TRANSPORT SPECIFICATION

Specifications for Road and Transport Digital Spatial Data at the City of Albany

Version 1.3
2019

INDEX

1. The Transport Specification

As part of the CITY OF ALBANY SPATIAL DATA SPECIFICATION the Transport Specification focuses on both pedestrian and transportation assets that the City of Albany have to maintain or be aware of. It captures both asset and some engineering details that allow not only for financial reporting and maintenance of assets but also to support future design and development.

The underpinning spatial standards are defined in the parent document, CITY OF ALBANY SPATIAL DATA SPECIFICATION.

The TRANSPORT SPECIFICATION is a requirement of the City of Albany to streamline the processes undertaken for infrastructure asset capturing and maintenance of this data in its geographic information systems (GIS), and Road Asset and Maintenance Management RAMM system.

This specification is for use by any Developers and Surveyors (hereafter referred to as "Consultants") who undertake Land Development or Capital Works activities that have to be recorded by the City of Albany.

This also includes any related construction activities undertaken by the City of Albany.

2. Contract Deliverables

2.1. Digital Spatial Data File Format

All data is to be supplied in the format specified by the City of Albany:

1. Preferred: ESRI Shapefile, FileGDB, PersonalGDB
2. By Special Arrangement: Mapinfo TAB/MIF, geoXML
3. Not Preferred: CADD DXF/DWG + EXCEL/CSV(Attribute Table)
4. Not Acceptable: PDF or hardcopy of Plan

2.2. Submission Metadata File

A readme.txt file 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	Wyndham Estate
STAGE	Subdivision Stage Name	Stage 3B
DATE SUBMITTED	Date the digital data submitted	31/01/2008
COMPANY	Company name taking responsibility for the data	Work Force
CONTACT	Contact name for this project	John Somebody
SURVEY NUMBER/REF	Company's survey reference	A1
TELEPHONE	Telephone number	(08) 5555 1234
EMAIL	Email address (as applicable)	johns@workforceco.com.au
MAILING ADDRESS	Mailing address	Level 19 Lower St, Blackhouse Sth, WA, 6000
PHYSICAL ADDRESS	Physical business address	"As Above"
DATUM/PROJECTION	The coordinate system the data is in. Please note the City of Albany only uses GDA94 Zone 50.	GDA94 Zone 50
TRANSFORMATION	The coordinate system the data was transformed from	E.g. Albany Grid ALB94 to GDA94 Zone50
DATA FORMAT & VERSION	Details about the software and file version used to create the digital data	E.g. AutoCAD Map 2008 and QGIS
NOTES	Important notes or information to be included here.	Any other relevant information that the data custodian needs to be aware of.

2.3. Submission Media

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

- Email to the City of Albany cityassets@albany.wa.gov.au. (File size limitation is 15 megabytes)
- USB devices / CD-ROM / DVD
- Include the following (as a label or in the Email):
  Estate Name and Stage or Project Name: _____
  Council Approval Number(s): _____
  Authorised by: _____ Date: _____
  Consultant Company: _____

3. Graphical Specifications

3.1. Theme/Layer Structure

The following information is provided as the guide when putting together graphical information.

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

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

Layer	Feature Type	Description	Attributes
REGULATORY SIGNS	Point	Regulatory Signs	**Attribute**
STREET LIGHTS	Point	Street Lights that the City maintains	**Attribute**
PARKING BAYS	Point	Parking bay identification point	**Attribute**
STAIRS	Polyline	Stairs and stair landing	**Attribute**
KERBING	Polyline	Gutter line of kerb	**Attribute**
PATH CENTRELINES	Polyline	Centre line of footpath (Including Kerb Ramps)	**Attribute**
PATH FEATURES	Polyline	Linear features associated to footpath (Grab Rails, Hand Rails & Tactiles)	**Attribute**
ROAD BARRIERS	Polyline	Line depicting roadside safety barriers	**Attribute**
ROAD CENTRELINES	Polyline	For RAMM import, includes pavement and surface details	**Attribute**
ROAD SURFACE	Polygon	Finished Road Surface. Includes formalised off road parking areas	
TRANSPORT POINTS	Point	Traffic Management Points	**Attribute**
TRANSPORT MARKINGS	Polyline	Line markings and on-paving symbols	**Attribute**
TRANSPORT POLYGONS	Polygon	Polygon representing different treatments within kerb lines, i.e brick paving, landscaping	**Attribute**
RAISED TRANSPORT	Polyline	Bridges, Boardwalks and Jetties	**Attribute**
BUS SHELTER	Point	Bus Shelters	**Attributes**
TRANSPORT PILES	Point	Piles for boat pens, jetty's and bridges	**Attribute**

3.2. Graphical Data Construction Principals

This section details the graphical data construction principles that must be adhered to for all features (polygons, lines, points).

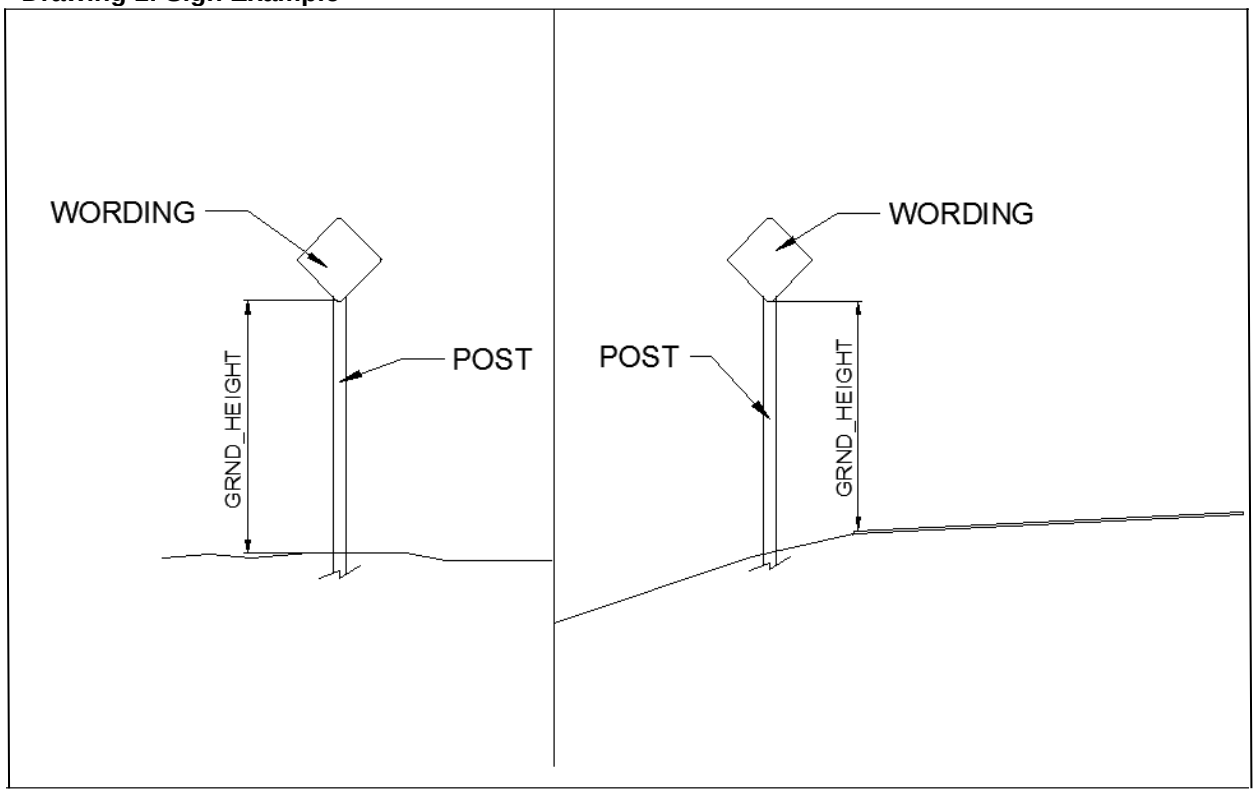
Please use sound practices when recording data, such as snapping to lines or points, closing polygons, and directional graphing for especially the roads centreline.

3.2.1. Regulatory Signs

Enforceable traffic and management signage based on Australian Standards. These signs should focus on parking limits, restricted access, street names and tourism signs. There is no requirement to capture sign owned by Main Roads, like stop, give-way or large directional signs.
It also does not include informative signs (see INFO_SIGNS in the MANAGED SPACE SPECIFICATION).

The attributes for this layer are specified in Table 4.1.

Drawing 1: Sign Example



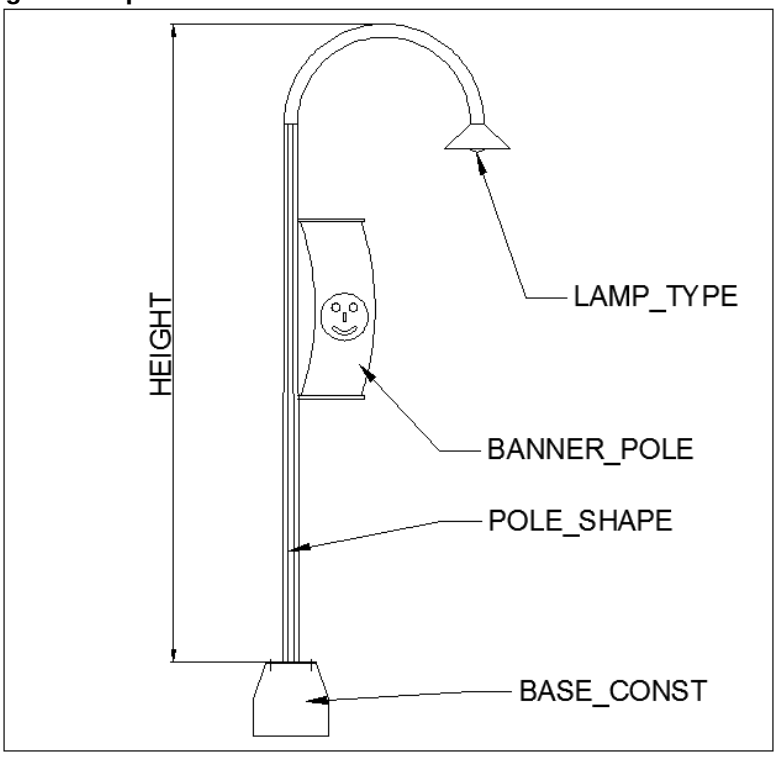
3.2.2. Street Lights

Unlike the LIGHTING layer in the MANAGED SPACE SPECIFICATION these lights comply with Australian Road Standards and therefore a layer on its own.

- These streetlights do not include streetlights from Western Power. For example, Street lights owned by the City of Albany are generally in high profile areas such as CBD and Middleton Beach and are of a more decorative/themed nature than standard Western Power street lights.

The attributes for this layer are specified in Table 4.2.

Drawing 2: Streetlight Example



3.2.3. Parking Bays

Points identifying parking bays, including type, duration, limitations, etc.
The TRANSPORT MARKINGS layer captures parking bay line markings and could therefore be used to check compliance with standards.

The attributes for this layer are specified in Table 4.3.

Drawing 3 depict how a parking bays WIDTH and LENGTH attributes are measured.

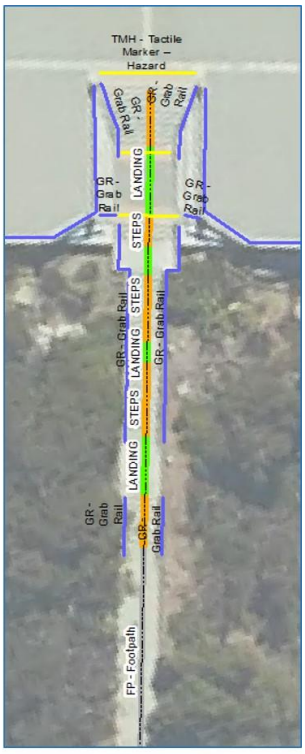
Drawing 3: Parking Bays

3.2.4. Stairs

Stairs form part of the pathway and trails infrastructure. Stairs are not captured in the Managed Space specification because they create a risk and newly constructed stairs have to comply with Australian Standards. Stair landings are also captured here, though are captured as a different type, as they will have differing attributes.

The attributes for this layer are specified in Table 4.4.

Drawing 4: Stairs



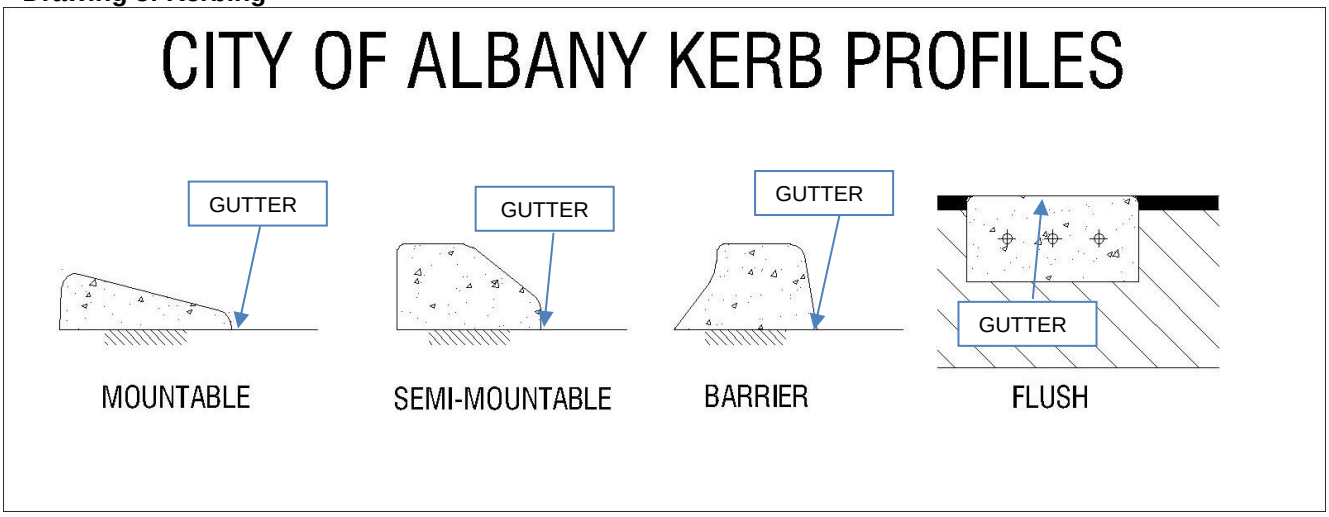
3.2.5. Kerbing

Road Kerbs are generally concrete structures, placed along the edges of roads to retain runoff water, as well as provide a separation barrier between vehicles and road verge users. Kerb lines are to be continuous through property crossover aprons where compliant kerbing is in place.

Kerbing is represented by polylines at the gutter of the kerb as depicted in Drawing 5. Note that Flush kerbing the gutter line is considered to be the centre of the kerb.

The attributes for this layer are specified in Table 4.5.

Drawing 5: Kerbing



3.2.6. Path Centrelines

The Pathway Centreline depicts the alignment and orientation of a footpath and holds the attributes recordable for both the pavement and path surface. Centrelines should be comprised of Polylines, which reflect the path alignment.

Centrelines should intersect the centreline of adjoining paths, or kerb lines of adjoining roads, and the resulting path length (chainage) is measured from this intersection. In the case of new paths adjoining existing paths, chainage 0-1.5m will commonly be the existing path attributes, with the new construction (and different attributes) from that point.

Centrelines should be broken into segments where changes in attributes occur, such as a change in pavement/surface material, or surface width. This includes intersections with existing paths, or road kerb lines, as mentioned in above paragraph.

Kerb Ramps (also known as pram ramps) are also captured here and should be picked up as a new segment of the path polyline though they are captured as a different path type (Drawing 6).

The attributes for this layer are specified in Table 4.6.

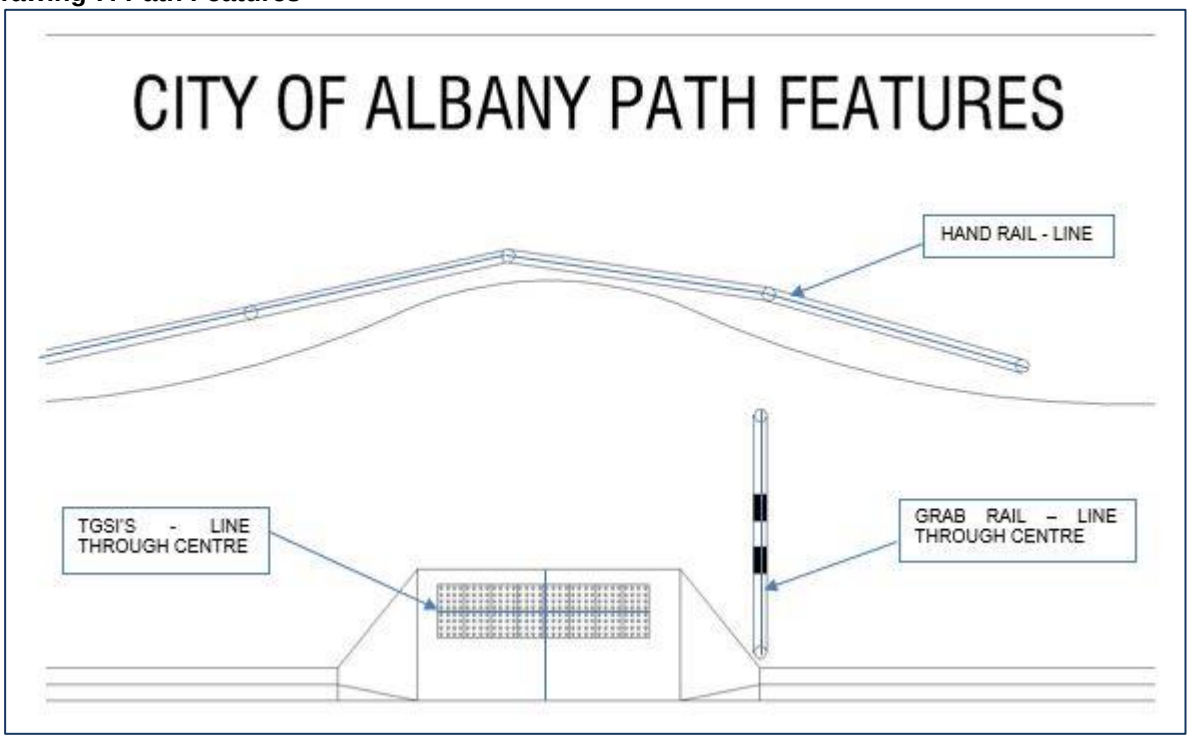
Drawing 6: Path Centrelines

3.2.7. Path Features

Path features that are represented by lines, and include items generally installed as a component of pathways, though are not best represented by the path centreline. They include such items as grab rails, hand rails and Tactile Ground Surface Indicators (TGSI's).

The attributes for this layer are specified in Table 4.7.

Drawing 7: Path Features



3.2.8. Road Barriers

Road barriers, are items used to inhibit vehicle movements, similar to traffic management polygons, however this group includes items best represented via lines. It includes road crash barriers, road speed humps, wombat crossings (plateau style speed humps, which may also be a pedestrian crossing) and parking barriers. They should be represented by a Polyline at the centre alignment of the barrier, and include width attributes.

The attributes for this layer are specified in Table 4.8.

3.2.9. Road Centreline

The Road Centreline depicts the alignment and orientation of a road carriageway, and holds the attributes recordable for both road pavement and road surface. Centrelines should be comprised of Polylines, which reflect the road alignment.

Centrelines should intersect the centreline of adjoining roads, and the resulting road length (SLK) is measured from this intersection. In the case of new roads adjoining existing roads, chainage 0-3m will commonly be the existing road, with the new construction (and different attributes) from that point.

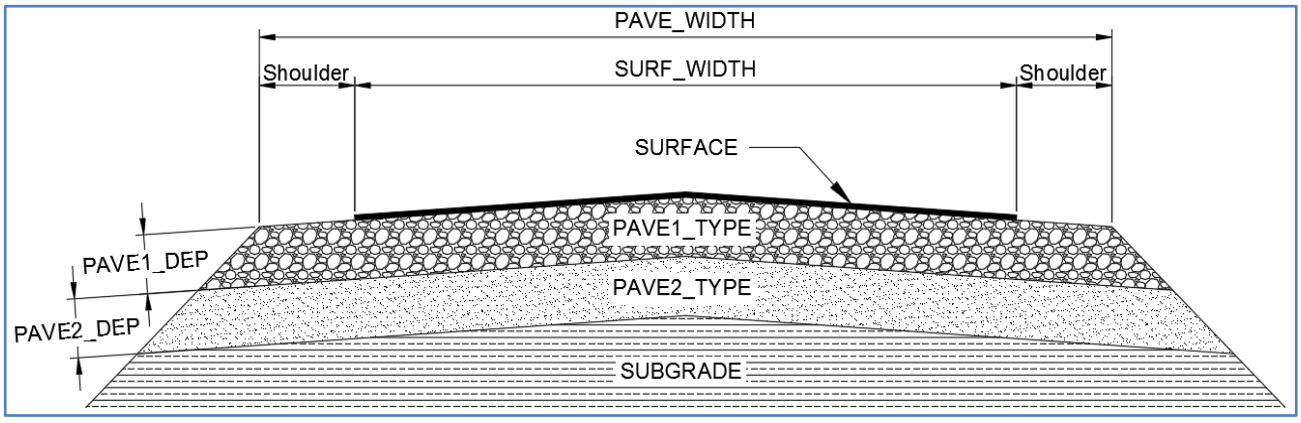
Centrelines should be broken into segments where changes in attributes occur, such as a change in pavement material, surface type or surface width. This includes intersections with existing roads, as mentioned above.

Dual-Carriageway Roads with a continuous dividing median should have a centreline for each side of the carriageway.

There is no requirement in this specification to capture the sub-grade (natural earth) of a road construction or reconstruction.

The attributes for this layer are specified in Table 4.9.

Drawing 8: Terminology for the structure of a road

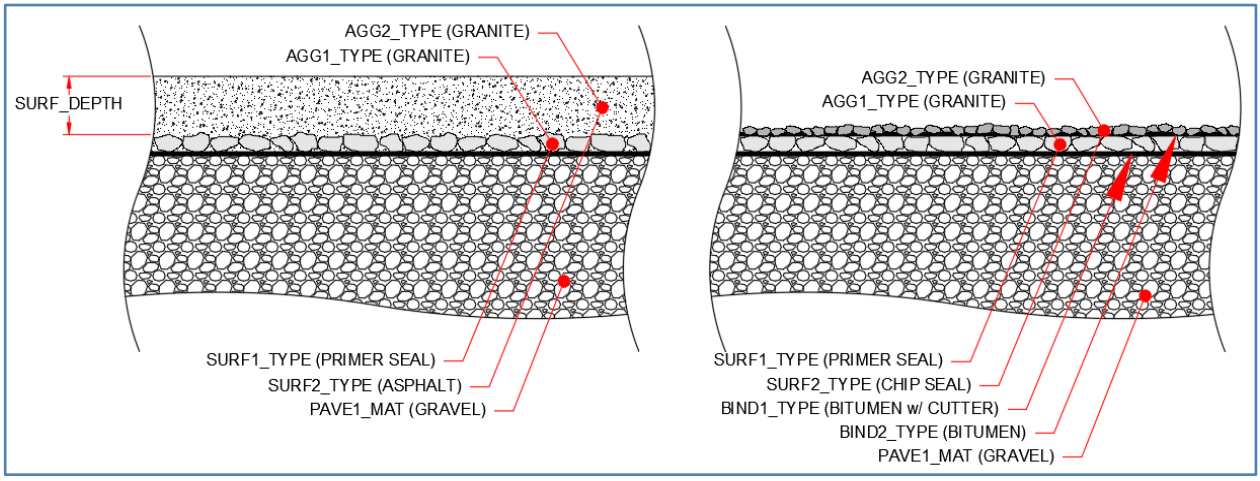


Drawing 9: Centreline Examples

In the case of a Cul-de-sac, or hammer-head end treatment, the centreline continues on its alignment to the end of road, with sections divided where changes of width or material occur:

In the case of roundabouts, or mid-block islands (rather than a continuous median), the centreline is treated as continuous through the central alignment, as if the feature was not present. All centrelines are broken at intersections with other road centrelines, changes in material/surface and/or changes in geometry.

Drawing 10: Pavement / Surface structure



3.2.10.Road Surface

The perimeter of the paved Road Section/Parking Area. Gutter of kerbing to lip of kerb, or road shoulder to road shoulder is to be represented by a series of polygons or closed polylines, echoing the section breaks in the centreline.

The purpose of this information is to provide area calculations which include portions not generally covered by a length/width multiplication, and to allow complex areas such as roundabouts and median islands.

No additional attributes are recordable to the road pavement/surface. Area is captured as part of the polygon geometry.

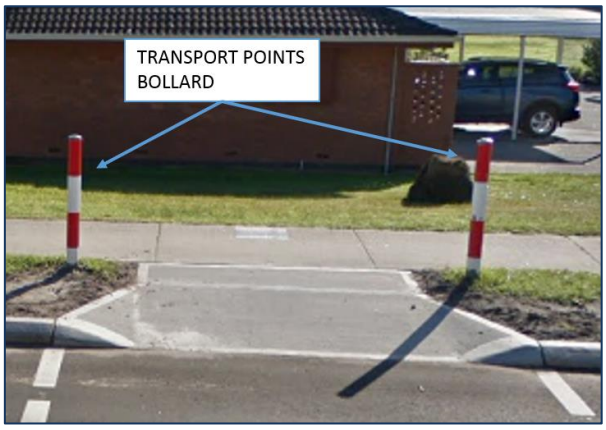
3.2.11. Transport Points

Minor road infrastructure best represented by a point feature, including:

- Bollards on the road or path For example, bollards for children's crossings, shared and shared acrod bays. Not in the MANAGED SPACE SPECIFICATION
- Guideposts
- Raised Retro-Reflective Pavement Markers (RRPM's, or 'Cats Eyes')
- Parking Ticket Machines

The attributes for this layer are specified in Table 4.10.

Drawing 11: Transport Points



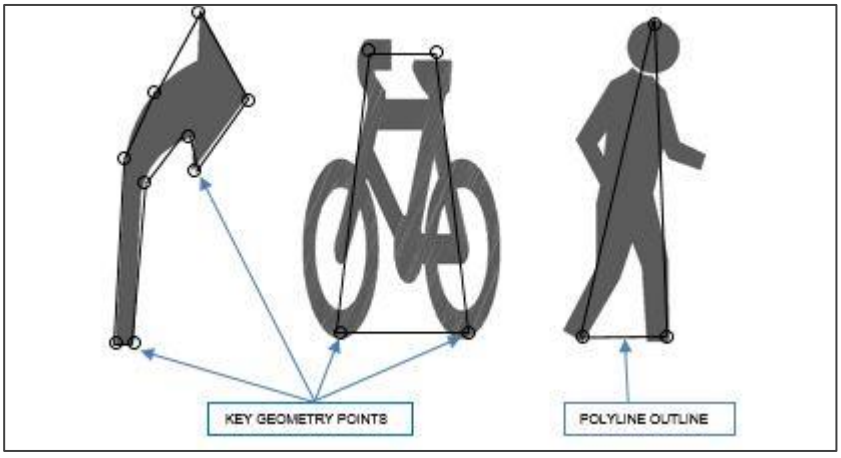
3.2.12. Transport Markings

LINE MARKING
Line marking should be represented by a line (polyline) along the middle/centre of the painted line, or in-between the painted lines in the case of double centrelines. It should follow the geometry of the painted line in the same manner as for road centrelines.

SYMBOLS
Symbols and text should be represented by a polyline representing the boundary of the key geometry, with associated attributes, describing the symbol. In the case of directional arrows it should visually show the directions indicated.

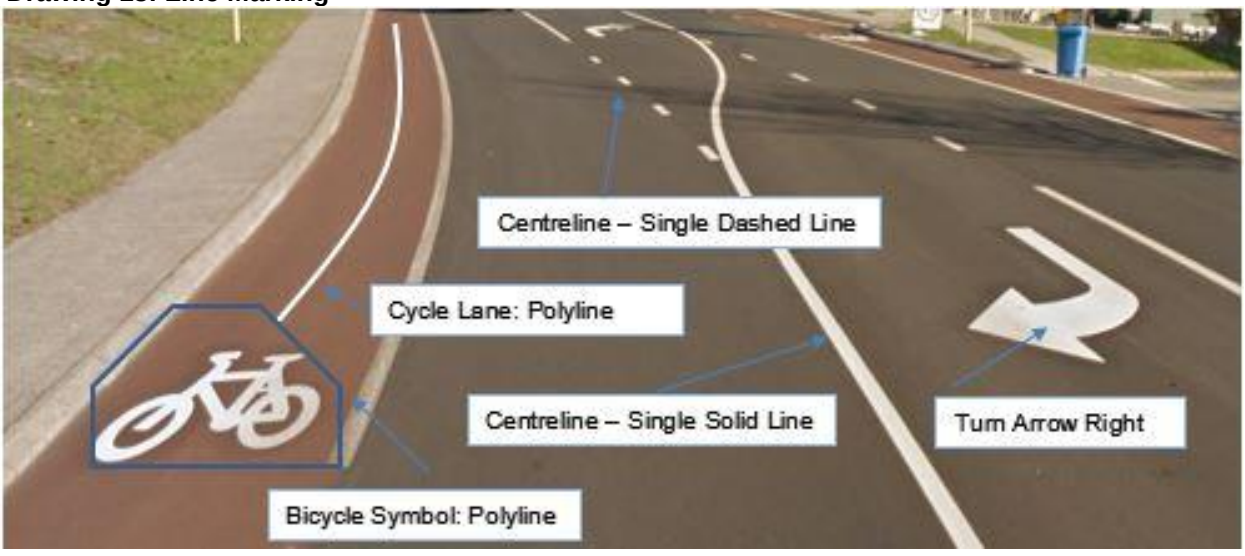
The attributes for this layer are specified in Table 4.11.

Drawing 12: Symbol Examples



Note that for Cycle Lanes, the lane is effectively part of the road surface.

Drawing 13: Line Marking



Gore Markings are a type of Symbol, used to denote areas of roads or parking bays where a different use is present. This includes reserving of parking bays for loading, access etc, or delineating a road area not to be trafficked. Gore marking is treated as a series of lines, each with a width attribute.

Drawing 14: Gore Marking

Drawing 15: Parking Bays

3.2.13. Transport Polygons

Islands & Roundabouts. If there is an infill area inside the island or roundabout then that area is to be cut out (no overlapping features) and coded under the correct layer (such as landscaping in Managed Space Specification).

Kerb lines (and their associated attributes) incorporated in the construction of traffic management devices should be provided separately.

The attributes for this layer are specified in Table 4.12.

Drawing 16: Transport Polygons

3.2.14.Raised Transport

Raised Transport are ‘bridge-style’ structures, including road bridges, pedestrian bridges and boardwalks, which share common engineering, construction and maintenance principles.

The attributes for this layer are specified in Table 4.13.

Drawing 16: Raised Transport

3.2.15.Bus Shelters

Bus shelters that are managed by the City of Albany are captured here with a point feature. This does not include Public Transport Authority bus stops that are denoted by a post only.

The attributes for this layer are specified in Table 4.15.

3.2.16. Transport Piles

Piles that are related to raised structures such as boat pens, jetty's, bridges and raised walkways.

The attributes for this layer are specified in Table 4.14.

Drawing 18: Piles

3.3. Acceptance Testing

Please note that the TRANSPORT SPECIFICATION reflects the City of Albany's requirements to record the asset. Contractual and compliance requirements, such as provision of marked-up drawings, are separate to this specification.

! The transport network shall be a single continuous file/drawing (not tiled or split in any form). Non-compliance will result in failing the acceptance testing.

! Attributes must comply with all the specifications in Section 4. Non-compliance will fail the acceptance testing.

! Please note that Data Validation is implied by the feature type, attribute data types and content descriptions provided in Section 4. Contractors still have to ensure the data is correct.

3.4. Matching to Existing Infrastructure

It is the responsibility of the consultant to ensure the "As Constructed" digital data of the assets are related to the current infrastructure data held by the City of Albany.

The City of Albany will make available an extract of any digital transport data held in their GIS that cover the specific project area. In some instances there may not be any data available or available data may not have been verified.

Submissions must include all required attributes of the existing infrastructure that the new assets are connecting to. This allows for verification of existing data and creates a 'tie-in' reference for the new infrastructure.

4. Attribute Specifications

All submissions will be provided in the preferred datum of City of Albany (MGA50 & AHD) as described in the City of Albany Spatial Data Specification.

As all new cadastral information is placed on the MGA grid, it is an expectation that all data provided by Contractors will be representative of this level of accuracy.

- All fields are to be populated in accordance with the notes and codes supplied in this document.
- All attribute files are to use the Column Names and Data Types set out in this section. Column names are restricted to 10 characters for compatibility (i.e. for ESRI Shape-files).
- All attributes marked with an M in the tables must be provided, and will fail the acceptance testing if not provided. **M = Mandatory Attribute**
- All attributes marked with an 'I' in the tables are for internal use. **I = Internal Attribute**

4.1. REGULATORY_SIGNS

	Column Name	Data Type	Max Length	Comments	Contents
M	FEAT_TYPE	Alpha/Numeric	5 chars	No commas	Australian standards, COA Signage policy classification (excluding stop, give-way & speed signs) (includes symbolic signs) (Table 5.2)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
	WORDING	Alpha	150 chars	No commas	Wording additional to AS/NZS (possum crossing, 1hr, 2hr, etc)
	BLADES_NO	Whole Number	n/a	Whole number	Number of blades per sign
	TIME_LIMIT	Alpha/Numeric	15 chars	No commas	Parking between hours x – y
	MOUNTING	Alpha	5 chars	No commas	Structure sign is mounted on include frangible (Table 5.3)
	GND_HEIGHT	Whole Number	n/a	Whole cm	Height to bottom of sign from the road paving level (Drawing 1)
	ASNZS_CODE	Alpha/Numeric	15 chars	No commas	Aust standards codes – AS/NZS 1906:2007
	REFLECTIVE	Alpha	1 chars	Y/N	Is the sign using reflective material
	COMPLIANT	Alpha	1 chars	Y/N	Compliance to colour, size, height etc.
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha	10 chars	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this asset

4.2. STREET_LIGHTING

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Lighting Type. (Table 5.4)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
	POLE_MAT	Alpha	5 chars	No commas	Table 5.1
	POLE_COAT	Alpha	5 chars	No commas	Table 5.5
	POLE_SHAPE	Alpha	5 chars	No commas	Table 5.6
	LAMP_TYPE	Alpha	5 chars	No commas	Lamp Type fitted; see Table 5.7
	LAMP_WATT	Whole Number	n/a	Whole number	Wattage of lamp fitting
	LAMP_COUNT	Whole Number	n/a	Whole number	Number of Lamps
	BASE_CONST	Alpha	5 chars	No commas	Table 5.8
	BASE_DIMS	Alpha	15 chars	No commas	Note on base dimensions in mm
	MODEL	Alpha	5 chars	No commas	Table 5.9 (Not Applicable – In House Only)
	HEIGHT	Decimal Number	n/a	2 decimals metres	Height at Base to Top of structure
	KERB_DIST	Whole Number	n/a	Whole mm	Offset from kerb gutter line, at right angles
	FRANGIBLE	Alpha	1 chars	Y/N	Frangible base for Roadside lights.
	BANNER_POL	Alpha	1 chars	Y/N	Banner Pole is present
	MANUFACT	Alpha	50 chars	No commas	Name of Manufacturer/Foundry/Supplier
M	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha	10 chars	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'

	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this asset

4.3. PARKING_BAYS

	Column Name	Data Type	Max Length	Comments	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Purpose of the bay (Table 5.9)
I	BAY_ID	Alpha	15 chars	No commas	In-Field Reference, Audit and Legal identifier (like FIELD_REF)
M	DURATION	Whole Number	n/a	Whole minutes	Duration in Minutes. 0 = unlimited
	LIMITATION	Alpha	25 chars	No commas	Parking requiring Authorisation. “Authorised”; “Private”; “Permit” “Reserved”; “Events Parking”
	WIDTH	Decimal Number	n/a	2 decimal meters	Width of Bay (see Drawing 3)
	LENGTH	Decimal Number	n/a	2 decimal meters	Length of Bay (see Drawing 3)
	ANGLE	Whole Number	n/a	Whole Degrees	Angle to kerb (Table 5.10)
	COMPLIANCE	Alpha	1 chars	Y/N	AS/NZS Standards, Like line colour, symbol size etc.
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or ‘n/a’
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this asset

4.4. STAIRS

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	7 chars	No commas	Use 'STEPS' or 'LANDING' only. 'UNK' when not known.
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
M	MATERIAL	Alpha	5 chars	No commas	Construction E.G. Concrete, Timber, Steel (Table 5.1)
M	RISE	Whole number	n/a	Whole mm	Height of each Step Rise/Fall. Use the maximum value if uneven.
	WIDTH	Decimal number	n/a	2 decimal meters	Width of the pathway steps in meters
	NO_STEP	Whole number	n/a	Whole number	Number of steps in this polyline segment. 0 = LANDING
M	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 char	No commas	Any additional comments that relate to this feature

4.5. KERBING

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Style of Kerb – See Drawing 5 and Table 5.11
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
M	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.6. PATH_CENTRELINE

	Column Name	Data Type	Max Length	Constraint	Contents
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
M	FEAT_TYPE	Alpha	5 chars	No commas	Path type (Path or Kerb Ramp) (Table 5.12)
M	WIDTH	Decimal number	n/a	2 decimal meters	Width of the pathway steps in meters
	SURF_MAT	Alpha	5 chars	No commas	Surface material (Table 5.13)
	SURF_DEPTH	Whole number	n/a	Whole mm	Depth of surface material
	PAVE_MAT	Alpha	5 chars	No commas	Path pavement/sub grade material (Table 5.14)
	PAVE_DEPTH	Whole number	n/a	Whole mm	Depth of imported pavement/sub-grade
	HIERARCHY	Alpha	5 chars	No commas	Principal transport hierarchy. (Table 5.15)
	CONST_CO	Alpha/Numeric	50 chars	No commas	Company name only
M	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 3.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.7. PATH_FEATURES

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Path feature type (grab rail, hand rail, tactile markers) (Table 5.16)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
M	MATERIAL	Alpha	5 chars	No commas	Steel, concrete, brick, rubber (Table 5.1)
	WIDTH	Whole number	n/a	Whole mm	Pram ramp widths. Width of TGSI
	HEIGHT	Whole number	n/a	Whole mm	Height of i.e. grab rails
	COLOUR	Alpha	20 chars	No commas	
	COMPLIANCE	Alpha	1 chars	Y/N	Compliance to AS1428, including overall compliance sum for grab rail height, pram ramp grades etc.
M	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.35)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.8. ROAD_BARRIERS

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Type of barrier. (Table 5.17)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
	STRT_TREAT	Alpha	5 chars	No commas	Treatment type at start of barrier. (Table 5.18) (for WB only)
	END_TREAT	Alpha	5 chars	No commas	Treatment type at end of barrier. (Table 5.18) (for WB only)
M	BARR_MAT	Alpha	5 chars	No commas	Barrier material. See Table 5.1
	BARR_COAT	Alpha/Numeric	25 chars	No commas	Paint, etc. if applicable
	BLOCK_MAT	Alpha	5 chars	No commas	Blockout material (if applicable). (Table 5.1) (for WB only)
	POST_SPACE	Whole Number	n/a	Whole cm	Post Spacing (centre to centre)
	FIX_MAT	Alpha	5 chars	No commas	Fixing material. (Table 5.19)
	COMPLIANCE	Alpha	1 chars	Y/N	Compliance.
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 3.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.9. ROAD_CENTRELINE

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Function of road (Table 5.20)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. R-Number
	SLK_FROM	Decimal number	n/a	2 decimal SLK	Start point of road segment (Reconstructions only)
	SLK_TO	Decimal number	n/a	2 decimal SLK	End point of road segment (Reconstructions only)
	NO_LANES	Whole Number	n/a	Whole number	Number of traffic lanes (both directions)
M	SEG_LENGTH	Decimal number	n/a	2 decimal metres	Centreline segment length in metres (implied in polyline geometry)
M	SURF1_TYPE	Alpha	5 chars	No commas	Surface Type (Table 5.21) (Drawing 8)
	S1EXP_LIFE	Whole Number	n/a	Years	Expected Life
	S1REP_COST	Decimal Number	n/a	Currency	Replacement Cost
	AGG1_TYPE	Alpha	5 chars	No commas	Type of Aggregate used in Surface 1 (Table 5.22) (Drawing 10)
	AGG1_SIZE	Whole Number	n/a	No commas	Aggregate size/grade used in Surface 1
	BIND1_TYPE	Alpha	5 chars	No commas	Type of Binder used in Surface1 (Table 5.23) (Drawing 8) (Drawing 10)
M	SURF2_TYPE	Alpha	5 chars	No commas	Surface Type (Table 5.21) if applicable (Drawing 8) (Drawing 10)
	S2EXP_LIFE	Whole Number	n/a	Years	Expected Life
	S2REP_COST	Decimal Number	n/a	Currency	Replacement Cost
	AGG2_TYPE	Alpha	5 chars	No commas	Type of Aggregate used in Surface 2 (Table 5.22) (Drawing 8) (Drawing 10)
	AGG2_SIZE	Whole Number	n/a	No commas	Aggregate size/grade used in Surface 2
	BIND2_TYPE	Alpha	5 chars	No commas	Type of Binder used in Surface 2 (i.e. Bitumen) (Table 5.23) if applicable
	SURF_WIDTH	Decimal number	n/a	2 decimal metres	Width of the surface, in metres (Drawing 8)
	SURF_DEPTH	Decimal number	n/a	2 decimal metres	Depth of the surface in millimetres. Applicable to asphalt, brick and concrete.
M	PAVE_WIDTH	Decimal number	n/a	2 decimal metres	Width of Pavement (Drawing 8)
M	PAVE1_MAT	Alpha	5 chars	No commas	Type of pavement material, (Table 5.14)
M	PAVE1_DEP	Whole Number	n/a	Whole mm	Depth of pavement. Where only one course of material is used, Pave2_Depth to be left blank.
	P1EXP_LIFE	Whole Number	n/a	Years	Expected Live
	P1REP_COST	Decimal Number	n/a	Currency	Replacement Cost
	PAV2_MAT	Alpha	5 chars	No commas	Type of pavement material, (Table 5.14) if applicable
	PAVE2_DEP	Whole Number	n/a	Whole mm	Depth of pavement material if applicable.

	P2EXP_LIFE	Whole Number	n/a	Years	Expected Live
	P2REP_COST	Decimal Number	n/a	Currency	Replacement Cost
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	OWNER	Alpha/Numeric	100 chars	No commas	If the responsible entity is not the City of Albany EG: MRWA; Private
	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or ‘n/a’
	COMMENTS	Alpha/Numeric	150 char	No commas	Any additional comments that relate to this feature

4.10. TRANSPORT_POINTS

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	See Table 5.24
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG “BBQ7”
M	MATERIAL	Alpha	5 chars	No commas	See Table 5.1
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.34)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or ‘n/a’
	COMMENTS	Alpha/Numeric	150 char	No commas	Any additional comments that relate to this feature

4.11. TRANSPORT_MARKINGS

	Column Name	Data Type	Max Length	Comments	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	See Table 5.25
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG “BBQ7”
M	MATERIAL	Alpha	5 chars	No commas	See Table 5.1
	WIDTH	Whole number	n/a	Whole mm	Where applicable
	THICKNESS	Whole number	n/a	Whole mm	Thickness of line marking (standardised)
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.35)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or ‘n/a’
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.12. TRANSPORT_POLYGONS

	Column Name	Data Type	Max Length	Constraint	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Type, EG: Roundabout (Table 5.26)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG “BBQ7”
M	MATERIAL	Alpha/Numeric	5 chars	No commas	The material (Table 5.27)
M	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.35)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or ‘n/a’
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.13. RAISED_TRANSPORT

	Column Name	Data Type	Max Length	Comments	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Function of structure (i.e pedestrian, vehicle), (Table 5.28)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
	NAME	Alpha	50 chars	No commas	Name of feature, EG: The Mangrove Boardwalk
	STR_MAT	Alpha	5 chars	No commas	Structure/supports material, eg, timber, steel. (Table 5.1)
	STR_WIDTH	Decimal Number	n/a	2 decimal metres	Width of the structure in metres
	DECK_MAT	Alpha	5 chars	No commas	Bridge decking/surface material, EG: Timber, concrete (Table 5.29)
M	DECK_WIDTH	Decimal Number	n/a	2 decimal metres	Deck width of the trafficable decking in metres
	DECK_DEPTH	Whole Number	n/a	Whole millimetres	Depth of decking pavement, EG. Thickness of planks
	RAIL_TYPE	Alpha	5 chars	No commas	Boardwalk/Bridge Rail Type, EG: Top rail with wire rope (Table 5.30)
	RAIL_MAT	Alpha	5 chars	No commas	Boardwalk/Bridge Rail material, EG: Timber. (Table 5.31)
	DESIGN_CO	Alpha	100 chars	No commas	Company name only, EG: Terra Australis Landscaping
	CONST_CO	Alpha	100 chars	No commas	Company name only, EG: Terra Australis Landscaping
I	IMAGE	Alpha	225 chars	No commas	File path to image
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.35)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.14. PILES

	Column Name	Data Type	Max Length	Comments	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	Function of structure (i.e jetty, bridge), (Table 5.32)
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
	NAME	Alpha	50 chars	No commas	Name of feature, EG: The Mangrove Boardwalk
	MATERIAL	Alpha	50 chars	No commas	Material (Table 5.1)
	DIAMETER	Decimal Number	n/a	2 decimal metres	Width of the structure in metres
	DEPTH	Decimal Number	n/a	2 decimal metres	Depth of pile into ground from seabed level
	LENGTH	Decimal Number	n/a	2 decimal metres	Overall length of Pile
	FIN_HEIGHT	Decimal Number	n/a	2 decimal metres	Height datum at top of Pile
	SLEEVED	Alpha	n/a	No commas	Yes / No
	SLEEVE_MAT	Alpha	n/a	No commas	Material (Table 5.1)
	DESIGN_CO	Alpha	100 chars	No commas	Company name only, EG: Terra Australis Landscaping
	CONST_CO	Alpha	100 chars	No commas	Company name only, EG: Terra Australis Landscaping
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 5.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.35)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 chars	No commas	Any additional comments that relate to this feature

4.15. BUS_SHELTER

	Column Name	Data Type	Max Length	Comments	Contents
M	FEAT_TYPE	Alpha	5 chars	No commas	See Table 5.33
I	FIELD_REF	Alpha/Numeric	10 chars	No commas First chars are the FEAT_TYPE	A unique field reference to this asset. This attribute does not necessarily change when the asset is replaced or moved. It is not an asset ID for tracking, but rather a long term in-field & contractual reference. EG "BBQ7"
M	MATERIAL	Alpha	5 chars	No commas	See Table 5.1
I	CONDITION	Whole Number	n/a	Whole number	Condition rating in Table 6.1
I	COND_BY	Alpha	15 chars	No commas	Condition surveyor
M	PLACE_DATE	Alpha/Numeric	10 char	dd/mm/yyyy	Creation/Construction/Installation date, EG: 2010; 17/05/2001
	HARDSTAND	Alpha	1 chars	Yes/No Field	Hardstand
	HS_MAT	Alpha	5 chars	No commas	Hardstand material (Table 5.1)
	ADVERT	Alpha	1 chars	Yes/No Field	Advertising (Definition: Permitted and suitable location for advertising material on shelters. Limited to selected distributor roads.)
	ASSET_ID	Alpha/Numeric	15 chars	No commas	Unique Asset identifier, used for accounting & asset management
	EXPEC_LIFE	Whole Number	n/a	Years	Expected life in Years
	REPL_COST	Decimal Number	n/a	Currency	Replacement cost of Asset as new
	LAST_AUDIT	Date	n/a	dd/mm/yyyy	Date of the previous audit EG: 12/06/2012
	OWNER	Alpha/Numeric	100 chars	No commas	Responsible Entity (Table 5.35)
I	COA_REF	Alpha/Numeric	20 chars	No commas	Synergy file or record number
M	SOURCE_REF	Alpha/Numeric	20 chars	No commas	Plan Number or Survey Job Reference: EG: 6080R212
M	SOURCE	Alpha/Numeric	100 chars	No commas	Source name and additional details related to the SOURCE_REF; EG: As-Constructed Plan; Designed Drawing; Great Southern Surveyors - Stage 2 – 09/02/2013; CoA Assets Surveyor – Bob Jones – 15/07/2009
	WAPC_NO	Alpha/Numeric	20 chars	No commas	Western Australian Planning Commission reference number; or 'n/a'
	COMMENTS	Alpha/Numeric	150 char	No commas	Any additional comments that relate to this feature

5. Code Lists

Code lists are used to standardise terminology by providing a list of item descriptions relating to a particular attribute. A number of attributes specified in Section 4 require the input of these codes.

Consultants please note that should a code not exist within an attribute code list, mark the entity as code UNK, then write the new code and an appropriate description in the comment field. Please pre-empt this situation by communicating such anomalies to the City of Albany promptly (email: cityassets@albany.wa.gov.au).

5.1. Materials

Code	Description	Comment
ST	Steel	
SS	Stainless steel	
SP	Steel Painted	
SPC	Steel Powder coated	
CI	Cast Iron	
CB	Colorbond®	
W	Wood / Timber	
AL	Aluminium	
R	Rubber	
C	Concrete	
B	Brick	
P	Plastic	
TP	Thermoplastic	
FG	Fibre Glass	
A	Asphalt	
PT	Paint	
PR	Paint – Reflective (glass)	
PS	Paint – Plastic Stencils	
WA	Wood / Timber (Asbestos)	Possibly contains asbestos
UNK	Unknown	Use when not known

5.2. Sign Type

Code	Description	Comment
SN	Street Name Plate	
RS	Regulatory Signs	Compliance signs (black, red & white signs)
TH	Traffic Hazzard	Includes Chevrons, and Keep Left signs
WS	Warning Sign	Yellow signs, generally alerting to hazards ahead for vehicles such as T-Junctions, winding road, Children Crossing, recommended speed sign.
TS	Tourist Sign	Brown and White signs.
SS	Service Sign	Blue and White signs. Guidance to the location of facilities, generally of a non-commercial nature.

PS	Parking Sign	
CI	Commercial and Industrial Estate	Entry sign for areas zoned as Commercial and Industrial estates.
UNK	Unknown	Use when not known

5.3. Sign Mounting

Code	Description	Comment
PS	Post - Steel	Typically a galvanised steel post
PDS	Post – Double - Steel	Typically double galvanised steel posts
PF	Post - Frangible	Steel post suitable for close proximity to roads
PT	Post - Timber	Decorative timber posts, used in heritage areas
PDT	Post – Double – Timber	Double timber posts
PP	Power Pole	Sign fixed to power pole (may not be CoA controlled asset)
UNK	Unknown	Use when not known

5.4. Lighting Type

Code	Description	Comment
V	Street lighting	Primary purpose is for vehicular use
VS	Street lighting – Solar powered	Primary purpose is for vehicular use
P	Path / Access way lighting	Set away from road, servicing pedestrian movements
PS	Path / Access way lighting – Solar powered	Set away from road, servicing pedestrian movements
UL	Up lighting	
ULS	Up lighting Solar	
CP	Car Park lighting	Area lighting
CPS	Car Park lighting – Solar powered	Area lighting
PC	Crossing lighting	Focussed lighting provided for pedestrian crossings over roads
RWL	Runway Lights	Airport
PL	Papi Light	Airport, Precision Approach Path Indicator
UNK	Unknown	Use when not known

5.5. Lighting Pole Coating

Code	Description	Comment
P	Painted	
PC	Powder Coated	
GAL	Galvanised	
AN	Anodised	
UNK	Unknown	Use when not known

5.6. Lighting Pole Shape

Code	Description	Comment
C	Circular	
O	Octagonal	
R	Rectangular	
UNK	Unknown	Use when not known

5.7. Lighting Lamp Type

Code	Description	Comment
INC	Incandescent	Older style, rarely used
FLU	Fluorescent lighting	Older style, rarely used
MV	Mercury Vapour	Replaced on failure with CFL
MH	Metal Halide	High quality, low efficiency lighting
HPS	High Pressure Sodium	Efficient lighting, “yellow’ light
LPS	Low Pressure Sodium	Efficient lighting, “yellow’ light, not commonly used
CFL	Compact Fluorescent Light	Energy efficient replacement for MV
LED	Light Emitting Diode	
UNK	Unknown	Use when not known

5.8. Lighting Base Construction

Code	Description	Comment
CO	Concrete	Formed mass concrete with Rag-bolts
DB	Direct Buried	Pole is buried directly into ground, no base or footing installed
CSB	Concrete Slip-base	Rag-Bolt installation with breakaway bolts for vehicle collisions
UNK	Unknown	Use when not known

5.9. Parking Bay Type

Code	Description	Comment
S	Standard	
A	ACROD – Universal Access	
AS	ACROD – Shared Zone	Hatched area in between ACROD bays
M	Motorcycle	
L	Loading Zone	
T	Taxi Zone	
B	Bus Stop	
NS	No Standing Zone	
DO	Drop-off / Pickup Only	
TR	Trailer Bay	

R	Restricted/Controlled/Authorised	Keyword in the LIMITATION attribute. Elaborate in the COMMENTS attribute.
EV	EV - Electric Vehicle Charging Station	
UNK	Unknown	Use when not known

5.10. Parking Bay Angle

Code	Description	Comment
30	30 degree angle	30 degrees to road alignment
45	45 degree angle	45 degrees to road alignment
60	60 degree angle	60 degrees to road alignment
90	90 degree angle	90 degrees to road alignment
0	Parallel parking	Same as road alignment
1	Unknown	Use when not known

5.11. Kerb Profile Type

Code	Description	Comment
FB	Flush Beam	
M	Mountable	
SM	Semi - Mountable	
B	Barrier	
KC	Kerb and channel	A precast structure incorporating a gutter and kerb in one piece
GK	Granite kerbing	Either mortared or cut granite stones performing a kerb function. Replacement costs will vary between types.
A	Apron	
UNK	Unknown	Use when not known

5.12. Path Type

Code	Description	Comment
FP	Footpath	
KR	Kerb Ramp	Also known as ‘Pram Ramp’
UNK	Unknown	Use when not known

5.13. Path Surface Material

Code	Description	Comment
BA	Black Asphalt	
RA	Red Asphalt	
C	Concrete	Any oxides or colouring added, note in comments field
CEA	Concrete – Exposed Aggregate	Include details of blend in comment field

BP	Brick Paving	Include details of colour/size in comments field
BS	Bitumen Seal	No longer used for new construction
SG	Stabilised Gravel	
UNK	Unknown	Use when not known

5.14. Pavement Material

Code	Description	Comment
CS	Compaction sand	
LIG	Lateritic Gravel	
LMG	Limestone Gravel	
CR	Crushed Rock Road Base	Manufactured pavement material
CSS	Cement-Stabilised sand	Commonly used under brick-paved areas Percentage of cement to be included in comments field
QD	Quarry Dust	Also known as “cracker” or “crusher” dust.
C	Concrete	Strength and reinforcement details to be provided in comments field
RC	Reinforced Concrete	Provide details of reinforcement, i.e. F62 mesh in comments field
CSG	Cement-stabilised Gravel	Percentage of cement to be included in comments field
UNK	Unknown	Use when not known

5.15. Path Hierarchy

Code	Description	Comment
PD	Principal Distributor Pathway	
LD	Local Distributor Pathway	
LAA	Local Access A Pathway	
LAB	Local Access B Pathway	
UNK	Unknown	Use when not known

5.16. Path Features Type

Code	Description	Comment
TMD	Tactile Marker – Directional	
TMH	Tactile Marker – Hazard	
GR	Grab Rail	Includes handrails for stairs and grab rails for paths
UNK	Unknown	Use when not known

5.17. Road Barrier Type

Code	Description	Comment
WS	Wheel Stop	Used in parking bays
SH	Speed hump	

WC	Wombat Crossing	Plateau-style speed hump, may be a zebra crossing
WB	Wire-rope Barrier	Roadside crash barrier
CBS	Crash barrier - Steel	W-Beam roadside crash barrier
CBW	Crash barrier - Wood	roadside crash barrier
GB	Gable Barriers	Airport
UNK	Unknown	Use when not known

5.18. Road Barrier Treatment Types

Code	Description	Comment
BN	Bullnose Attenuator	
FL	Flare	Provide flare rate as comment
XT	X-Tension	
BU	Buried	Rail end is buried below ground level
CE	ET2000	
UNK	Unknown	Use when not known

5.19. Road Barrier Fixing Material

Code	Description	Comment
ST	Steel post	
W	Timber post	
EP	Epoxy adhesive	
CA	Chemical Anchor	
DB	Direct Buried	Includes fixing by screws etc.
UNK	Unknown	Use when not known

5.20. Road Function

Code	Description	Comment
RD	Road	Fulfils a vehicle transport function, public road
CP	Car Park	vehicle parking, including internal roads
PR	Private Road	Road not located on gazetted Road Reserve
UNK	Unknown	Use when not known

5.21. Surface Type

Code	Description	Comment
AC	Asphalt Concrete	Asphalt seal. The chip size within the asphalt can be captured in the AGG1_SIZE or AGG2_SIZE fields in Road Centreline.
CS	Chip Seal	Single coat of bitumen, with aggregate (used as second/subsequent seal). May include Primer

PS	Primer seal	A heavy bitumen coat with aggregate applied.
BP	Brick Paving	
UNK	Unknown	Use when not known

5.22. Surface Aggregate Type

Code	Description	Comment
LIG	Lateritic Gravel	Crushed, screened lateritic ironstone used as a sealing aggregate
BAS	Basalt	A black stone, not local to Albany
S	Sand	Occasionally used to provide a fine finish to chip seals
G	Granite	The most commonly used sealing aggregate
PG	Pink Granite	Granite with a pink hue
UNK	Unknown	Use when not known

5.23. Surface Binder Type

Code	Description	Comment
W	Water	Used for brick-paving
B	Bitumen	Bitumen used as a binder in chip seals, or Asphalt. Type and class to be provided in comments field (Cationic, Class 170)
CB	Cutback Bitumen	Bitumen with added 'cutter' for chip seals, percentage and type of cutter to be provided in comments field
PMB	Polymer-Modified Bitumen	Bitumen with polymer additives. Type of polymer to be provided in comments field
BE	Bitumen Emulsion	Bitumen/Water blend used for cold application. Type and class to be provided in comments field (CRS 170)
UNK	Unknown	Use when not known

5.24. Transport Points Type

Code	Description	Comment
B	Bollard	Bollard used for transport purpose
G	Guidepost	Edge delineation for roads
RRPM	Raised Retroreflective Pavement Marker (Cats Eyes)	Colour to be noted in comments field
TWC	Taxiway Cones	Airport
RWC	Runway Cones	Airport
PTM	Parking Ticket Machine	
GM	Gable Markers	Airport
HC	Helipad Cones	Airport
AP	Anchor Points	Airport

UNK	Unknown	Use when not known

5.25. Transport Markings Type

Code	Description	Comment
CSS	Centreline – Single Solid Line	
CSD	Centreline – Single Dashed Line	
CDS	Centreline – Double Solid Lines	
CDD	Centreline – Double Single Dashed & Solid Line	
PC	Path Centreline	
LW	Line - White	Line\Edgeline of road or path
LY	Line - Yellow	Line\Edgeline of loading/bus zone
LG	Line – Green	Line\Edgeline Green
LDW	Line – Dashed White	Line\Edgeline dashed white
LDY	Line – Dashed Yellow	Line\Edgeline dashed yellow
HL	Hold Line	Solid Line used to denote a "STOP" requirement
GL	Give Way Line	Dashed line denoting a "Give Way" requirement
CY	Cycle Lane	Line dividing cycle lane from Traffic Lane
GM	Gore Marking	Lines comprising hatching of a traffic area or parking bay to denote a different use, colour to be noted in comments.
AM	Acrod symbol	Symbol denoting Acrod reserved parking
BM	Bicycle Symbol	Used on Cycle Lanes
TX	Text Symbol	Used to donate loading zones etc. Details of text to be provided in comments field
SM	Shared-use symbol	Used on shared paths
TL	Turn Arrow symbol - Left	Left turn arrow symbol
TR	Turn Arrow symbol - Right	Right turn arrow symbol
TS	Turn Arrow symbol - Straight	Straight turn arrow symbol
TLS	Turn Arrow symbol – Straight and Left	
TRS	Turn Arrow symbol – Straight and Right	
TLR	Turn Arrow symbol – Left and Right	
TDM	Three directional turn Arrow symbol	Left, Right and Straight arrow symbol
UNK	Unknown	Use when not known

5.26. Transport Polygon Type

Code	Description	Comment
RB	Roundabout	Intersection treatment
SI	Splitter Island	
MI	Median Island	Directional treatment
BI	Blister Island	Speed treatment
UNK	Unknown	Use when not known

5.27. Transport Polygon Material

Code	Description	Comment
BP	Brick Paving	
A	Asphalt	
C	Concrete	
L	Lawn	
P	Planted	
UNK	Unknown	Use when not known

5.28. Raised Transport Function

Code	Description	Comment
P	Pedestrian	Pedestrian/cyclist primary transport function
V	Vehicular	Vehicular primary transport function
BR	Boat Ramp	
J	Jetty	
PT	Pontoon	
UNK	Unknown	Use when not known

5.29. Raised Decking Material

Code	Description	Comment
SS	Steel - solid	
SG	Steel - grating	
PP	Plastic - planking	
PG	Plastic - grating	
TS	Timber - solid	
TP	Timber - planking	
UNK	Unknown	Use when not known

5.30. Raised Transport Rail Type

Code	Description	Comment
HR	Hand rail	
VB	Vehicular barrier	Thriebeam, or similar
JL	Jetty Ladder	
UNK	Unknown	Use when not known

5.31. Raised Transport Rail Material

Code	Description	Comment
S	Steel	
T	Timber (Post and rail)	

PW	Post and Wire	
UNK	Unknown	Use when not known

5.32. Piles Type

Code	Description	Comment
BPP	Boat Pen Pile	
JP	Jetty Pile	
BP	Bridge Pile	
UNK	Unknown	Use when not known

5.33. Bus Shelter Type

Code	Description	Comment
R	Rural	Colourbond box
U	Urban	St Kilda
O	Other	Styles to be replaced with Rural or Urban Modern styles
UM	Urban Modern	Concrete Pre-Cast
UNK	Unknown	Use when not known

5.34. Owner

Code	Description	Comment
COA	City of Albany	
CAL	City of Albany – Leased	
SGU	State Government Departments / Utilities	Western Power, Telstra MRWA etc
PVT	Private	On Private Land

6. Condition Ratings

Condition Ratings are generally in five classes. The maintenance demand is related to these classes:

- Rating 1 is in very good condition, with no defects or wear evident
- Rating 2 is Serviceable with no maintenance required;
- Rating 3 could benefit from Maintenance but is still performing its required function;
- Rating 4 requires maintenance to perform its function to full effect.
- Rating 5 requires immediate attention. The asset has failed and is posing a risk.

A rating of 0 (zero) is only used when an asset has not been rated. This situation should be avoided.

6.1. General Condition Rating

Rating	Condition	Example	Description
1	Very Good		In very good condition, with no defects or wear evident
2	Good		Serviceable with no maintenance required
3	Moderate		Could benefit from Maintenance but is still performing its required function
4	Poor		Requires maintenance to perform its function to full effect
5	Very Poor		Requires immediate attention. The asset has failed and is posing a risk
0	NOT RATED		Asset has not been rated

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