated by the red hatching in the diagram below).
2. The pavement area of the Bridge (as indicated by the Black hatching area in the diagram below)

(This photography is provided courtesy of Wyndham City Council)

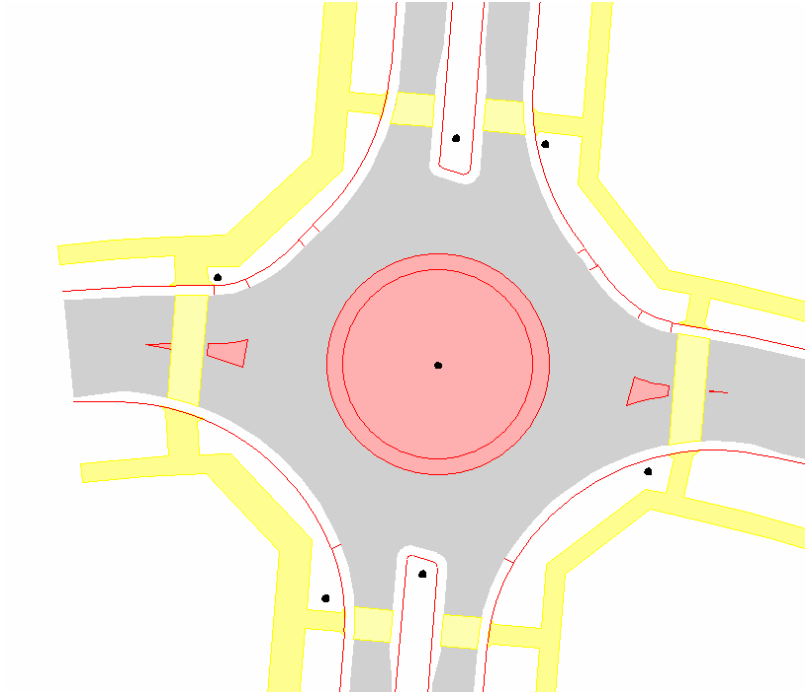


(This diagram is provided courtesy of Busselton Shire Council)



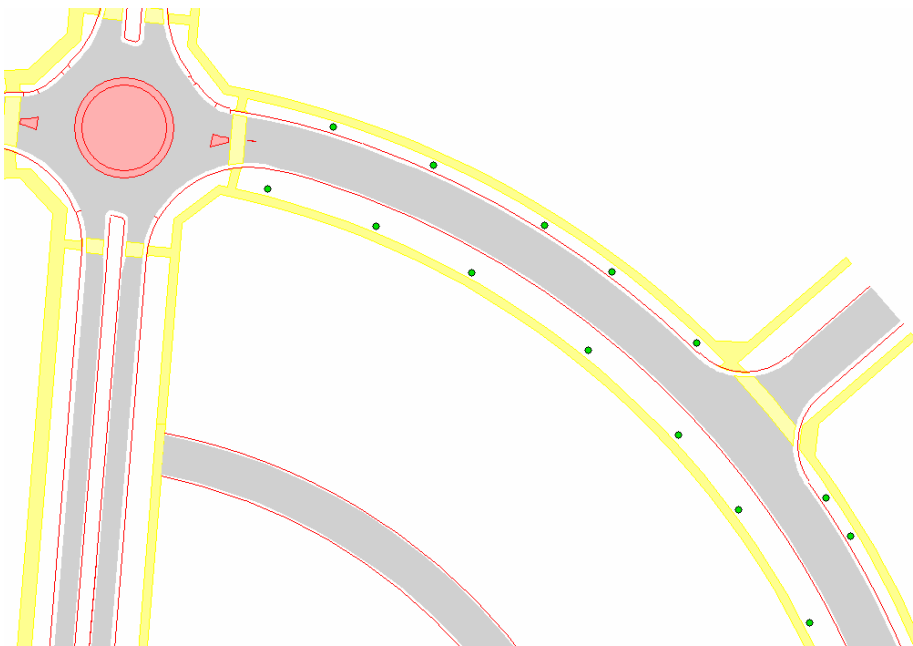
1.4.11 Signs (Point)

Centre of the Sign. (Shown in Black in the diagram below)



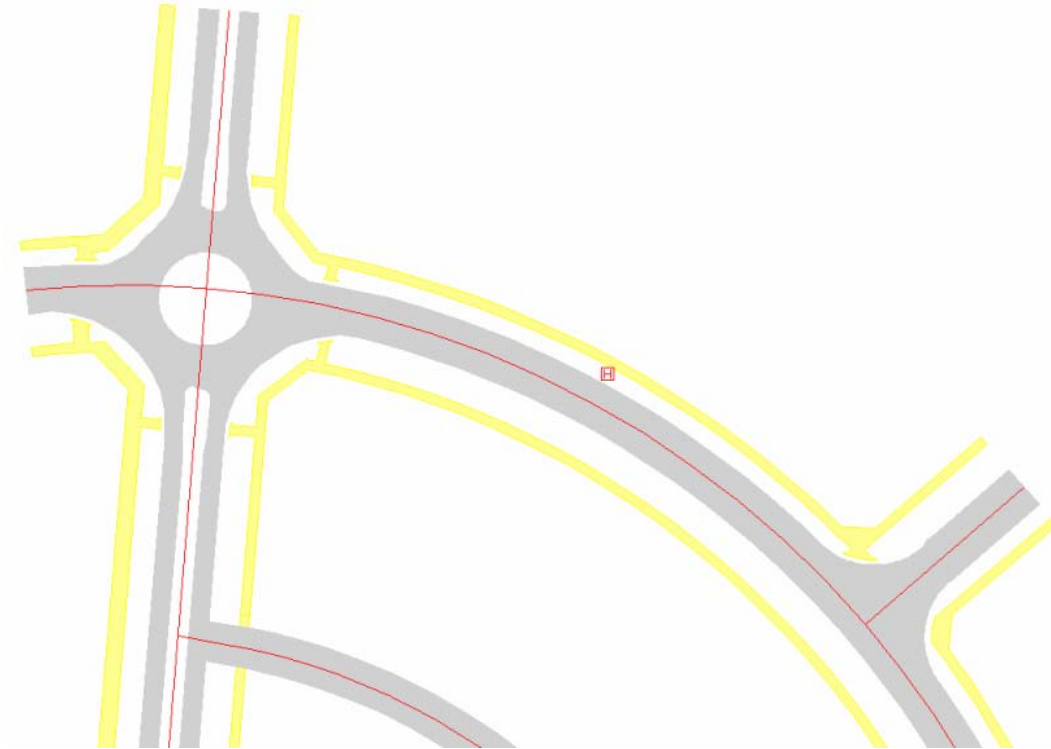
1.4.12 Trees (Point)

Centre of the Tree. (Shown in Green in the diagram below)



1.4.13 Water Hydrants (Point)

Centre of the Water Hydrant location. (Shown as a red H symbol in the diagram below)



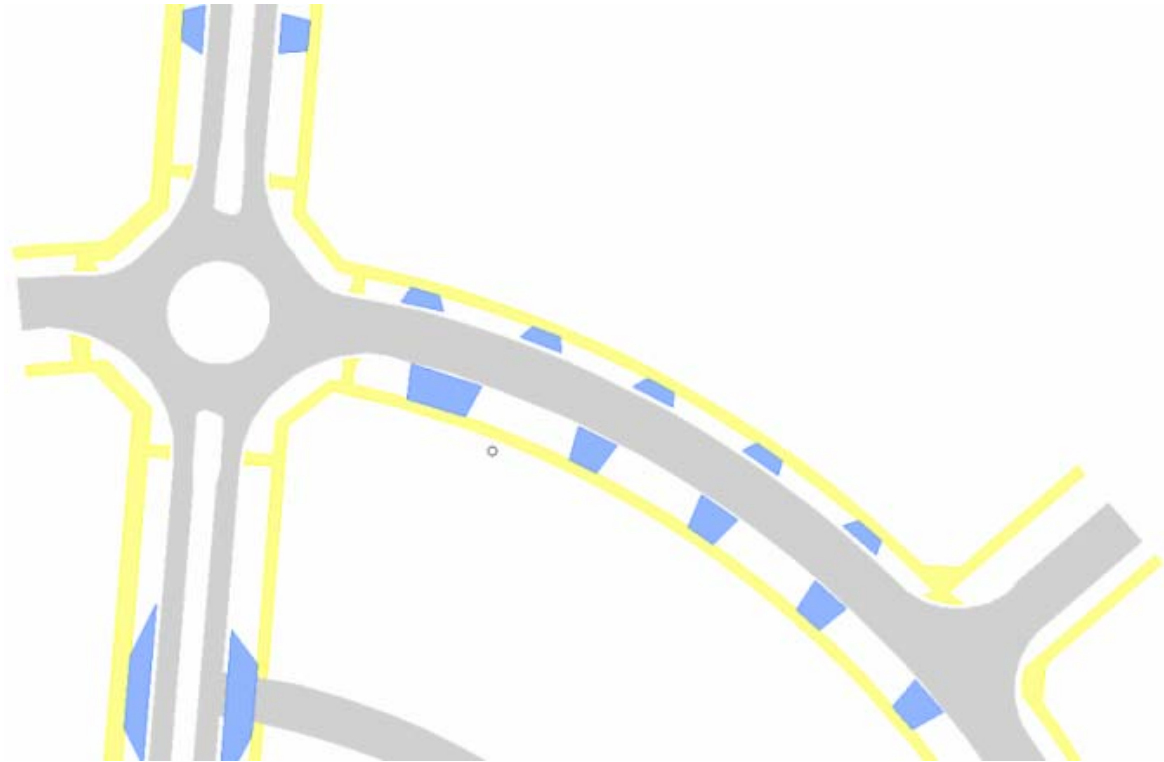
1.4.14 Lighting (Point)

Non-standard public lighting to be represented as a point indicating the centre of the lighting device.

<NO DIAGRAM IS PROVIDED>

1.4.15 Vehicle Crossing (Polygon/ Closed Polyline)

Driveway access, shown in Blue in the diagram below.



1.4.16 Road Safety Barriers (Line / Polyline)

Road Safety Barriers to be represented as a line indicating the position of the device.

<NO DIAGRAM IS PROVIDED>

1.5 Acceptance Testing

All graphical information will be checked against the Attribute file/table and it is essential that there is a link OR key between the graphics and the Attribute file/table. Please refer to [Sections 2.6](#) through to [2.10](#) for guidelines designed to assist Consultants when putting together attribute information.

1.6 Matching to Existing Infrastructure

“As Constructed” digital data of the assets are:

1. to be positioned relative to the respective map bases referred to as:
 - a. the State Digital Map Base (SDMB) in Victoria
 - b. the Spatial Cadastral Data Base (SCDB) in Western Australia

The exception to this is when the position of the new assets clearly indicates a discrepancy when compared to the position of the existing assets. When this occurs the consultant is to record this discrepancy as outlined in the table in [Section 1.5 Themes/Layer Structure](#).

It is the responsibility of the consultant to ensure the “As Constructed” digital data of the assets are related wherever possible to the existing data held in **R-SPEC** consortium members GIS. The **A-SPEC** consortium members will make available an extract of any digital data held in their respective GIS environments covering the specific project area.

Consultants are to use [Attachment 1: Request for digital data](#) to obtain this extract.

Should the consultant find any errors in the data a “Corrective Action Request Form” can be used to inform **A-SPEC** consortium members of any changes that need to occur. Please refer to [Attachment 2: Corrective Action Form](#)

These measures will ensure that all new assets are recorded relative to the existing data sets to enable:

1. integration into **A-SPEC** consortium members respective GIS environments and
2. completeness of asset management information within the **A-SPEC** consortium members respective AMIS environments
3. confirmation of the location of the assets
4. continuous improvement process

1.7 Design Boundary Extent

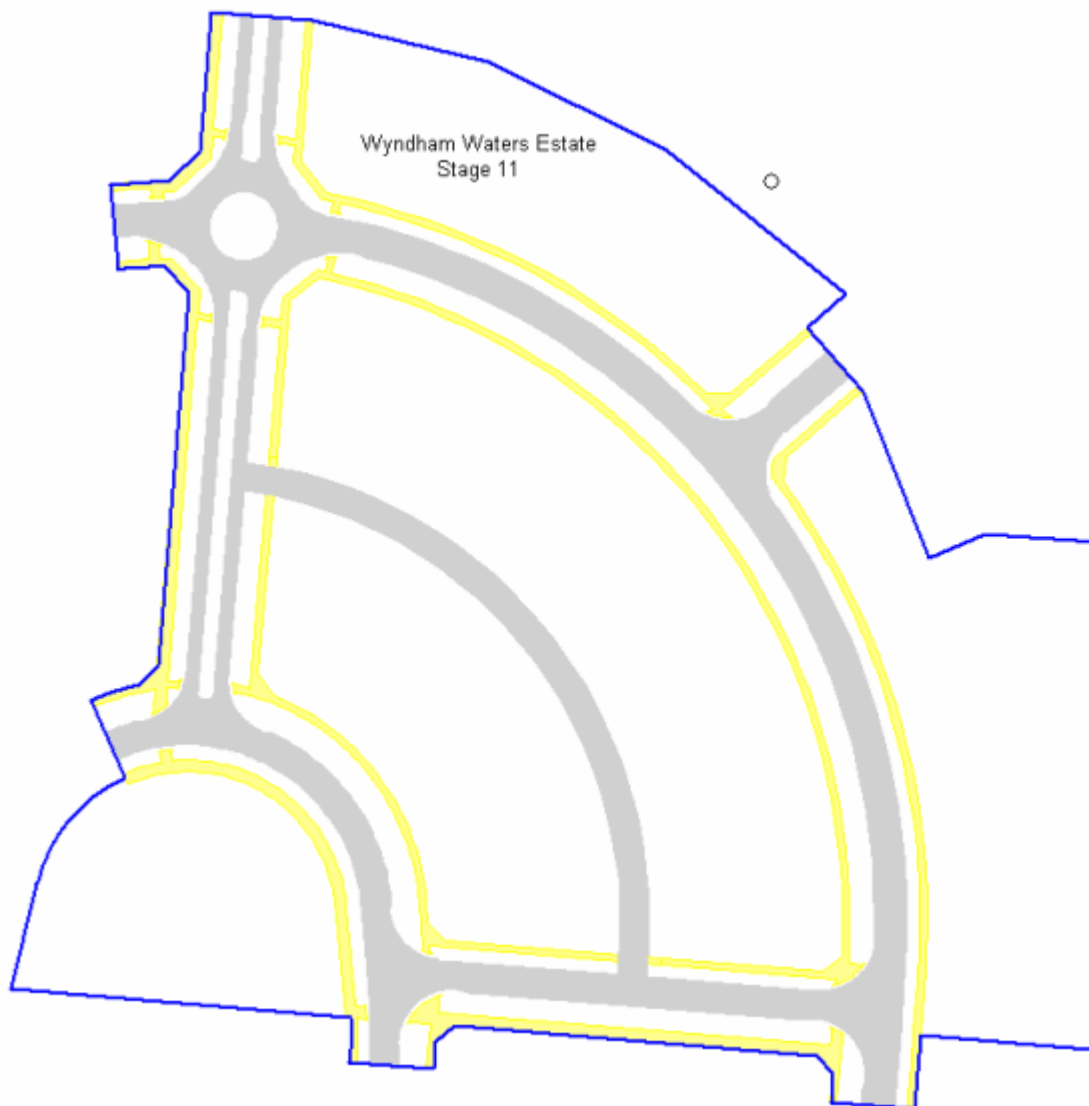
Consultants are to supply design boundary extents as a shape or polygon on a separate layer along with the Development Name and Stage as text labels as outlined in the R-Spec standard.

The objective of this boundary is to provide the A-Spec Group members an overview of the area being developed. This will also assist the A-Spec Group members monitoring progress of stage developments.

The image on the below – *Drawing 5 – Design Boundary Extents*, shows the suggested placement of an estate name (i.e. Bridge St) inside the boundary of the development. Please note the boundary depicted by the blue line takes into account property boundaries included within the subdivision.

In the event that the area of works is only related to road works then the boundary only needs to be placed around the area affected by the works.

Drawing 5: Design Boundary Extents.



2. Attribute File Specifications

1. All coordinates will be provided in the preferred datum of each individual **A-SPEC** Group member as specified in on the **A-SPEC** website www.dspeg.com.au
2. All Z coordinates (levels) will be provided in AHD metres.
3. Maximum field widths are specified for Alpha/Numeric and Alpha data.
4. For floating point data the number of characters after the decimal point are specified
5. Dates are to be provided as dd/mm/yyyy, EG: 07/06/2001
6. All fields are to be populated.
7. All Attribute files are to use the Column Names set out in [Section 2.1 Attribute File Format Instructions](#).
8. A set of code lists are provided to standardise the capture of information in the Attribute files. They can be found in [Section 2.11: R-SPEC Code Lists](#). The **A-SPEC** website will also contain the most current codelists.

2.1 Road Reserve Attribute File Format Instructions

This component is a graphics only component and is to correspond with the Pavement centreline section

2.2 Trafficable Width File Format Instructions

This component is a graphics only component and is to correspond with the Pavement centreline section

2.3 Pavement Centreline File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Road_from	Floating Point	n/a	2 decimal places	Chainage at start of street segment
Road_to	Floating Point	n/a	2 decimal places	Chainage at end of street segment
No_lanes	Integer	n/a		Number of lanes
Segment length	Floating Point	n/a	2 decimal places	Length between chainages in metres
Material	Alpha	100 chars	No commas included	Seal material, for example Bitumen (Section 4. R-SPEC Code lists)
Pavement_W	Floating Point	n/a	2 decimal places	Width of pavement
Pavement_D	Integer	n/a	Whole mm	Depth of pavement seal in millimetres
Base1Type	Alpha	100 chars	No commas included	The type of base course pavement material. As per VicRoads Standard Specification http://www.vicroads.vic.gov.au/NR/rdonlyres/AED0401E-FB1B-464E-A5E8-28AA4EDA7491/0/sd5300.pdf <i>Where only one course of material is used, enter the type in "Base1Type" column. The column "Base2Type" and "Base3Type" is to be left blank.</i>
Base1Depth	Integer	n/a	Whole mm	The depth of the base course pavement material. <i>Where only one course of material is used, enter the depth in "Base1Depth" column. The columns "Base2Depth" and "Base3Depth" are to be left blank.</i>
Base2Type	Alpha	100 chars	No commas included	The type of the second base course pavement material. As per VicRoads Standard Specification <i>Where only one course of type is used, enter the type in "Base1Type" column. The columns "Base2Type" and "Base3Type" are to be left blank.</i>
Base2Depth	Integer	n/a	Whole mm	The depth of the second base course pavement material. <i>Where only one course of material is used, enter the depth in "Base1depth" column. The columns "Base2Depth" and "Base3Depth" are to be left blank.</i>

Column Name	Data Type	Max Length	Comments	Contents
Base3Type	Alpha	100 chars	No commas included	The type of the third base course pavement material. As per VicRoads Standard Specification <i>Where only one course of material is used, enter the depth in "Base1Type" column. The columns "Base2Type" and "Base3Type" are to be left blank.</i>
Base3Depth	Integer	n/a	Whole mm	The depth of the third base course pavement material. <i>Where only one course of material is used, enter the depth in "Base1Depth" column. The columns "Base2Depth" and "Base3Depth" are to be left blank.</i>
Sub1Type	Alpha	100 chars	No commas included	The type of sub-base course pavement material. As per VicRoads Standard Specification <i>Where only one course of type is used, enter the depth in "Sub1Type" column. The columns "Sub2Type" and "SubType3" are to be left blank.</i>
Sub1Depth	Integer	n/a	Whole mm	The depth of the sub-base course pavement material. <i>Where only one course of material is used, enter the depth in "Sub1Depth" column. The columns "Sub2Depth" and "Sub3Depth" are to be left blank.</i>
Sub2Type	Alpha	100 chars	No commas included	The type of the second sub-base course pavement material. As per VicRoads Standard Specification) <i>Where only one course of type is used, enter the depth in "Sub1Type" column. The columns "Sub2Type" and "Sub3Type" are to be left blank.</i>
Sub2Depth	Integer	n/a	Whole mm	The depth of the second sub-base course pavement material. <i>Where only one course of material is used, enter the depth in "Sub1Depth" column. The columns "Sub2Depth" and "Sub3Depth" are to be left blank.</i>
Sub3Type	Alpha	100 chars	No commas included	The type of the third sub-base course pavement material. As per VicRoads Standard Specification) <i>Where only one course of material is used, enter the type in "Sub1Type" column. The columns "Sub2Type" and "Sub3Type" are to be left blank.</i>
Sub3Depth	Integer	n/a	Whole mm	The depth of the third sub-base course pavement material. <i>Where only one course of material is used, enter the depth in "Sub1Depth" column. The columns "Sub2Depth" and "Sub3Depth" are to be left blank.</i>
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Construction

Column Name	Data Type	Max Length	Comments	Contents
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this asset

2.4 Pathways File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Type	Alpha	100 chars	No commas included	Pathway Type, for example Bike Path (Section 4. R-SPEC Code lists)
Length	Floating Point	n/a	2 decimal places	Length of the pathway in metres
Material	Alpha	100 chars	No commas included	Seal material, for example CSF (Section 4. R-SPEC Code lists)
Reinforce	Alpha	1 char	Yes/ No field	If the Pathway is reinforced; E.G. Y
Width	Floating Point	n/a	2 decimal places	Width of the pathway seal in metres
Depth	Integer	n/a	Whole mm	Depth of the pathway sea in millimetres
Ramp	Alpha	1 char	Yes/ No field	If Ramp Access exists; E.G. Y
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.5 On-Road Parking Attribute File Format Instructions

This component is a graphics only component, no attributes are required

2.6 Kerb, Kerb & Channel and Shoulder File Format Instructions

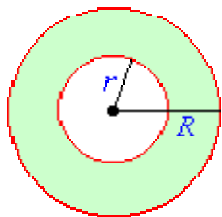
Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Type	Alpha	100 chars	No commas included	Kerb Type, for example Mountable Kerb (Section 4. R-SPEC Code lists)
Material	Alpha	100 chars	No commas included	Kerb material, for example Concrete (Section 4. R-SPEC Code lists)
Length	Floating Point	n/a	2 decimal places	Length of the feature
Width	Floating Point	n/a	2 decimal places	Width of the shoulder in metres This is only to be completed if the feature is a shoulder
Owner	Alpha	100 chars	No commas included	Council / Other
RespAuth	Alpha	100 chars	No commas included	The name of the responsible Authority for maintenance purposes
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.7 Traffic Management Devices (Polygon) - File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
Type	Alpha	100 chars	No commas included	Kerb Type, for example Roundabout or Bus Shelter (Section 4. R-SPEC Code lists)
Material	Alpha	100 chars	No commas included	The material of the external area of the roundabout If no annulus is present then material is to be classified as infill material Annulus material, for example Rubber (Section 4. R-SPEC Code lists)
InfillMat	Alpha	100 chars	No commas included	The material of the infill of the roundabout Infil material, EG:Grass (Section 4. R-SPEC Code lists)
KerbType	Alpha	100 chars	No commas included	The type of kerb (Section 4. R-SPEC Code lists)
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

Area of a Annulus

An **annulus** is the part of a large circle remaining when a small circle with the same centre is cut out.



$$\begin{aligned} \text{Area of the annulus} &= \text{Area of the large circle} - \text{Area of the small circle} \\ &= \pi R^2 - \pi r^2 \end{aligned}$$

2.8 Traffic Management – Line Marking File Format Instructions

This component is a graphics only component

2.9 Traffic Management – Point File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
Type	Alpha	100 chars	No commas included	Kerb Type, for example Bus Stop (Section 4. R-SPEC Code lists)
Material	Alpha	100 chars	No commas included	For example Steel (Section 4. R-SPEC Code lists)
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.10 Bridge/Major Culvert & Abutment File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Type	Alpha	100 chars	No commas included	Type, for example Footbridge (Section 4. R-SPEC Code lists)
Config	Alpha/Numeric	100 chars	No commas included	Example. - Configuration of conduits/ pipes in culverts 3x150x300 i.e. 3 conduits / pipes @ 150mm diameter_/ width by 300 height each. (please note configurations may vary)
Span_Cell	Integer	n/a	Whole number	Number of spans or cells E.G. 2
Material	Alpha	100 chars	No commas included	Bridge material, for example Steel (Section 4. R-SPEC Code lists)
Function	Alpha	100 chars	No commas included	Over road or Under road Over railway or under railway Over watercourse etc.
Clearance	Floating	n/a	2 decimal place	The distance between the water feature and the bridge at the high water mark in metres. In the event of - inland water at high water mark - tidal water at high tide EG: 1.5m
Limit	Integer	n/a	Whole Tonnes	Load limit on the bridge in tonnes EG: 25 tonnes
Design_Co	Alpha	100 chars	No commas included	Company name only. EG: Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.11 Sign File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Type	Alpha	100 chars	No commas included	Refer to Australian Standards
AS_Ref	Alpha/Numeric	40 chars	No commas included	Australian Standard Reference
Wording	Alpha/Numeric	100 chars	No commas included	Only to be completed if signs are a) directional or b) informational
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.12 Trees File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Common	Alpha	100 chars	No commas included	Common Name EG:River Red Gums
Species	Alpha	100 chars	No commas included	EG: Eucalyptus Camaldulensis
Guard	Alpha	1 char	Yes / No field	Tree / Plant guards EG: N
Design_Co	Alpha	100 chars	No commas included	Company name only EG:Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only EG: Environ Plantings
Plant_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.13 Water Hydrants File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only, EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.14 Lighting File Format Instructions

Column Name	Data Type	Max Length	Comments	Contents
St_Name	Alpha	100 chars	No commas included	Street Name; Including street type (Rd, St, etc) for example: Jones Dr
Type	Alpha	100 chars	No commas included	Lighting Type, for example Directional
Man_Imp	Alpha	100 chars	No commas included	Name of the Manufacturer or Importer EG: Australian Lighting Company
AS_No	Alpha/Numeric	20 chars	No commas included	Australian Standard number
Connection	Alpha	10 chars	No commas included	Above ground, below ground EG: "Above" or "Below"
Design_Co	Alpha	100 chars	No commas included	Company name only, EG: : Fred Charles and Associates
Plan_No	Alpha/Numeric	20 chars	No commas included	EG: 6080R212
Const_Co	Alpha	100 chars	No commas included	Company name only EG: : Jamieson Drainage
Const_Date	Date	n/a	dd/mm/yyyy	EG: 17/05/2001
Data_Source	Alpha	50 chars	No commas included	EG: As Constructed field work, As Designed – drawings, Aerial Photography, Topographic Maps – 1:25,000, etc
Comments	Alpha/Numeric	100 chars	No commas included	Any additional comments that relate to this pipe section

2.15 Vehicle Crossing File Format Instructions

This component is a graphics only component

2.16 Road Safety Barrier File Format Instructions

This component is a graphics only component

3. Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the attribute file.

3.1 Road Reserve

No attribute data is to be provided with this element.

3.2 Trafficable Width

No attribute data is to be provided with this element.

3.3 Pavement Centreline Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Pavement Centreline attribute file.

Attribute	Technical Description	QA Validation
Street Name (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Road from (<i>Road_from</i>)	A Floating-Point data type is to be used to two decimal places.	Field cannot be empty. Will be used in the computation check of the pipe length This is to be the starting chainage of the centreline The chainage is to correspond with the pavement length, when the pavement type changes this will constitute a separate centreline.
Road to (<i>Road_to</i>)	A Floating-Point data type is to be used to two decimal places.	Field cannot be empty. Will be used in the computation check of the pipe length This is to be the finishing chainage of the centreline
Number of lanes (<i>No_lanes</i>)	An Integer data type is to be used in whole numbers. EG: 2	Field cannot be empty
Segment length (<i>Length</i>)	A Floating-Point data type is to be used to two decimal places.	Length to be checked based on chainages supplied
Pavement Material (<i>Material</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Bitumen	Field cannot be empty Type of seal on pavement surface (Section 4. D-SPEC Code lists)
Pavement Width (<i>Pavement_W</i>)	A Floating-Point data type is to be used to two decimal places. EG: 1.20	Width of the pavement surface seal
Pavement Depth (<i>Pavement_D</i>)	An Integer data type is to be used in whole mm. EG: 150	Depth of the pavement surface seal
Base 1 Material Type (<i>Base1Type</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	Field cannot be empty If only one course of material is used populate this field only
Base 1 Depth (<i>Base1Depth</i>)	An Integer data type is to be used in whole mm.	Field cannot be empty If only one course of material is used populate this field only
Base 2 Material Type (<i>Base2Type</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	This field can be empty If more than one course of material is used this field is to be populated
Base 2 Depth (<i>Base2Depth</i>)	An Integer data type is to be used in whole mm.	This field can be empty If more than one course of material is used this field is to be populated

Attribute	Technical Description	QA Validation
Base 3 Material Type (Base3Type)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	This field can be empty If more than two courses of material is used this field is to be populated <i>If more than three courses of material is used add an additional field to this table.</i>
Base 3 Depth (Base3Depth)	An Integer data type is to be used in whole mm.	This field can be empty If more than two courses of material is used this field is to be populated <i>If more than three courses of material is used add an additional field to this table.</i>
Sub Base Material Type 1 (Sub1Type)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	Field cannot be empty If only one course of material is used populate this field only
Sub Base Depth 1 (Sub1Depth)	An Integer data type is to be used in whole mm.	Field cannot be empty If only one course of material is used populate this field only
Sub Base Material Type 2 (Sub2Type)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	This field can be empty If more than one course of material is used this field is to be populated
Sub Base Depth 2 (Sub2Depth)	An Integer data type is to be used in whole mm.	This field can be empty If more than one course of material is used this field is to be populated
Sub Base Material Type 3 (Sub3Type)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	This field can be empty If more than two courses of material is used this field is to be populated <i>If more than three courses of material is used add an additional field to this table.</i>
Sub Base Depth 3 (Sub3Depth)	An Integer data type is to be used in whole mm.	This field can be empty If more than two courses of material is used this field is to be populated <i>If more than three courses of material is used add an additional field to this table.</i>
Design Company (Design_Co)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (Plan_No)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (Const_Co)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (Const_Date)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.

Attribute	Technical Description	QA Validation
The source of the original data <i>(Source)</i>	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments <i>(Comments)</i>	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field.	Field may be empty

3.4 Pathways Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Pathways attribute file.

Attribute	Technical Description	QA Validation
Surface Material (seal) (<i>Material</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Sand	Field cannot be empty This field is to show the type of material of the pathway (Section 4. D-SPEC Code lists)
Pathway Reinforced (<i>Reinforce</i>)	An Alpha data type is to be with a maximum of 1 character. Yes/ No field. No commas are to be used in this field. EG: Y or N	This field can be empty This field is to show whether the pathway is reinforced.
Surface Width (<i>Width</i>)	A Floating-Point data type is to be used to two decimal places in metres EG: 1.20m	Field cannot be empty
Surface Depth (<i>Depth</i>)	An Integer data type is to be used in whole mm. EG: 150	Field cannot be empty Depth of the pavement surface seal
Ramp Access	An Alpha data type is to be with a maximum of 1 character. Yes/ No field. No commas are to be used in this field. EG: Y or N	This field can be empty This field is to show whether ramp access exists
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (<i>Comments</i>)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field.	Field may be empty

3.5 On-Road Parking Attribute Data Validation Checks

There are no attributes required for this feature

3.6 Kerb, Kerb & Channel & Shoulder Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Kerb, Kerb & Channel & Shoulder attribute file.

Attribute	Technical Description	QA Validation
Street Names (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Type of Kerb (<i>Type</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Semi-Mountable Kerb	Field cannot be empty
Kerb Material (<i>Material</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Concrete	Field cannot be empty (Section 4. D-SPEC Code lists)
Length of the kerb (<i>Length</i>)	A Floating-Point data type is to be used to two decimal places in metres EG: 31.20m	Field cannot be empty
Owner of the asset (<i>Owner</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: VicRoads	Field cannot be empty
Responsible Authority (<i>RespAuth</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Council	Field cannot be empty
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (<i>Comments</i>)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field.	Field may be empty

3.7 Traffic Management Devices (Polygon) - Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Traffic Management Device attribute file.

Attribute	Technical Description	QA Validation
Device Type (Polygon Feature) (Type)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Semi-Mountable Kerb	Field cannot be empty
Annulus Material (Material)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Roundabout	This field can be empty if the roundabout does not have an annulus
Infill Material (InfillMat)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Stamped concrete	Field cannot be empty
Kerb Type (KerbType)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	Field cannot be empty
Design Company (Design_Co)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (Plan_No)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (Const_Co)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (Const_Date)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (Source)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (Comments)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field.	Field may be empty

3.8 Traffic Management – Line Marking Attribute Data Validation Checks

There are no attributes required for this feature

3.9 Traffic Management - Point Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Traffic Management Device attribute file.

Attribute	Technical Description	QA Validation
Device Type (Point Feature) (Type)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Bus Shelter	Field cannot be empty
Design Company (Design_Co)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (Plan_No)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (Const_Co)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (Const_Date)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (Source)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (Comments)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field.	Field may be empty

3.10 Bridge/Major Culvert Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Traffic Management Device attribute file.

Attribute	Technical Description	QA Validation
Street Names (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Type of Feature (<i>Type</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Culvert	Field cannot be empty
Configuration (<i>Config</i>)	An Alpha/Numeric data type is to be used 50 characters maximum length. No commas are to be used in this field. EG: 3 x 750 x 1500	This field ONLY needs to be populated when the feature is a culvert. This specifies the configuration of the culvert.
Number of spans / cells (<i>Span_Cell</i>)	An Integer data type is to be used in whole numbers EG: 3	This field can be empty if the feature is not a bridge
Material of the feature (<i>Material</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: High Density Polyethylene	Field cannot be empty
Function of the feature (<i>Function</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Over watercourse	Field cannot be empty
Height over Watercourse (<i>Clearance</i>)	A Floating-Point data type is to be used to two decimal places in meters. EG 1.75	This field ONLY needs to be populated when the feature is over a watercourse.
Load Limit of Feature (<i>Limit</i>)	An Integer data type is to be used in tonnes EG: 100	Field cannot be empty
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field

Attribute	Technical Description	QA Validation
Comments <i>(Comments)</i>	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: This pit will be replaced during next stage of development in Aug 2005	Field may be empty

3.11 Sign Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Sign attribute file.

Attribute	Technical Description	QA Validation
Street Names (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Type of Sign (<i>Type</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Directional	Field cannot be empty
Australian Standard Reference (<i>AS_Ref</i>)	An Alpha/Numeric data type is to be used with a maximum of 40 characters. No commas are to be used in this field. EG: AS 1743 Road Signs	This field can be empty if not under a specific standard
Wording on the Sign (<i>Wording</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field.	This field ONLY needs to be populated if sign ids not standard wording
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (<i>Comments</i>)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: This pit will be replaced during next stage of development in Aug 2005	Field may be empty

3.12 Trees Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Tree attribute file.

Attribute	Technical Description	QA Validation
Street Names (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Common plant name (<i>Common</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: River Red Gum	Field cannot be empty
Scientific Name (<i>Species</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Eucalyptus Camaldulensis	Field cannot be empty
Plant Guard (<i>Guard</i>)	An Alpha data type is to be with a maximum of 1 character. Yes/ No field. No commas are to be used in this field. EG: Y or N	Field cannot be empty.
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (<i>Comments</i>)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: This pit will be replaced during next stage of development in Aug 2005	Field may be empty

3.13 Water Hydrants Attribute Data Validation Checks

The following guidelines are designed to assist Developer/Consultants when putting together information in the Water Hydrant attribute file.

Attribute	Technical Description	QA Validation
Street Names (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (<i>Comments</i>)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: This pit will be replaced during next stage of development in Aug 2005	Field may be empty

3.14 Lighting Attribute Data Validation Checks

The following guidelines are designed to assist Developers/Consultants when putting together information in the Non-Public Lighting attribute file.

Attribute	Technical Description	QA Validation
Street Names (<i>St_Name</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Jones Dr	Field cannot be empty
Lighting Type (<i>Type</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Directional	(Section 3. D-SPEC Code lists)
Manufacturer or Importer (<i>Man_Imp</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Australian Lighting Company	Field cannot be empty.
Australian Standard Number (<i>As_No</i>)	An Alpha/Numeric data type is to be used with a maximum of 20 characters. No commas are to be used in this field. EG:	Field cannot be empty.
Connection Type (<i>Connection</i>)	An Alpha data type is to be used with a maximum of 100 characters. No commas are to be used in this field. EG: Above	Field cannot be empty.
Design Company (<i>Design_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Fred Charles and Associates	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Plan Number (<i>Plan_No</i>)	An Alpha/Numeric data type is to be used 20 characters maximum length. No commas are to be used in this field. EG: 6080R212	Field cannot be empty. Reference to the as constructed drawing plan number
Construction Company/ Contractor (<i>Const_Co</i>)	An Alpha data type is to be used, 100 characters maximum length. No commas are to be used in this field. EG: Smith Construction	Field cannot be empty. (Please Note in future each company may be provided with a code number for ease of data entry)
Construction Date (<i>Const_Date</i>)	A date data type is to be used (dd/mm/yyyy). EG: 17/05/2001	The day, month and year fields within the date will be range checked.
The source of the original data (<i>Source</i>)	An Alpha/Numeric data type is to be used, 50 characters maximum length. No commas are to be used in this field. EG: As Constructed field work, As Designed drawings, 1:2500 etc	Field cannot be empty. If more notes required enter in the "Comments" field
Comments (<i>Comments</i>)	An Alpha/Numeric data type is to be used, 100 characters maximum length. No commas are to be used in this field.	Field may be empty

3.15 Vehicle Crossing

No attribute data is to be provided with this element.

3.16 Road Safety Barriers

No attribute data is to be provided with this element.

4. R-SPEC Code Lists

Code lists are used to standardise terminology by providing a range of item descriptions relating to a particular attribute. A number of attributes specified in the attribute fields may require the input of a code list entry number.

Consultants please note that should an entry not exist within the code list please contact your **A-Spec Group** contact to make arrangements for its inclusion.

Code list entries will be constantly reviewed by the consortium and additions and amendments made as the need arise.

Material – Pavement, Footpath, Kerb, Bridge, Traffic Mgt

Code	Description	Class	Comment
	Bitumen / Asphalt		
	Bitumen with Spray on Finish		
	Concrete		
	Earth		
	Gravel		
	Pavers		
	Concrete Coloured/Patterned		
	Concrete Spray Finish		
	Concrete Stamped		
	Tiles		
	Stone		
	Rubber		
	Landscape		
	Grass		
	Exposed Aggregate		
	Timber		
	Steel		
	Concrete-Steel		
	Steel-Timber		
	Aluminium		
	Black Brute		
	Asbestos Cement		
	PVC		
	Steel Reinforced Concrete		
	Corrugated Steel		
	Ductile Iron		
	Fibre Reinforced Concrete		
	High Density Polyethylene		
	Cast Iron		

Pathway Type

Code	Description	Class	Comment
	Horse Trail		
	Boardwalk		
	Footpath		
	Walking Track		
	Pedestrian Access		
	Shared Path		
	Beach Access		

Kerb Type

Code	Description	Comment
	Barrier Kerb	
	Semi-Mountable Kerb	
	Mountable Kerb	
	Roll top Kerb and Channel	
	Barrier Kerb and Channel	
	Layback Kerb and Channel	
	Shoulder	

Traffic Management Type

Code	Description	Comment
	Median strip	
	Splitter island	
	Roundabout	
	Raised pavement	
	Chicane	
	Tee Intersection	
	Intersection Platform	
	Speed Bump	
	Pedestrian Refuge	
	Bus Stop	To be represented as a point
	Bus Shelter	To be represented as a polygon
	School Crossings	

Bridge/Major Culvert Type

Code	Description	Comment
	Road bridge	
	Footbridge	
	Culvert	
	Stock crossing/Underpass	
	Abutment	

Lighting Type

Code	Description	Comment
	Directional	
	Feature	
	Bollard	

Draft for Comment

Attachment 1: Request for Existing Digital Data within the Road Reserve from A-Spec Member

Please note this relates to roads, footpaths and kerb & channel alignments.

- Please refer to the **A-SPEC** website for relevant contact details. www.dspeg.com.au

Date:

A-SPEC Member Contact:

Developer or their Representative's Name:

Developer or their Representative's Contact Name:

Address:

Suburb:

Postcode:

Telephone:

E-mail:

Development project(s) reference(s):

I, the representative named above, request from _____ an extract
(insert name of A-Spec member)
 from their drainage digital map base covering the area as described in the following sections. As a condition of using this data, I agree to acknowledge the ownership of _____
(insert name of A-Spec member)
 over this data and agree to be bound by the restriction that the data is only to be used for the nominated development projects.

Please make a selection indicating, the method of delivery and the type of media the data is to be supplied on.

Requested method of data delivery	Requested media format
<input type="checkbox"/> E-mail	
<input type="checkbox"/> Post	<input type="checkbox"/> CD-ROM
<input type="checkbox"/> To be collected - CD-ROM	

Please complete one of the sections below. Adequate information must be provided to easily identify the area of interest.

Description

E.g. the area bounded by Latrobe, Swanston, Bourke and Spencer Streets.

Bounding Coordinates (*Eastings and Northings*)

E.g. the area within (294081m E, 5802320m N), (294430m E, 5802315m N), (294449m E, 5801990m N), (294094m E, 5801991m N)

Area shaded in attached picture

E.g. the area shown shaded in an extract from a street directory.

